



Te Puni Kōkiri
MINISTRY OF MĀORI DEVELOPMENT

Te Kāwanatanga o Aotearoa

The Power of Nature – Te Kaha o te Taiao

Engagement on policy options for a biodiscovery system in Aotearoa New Zealand

Discussion Document for public consultation



Privacy statement

The Privacy Act 2020 applies certain principles about the collection, use, and disclosure of information about individuals by various agencies, including Te Puni Kōkiri. It governs access by individuals to information about themselves held by agencies. Any personal information you provide as part of a submission will be managed in accordance with the Privacy Act.

The information is being recorded electronically for the purpose of the proposed policy options for a Biodiscovery system in New Zealand.

Te Puni Kōkiri is the agency collecting and holding the information. The address is 1 Bowen Street, Pipitea, Wellington 6011.

The information that you supply is voluntary. Te Puni Kōkiri kaimahi involved on the project will be able to use and access the information.

The submitter has the right to access their information or correct their information. Requests can be sent to: biodiscovery@tpk.govt.nz

Te Puni Kōkiri will not keep personal information for longer than it is required for the purpose of developing policy related a biodiscovery system in New Zealand. Personal information will be disposed of in accordance with the Te Puni Kōkiri disposal schedule.

Te Puni Kōkiri may publish on its website a list of submitters (unless someone states they do not wish to release this information). Submissions analysis will contain aspects of submissions but will seek to avoid including personal information. If you are making a submission, please withhold personal information or mātauranga Māori that you do not want to be released.

Te Puni Kōkiri will consider that, by making a submission, you consent to the release and retention of your details.

If you do not wish us to release or retain your personal details or mātauranga Māori, please state this:

- on your paper submission or feedback;
- as part of your emailed submission.

The information will be destroyed once it is no longer needed.

Disclaimer

The information contained in this publication is for general information only. While every effort has been made to ensure the accuracy of the information, because the information is generalised, its accuracy cannot be guaranteed. Readers are advised to seek independent advice on particular matters and not rely on this publication. No liability is assumed by Te Puni Kōkiri for any losses suffered directly or indirectly by any person relying on the information contained in this publication.

Creative Commons

This work is licensed under the Creative Commons Attribution 4.0 New Zealand License.

To view a copy of this license, visit

[Copyright and attribution | New Zealand Government](#)

Published by

Te Puni Kōkiri

ISBN: 978-0-478-34561-2

[TBC OCTOBER]

Minister's Foreword

E aku nui, e aku rahi, e aku whakatamarahi ki te rangi, tēnā tātou.

Me mihi ka tika ki a rātou mā i whārikihia te kaupapa nei, ā, ki a rātou e kaha whakapau wera tonu ana kia mana ai tēnei kaupapa e whakaawe nei i te iwi Māori. E kore ngā mihi e mutu.

Otirā, tēnā tātou i tēnei nā kaupapa e aro ana ki te oranga tonutanga o ngā taonga me ngā mātauranga Māori horapa o Aotearoa, ā, puta noa ki te ao. He kaupapa nui whakaharahara tēnei e whakawhanake ai ngā hua ōhanga me ngā hua taiao o te motu nei.

E kī ana te kōrero, 'kohikohi ngā kākano, whakaritea te pārekereke, kia puāwai ngā hua'.

The Māori economy is a growing contributor to national prosperity. With assets exceeding \$70 billion and a strong presence in land, natural resources and innovation, Māori enterprises are well-placed to lead and advance high-potential areas such as commercial biodiscovery. Backing commercial biodiscovery activity in a way that honours Te Tiriti o Waitangi/Treaty of Waitangi relationships and respects connections to taonga is a strategic move to unlock new sources of growth, diversity of the innovation ecosystem, and lift regional and national prosperity. It also helps to ensure that benefits from taonga-related innovation, including those realised internationally, can flow back to Aotearoa New Zealand.

Aotearoa New Zealand holds significant untapped potential in biotechnology. The global market exceeded \$2.78 trillion in 2024. In 2020, New Zealand ranked fourth internationally for innovation potential, and the domestic sector generated \$2.7 billion in revenue across 211 biotechnology enterprises. This opportunity is supported by our ability to combine leading scientific research with distinctive national assets, including rich indigenous biodiversity and traditional knowledge systems such as mātauranga Māori.

Realising this potential will require practical rules and systems that make it easier to participate in innovation. Iwi, hapū and Māori, as landowners, knowledge holders, and kaitiaki, maintain deep relationships with taonga for a range of purposes. Te Puni Kōkiri advises on how government can shape new systems to enable those

pursuing commercial biodiscovery. This includes helping ensure that iwi, hapū and Māori can contribute to, collaborate in, and benefit from biotechnology in ways that are forward-looking, economically sound, and aligned with national priorities.

These improvements aim to simplify engagement, remove unnecessary barriers, and unlock the economic potential of Māori-led initiatives. They also help ensure that taonga species and associated knowledge are used responsibly and remain protected for future generations, while contributing to a stronger and more inclusive bioeconomy.

The proposals in this Discussion Document are designed to enable landowners, kaitiaki, and other contributors to pursue commercial opportunities while maintaining safeguards that protect taonga species and associated knowledge. Your feedback is invited to ensure that any resulting changes are practical, growth-oriented, and aligned with the long-term interests of iwi, hapū, and whānau Māori, as well as the broader national economy.

Mauriora,

Hon Tama Potaka

Minister for Māori Development

Contents

Section 1. Introduction and scope	13
1.1 How commercial biodiscovery in New Zealand connects with the world around us	14
1.2 Waitangi Tribunal recommendations	19
1.3 Previous public consultation on biodiscovery	20
1.4 What is Te Puni Kōkiri doing to take this work forward?	20
Section 2. Key challenges and status quo	23
2.1 Addressing the challenges of biodiscovery	23
Section 3. Biodiscovery policy aspects for public consultation	33
3.1 A proposed vision, guiding principles and outcomes for a Biodiscovery system	33
3.2 Standardising Access and Benefit Sharing practices	35
Proposal 1 – standardising access practices	36
Proposal 2 – standardising benefit sharing practices	39
Proposal 3 – establishing access and benefit sharing guidance	44
3.3 Uplifting capacity and capability	46
3.4 Establishing provenance mechanisms	48
Appendix 1 – how to have your say	55
Full list of consultation questions	56
Appendix 2 - submission themes from 2002 and 2007 public consultations	58
References	61

Key terms

Biodiscovery

Encompasses the examination of biological and genetic resources (e.g. plants, animals and micro-organisms) for features that may be of value for scientific research and/or commercial development.¹ These features may include chemical compounds, genes and products derived from them. This term is often used in tandem with 'bioprospecting', which is the term for accessing or taking of biological material for the purpose of commercial, academic research, and conservation.²

Bioeconomy

The production, utilisation and conservation of biological and genetic resources, including related knowledge, science, technology and innovation, to provide information, products, processes and services across all economic sectors aiming toward a sustainable economy.^a

Biological resources

Includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.³

Biotechnology

Involves harnessing cellular and biomolecular processes to develop technologies and products.⁴ Biotechnology is critical in enabling and growing New Zealand's bioeconomy and wider economy due to growing global demand for biotechnology.^b

Ex-situ

Environments outside of where taonga species naturally occur, including private collections found in research organisations, botanical gardens, seed banks, museums and herbaria.

^a Products of the bioeconomy account for over two thirds of New Zealand's total exports of goods and services. The bioeconomy is, at this time, the only major sector of the economy holding up New Zealand's global trade position.

^b The global biotechnology market is expected to be worth US\$729 billion (approximately NZ\$1.3 trillion) in 2025. New Zealand is positioned well in the world, ranking 4th for innovation potential in biotechnology.

Genetic resources

Includes any material of plant, animal, microbial or other origin containing functional units of heredity with actual or potential value.⁵

Indigenous algae

Intended to capture the biological resources in indigenous species of algae, including marine algae such as seaweeds.

Indigenous fauna

Intended to capture the biological resources in indigenous species of mammals, birds, reptiles, frogs, fish and invertebrates, including land-based, freshwater and marine species.

Indigenous fungi

Intended to capture the biological resources in indigenous species of fungi, including lichenised fungi (lichens).

Indigenous plants

Intended to capture the biological resources in indigenous mosses, ferns, conifers and flowering plants.

Indigenous species

Means a native species that occurs naturally in New Zealand or has arrived in New Zealand without human assistance.⁶

For the purposes of this Discussion Document, we refer to “indigenous species” to mean the biological resources in indigenous algae, fauna, fungi and plants.

In-situ

Environments where taonga species naturally occur, including terrestrial (land or whenua), coastal, marine and freshwater environments.

Intellectual property

Refers to creations of the mind such as inventions, literary and artistic works, designs and symbols, names and images used in commerce.⁷

Kaitiaki

Includes an iwi, hapū, individual of Māori descent, or Māori entity as tangata whenua.⁸

Kaitiaki-led protocols

Draws from international examples of 'community protocols' implemented in other biodiscovery systems. E.g., community protocols led by Indigenous communities in South Africa act as charters outlining their values, customary laws and norms, relationship to traditional knowledge and leadership structures. They are designed to outline to key players in biodiscovery the process of engaging with indigenous communities and how the community makes decisions.⁹

Kaitiaki relationships

The nature of kaitiaki relationships is typically derived through whakapapa, mātauranga and association, use and development.¹⁰ In this Discussion Document, we generally discuss kaitiaki relationships with indigenous species, non-indigenous species of significance and associated mātauranga Māori.

Mātauranga Māori

Described as a broad concept that includes Māori traditional knowledge¹¹ which encompasses the worldview of whānau, hapū and iwi as Kaitiaki, which itself is an obligation derived from whakapapa.¹²

Non-indigenous species of significance

Recognises taonga species that iwi, hapū and Māori have kaitiaki relationships with that are not considered 'indigenous' to New Zealand. These mean species believed to have been brought to New Zealand before 1769 on waka migrating from other parts of the Pacific region, e.g., kūmara (sweet potato).¹³

Patent

A patent is an exclusive right granted for an invention. Patents benefit inventors by providing them with legal protection of their inventions. However, patents also benefit society by providing public access to technical information about these inventions and thus accelerating innovation.¹⁴

Plant variety right

Under New Zealand's Plant Variety Rights Act 2022, a 'plant variety right' is defined as an exclusive intellectual property right granted to the breeder of a new plant variety (which also includes those of fungi and algae).¹⁵

Provenance

For the purposes of this Discussion Document, we refer to the "provenance" of something to mean the place that it comes from or that it originally came from.¹⁶

Taonga species

Encompasses both indigenous species and non-indigenous species of significance.

For the purposes of this Discussion Document, we refer to "taonga species" to mean the biological resources in both indigenous species and non-indigenous species of significance that are algae, fungi and plants.

Traditional knowledge (international context)

There is no accepted definition of traditional knowledge, however, at a broad level, it generally includes the intellectual and intangible cultural heritage, practices and knowledge systems of traditional communities, including Indigenous Peoples and Local Communities.¹⁷



Summary

Scope of consultation

Te Puni Kōkiri (TPK) is developing policy on a biodiscovery system as part of the Government's focus on Māori economic growth through the Going for Growth with Māori | Tōnui Māori framework.¹⁸

A key objective of this work is to create clear pathways to take innovations relating to taonga species and traditional knowledge to commercial markets in ways that are ethical and consistent with Te Tiriti o Waitangi/ the Treaty of Waitangi as well as other relevant standards and agreements. This work is intended to align with other science, innovation and technology initiatives and look to maximise opportunities from the establishment of the new Bioeconomy Science Institute¹⁹ and Invest New Zealand.²⁰

Through this consultation, TPK is seeking your views on a range of policy options for a biodiscovery system for Aotearoa New Zealand.

Have your say

This consultation will inform TPK's recommendations to the Government in 2026 about how to establish a biodiscovery system for New Zealand. Those recommendations will lay the foundations for a system that creates certainty and transparency for everyone operating within it, enable best practice through better recognition and protection of kaitiaki relationships with taonga species and mātauranga Māori, and realises economic potential for iwi, hapū, Māori and all New Zealand.

Appendix 1 provides details on the ways you can provide your whakaaro and feedback on this consultation and a full list of consultation questions.

How to use this document

This Discussion Document explains why we are consulting with you and outlines proposed policy options. We ask some questions about each policy option which you can answer as part of your submission. You can choose how you wish to respond, including which questions you would like to answer.

Next steps

A summary of engagement will be published on the TPK website www.tpk.govt.nz. All responses will be anonymised, but a list of submitters may be provided. Please clearly indicate in your submission if you wish your name, any other personal information, or any mātauranga you wish to share as part of your submission, to be excluded in any summary of submissions that TPK may publish.



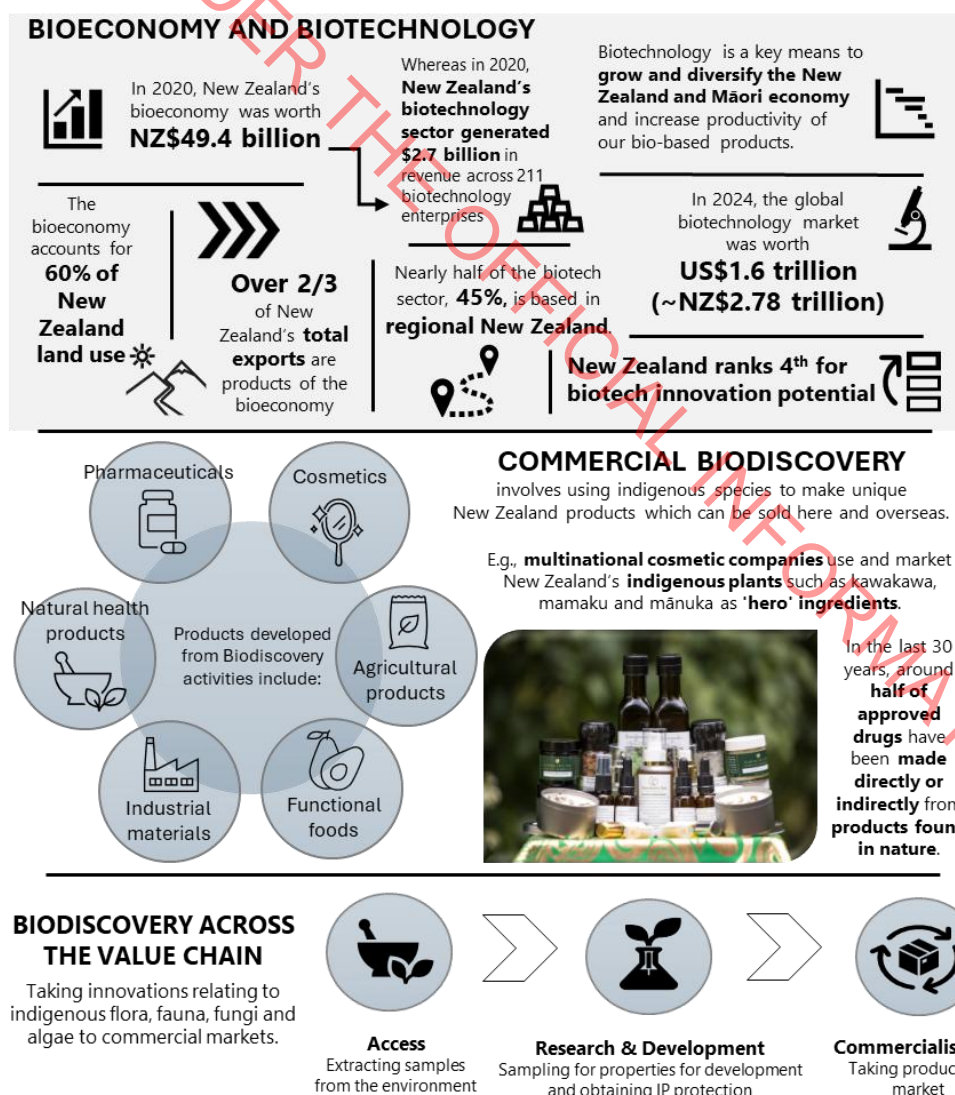
Section 1. Introduction and scope

New Zealand is home to over 80,000 indigenous species, many of which can only be found here. These species have evolved over a long period of geographical isolation, which is rich in mātauranga Māori and includes many species that are considered taonga. New Zealand also has one of the largest exclusive economic zones in the world, combined with a high degree of endemism i.e., species only found in New Zealand.²¹

New Zealand has significant unrealised potential in the bioeconomy. Through commercial biodiscovery with our unique indigenous species, mātauranga Māori and science capabilities in a way that supports the protection and restoration of our indigenous biodiversity, we can unlock our economic potential.

Where does biotechnology and biodiscovery sit within the bioeconomy?

Figure 1 (see endnote for references).²²



Now is a critical time for New Zealand to unlock economic value from our unique indigenous species and mātauranga Māori, as global advances in biotechnology and genomics accelerate the race for biodiscovery. We need to do this in a way that acknowledges commercial biodiscovery is underpinned by indigenous biodiversity.

Without a coordinated commercial biodiscovery system, New Zealand risks losing intellectual property (IP) and commercial benefits to faster-moving international players and key partners, such as Australia, Canada, the European Union, India, Japan, South Africa, the United Arab Emirates and Brazil.

Additionally, there are growing trends such as an 8 – 10x increase in patent applications over the past 15 years using New Zealand's indigenous plants. Nearly all these patents are issued in the United States to overseas companies based in Asia, Europe and North America.²³

1.1 How commercial biodiscovery in New Zealand connects with the world around us

There is an opportunity to boost New Zealand's edge in the global bioeconomy through more quality commercial biodiscovery with taonga species of plants, fungi and algae.

Decisions have not yet been taken as to whether New Zealand should sign up to the Nagoya Protocol, which is a global agreement on access and benefit sharing related to the utilisation of genetic resources (i.e., indigenous species and associated traditional knowledge).^c

Whereas other countries such as Denmark, Australia, Switzerland, South Africa, South Korea and Singapore are leaders in commercial biodiscovery with small to medium-sized high performing bioeconomies with high potential. Despite not all being signatories of the Nagoya Protocol themselves (for example, Australia and Singapore), these countries have worked out standardised ways of undertaking commercial biodiscovery activities that give companies certainty when considering if they should invest in commercial biodiscovery and buy traditional products.

^c The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity is an international agreement which aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way. It entered into force on 12 October 2014. [The Nagoya Protocol on Access and Benefit-sharing](#).



Figure 2 (see endnote for references).²⁴

COMPARABLE INTERNATIONAL EXAMPLES OF SUCCESS

Success is supported by intercountry harmonization & clear regulatory pathways, such as:

AUSTRALIA – Nanotechnology researchers found a spinifex grass species, traditionally used as medicine and adhesive, produces ultra-strong microscopic fibres. With traditional knowledge holders, they **co-developed commercialised injectable medical gels** for arthritis, drug delivery and cosmetic procedures.

Benefits include **royalties** supporting **Aboriginal people** with **training & education pathways**, and **job opportunities** located where the spinifex grass is grown, harvested and processed.



DENMARK – applies the EU biodiscovery regulations and has over **700 companies** with over **58,000 employees**. They utilise both domestic & foreign genetic resources for biosolutions that boost agricultural yields, transform CO2 emissions into valuable byproducts, reduce food waste and extend product shelf life.



SOUTH KOREA – **Biotechnology market of \$25b**, predicated to grow at a **CAGR of 18%**. They understand and utilise their domestic biological resources to meet the increasing demand for biopharmaceuticals, precision medicine, and sustainable agricultural solutions.



SOUTH AFRICA – **Rooibos tea market** is estimated to reach **\$2.6b (USD) by 2032**, growing at a **CAGR of 6.7%**.

Legislation supports direct monetary & non-monetary benefits to the San and Khoi communities in South Africa.



These countries have leveraged international instruments such as treaties and protocols (set out in Table 1 below) which set standards for how biological and genetic resources can be appropriately accessed, researched and commercialised.

Table 1

International instrument	Key features
World Intellectual Property Organization (WIPO) treaty on Intellectual Property, Genetic Resources and	In May 2024, an international treaty focusing on the Disclosure of Origin of Genetic Resources and Associated Traditional Knowledge in patent applications (GRATK Treaty) was agreed to by consensus by the 193 member states of WIPO.



Associated Traditional Knowledge

- To date, 44 countries have signed, and one country has ratified (Malawi).
- It will enter into force once 15 countries have followed suit.²⁵
- The GRATK Treaty sets an international standard relating to disclosure of origin for IP systems globally and genetic resources used in commercial biodiscovery.
- It includes a new disclosure of origin mechanism, ensuring greater transparency across the system when genetic resources and traditional knowledge are utilised within patents.
- New Zealand was instrumental in negotiations on the GRATK Treaty, and this Discussion Document includes detail on next steps for New Zealand to become a Contracting Party.

Convention on Biological Diversity (CBD)

- New Zealand is a Party to the CBD which was finalised in 1993 and currently has 196 Parties.
- The CBD establishes three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources.
- As part of the CBD, the Kunming-Montreal Global Biodiversity Framework (**GBF**) was adopted during the fifteenth meeting of the Conference of the Parties (**COP 15**) in 2022.
- The GBF supports the achievement of sustainable development goals and sets out a pathway to reach the global vision of a world living in harmony with nature by 2050. In adopting the GBF, all parties committed to setting national targets to implement it.^d
- At COP 16 in Cali, Colombia,^e a multilateral benefit-sharing mechanism for Digital Sequence Information (**DSI**) was agreed.

^d New Zealand is committed to the CBD and the GBF goals and targets. [New Zealand submitted 13 national targets to the CBD, made up of the 13 objectives of Te Mana o Te Taiao Aotearoa New Zealand Biodiversity Strategy and selected, adjusted goals](#). The Department of Conservation is leading the collective implementation of Te Mana o Te Taiao through driving conservation action at a national, regional and local level.

^e COP16 refers to the 16th session of the Conference of the Parties to the CBD held in Oct 2024. It focused on translating the commitments made in the Kunming-Montreal Global Biodiversity Framework into actionable plans and policies.

- The DSI mechanism, which is non-binding, including the creation of a global fund called the Cali Fund, aims to ensure fair and equitable sharing of benefits from the use of DSI derived from genetic resources.
- The DSI mechanism requires companies using DSI derived from genetic resources to pay a portion of their profits or revenue into a global fund that is used for biodiversity restoration and protection, some of which may be led by Indigenous Peoples and local communities.
- It is important to note that many elements of the operation of the Cali Fund are still under discussion.²⁶

Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (Nagoya Protocol)²⁷

- The Nagoya Protocol is a supplementary agreement to the CBD. Negotiations to this instrument were finalised in 2010 with New Zealand's participation, though we are not yet a signatory.
- Currently, 142 countries have ratified the Nagoya Protocol and have put in place domestic biodiversity systems as required by the Protocol. This includes the European Union, India and Japan.
- New Zealand has an interest in the Nagoya Protocol as both a user and provider of genetic resources but has not yet signed the agreement, as a requirement to do so is to have a domestic Biodiscovery system in place.
- This Discussion Document explores policy options for such a system, which would enable New Zealand to consider acceding to the Nagoya Protocol as a means to illustrate that we meet international standards.
- The Nagoya Protocol sets the standards for biodiversity systems and enables recognition of the systems across parties to the protocol. Some of its key elements are:
- ensure there is both a transparent legal framework governing access to genetic resources

and fair and equitable sharing of the benefits that arise from their use;

- requires indigenous people to provide their free, prior and informed consent to the use of their resources and the genetic material itself;
- to accede to Nagoya, a domestic biodiscovery system needs to be in place and enforced by a competent national authority (i.e., a regulator);
- a Biodiscovery system would need a regulator (i.e., a Competent National Authority) to make and enforce decisions. This could be a standalone entity or operate within or as part of an existing agency;
- as the Competent National Authority, the regulator would be responsible for decisions relating to biodiscovery applications and granting access to genetic resources. Consequently, it would also have a critical role in protecting the kaitiaki interests of iwi, hapū and Māori by ensuring the free, prior informed consent of kaitiaki is secured and mutually agreed terms are negotiated where appropriate; and
- while not mentioned in the Nagoya Protocol, the regulator could hypothetically also be responsible for identifying relevant kaitiaki interests and consulting with them as necessary as part of its decision-making process. Designing a process to resolve any disagreements between kaitiaki interests about support or opposition to a particular application or the impacts on any kaitiaki relationship will also be important.

Other existing international instruments that can be leveraged across Government include the Indigenous Collaboration Arrangements (**ICAs**),^f Free Trade Agreements (**FTAs**),^g the Indigenous Peoples Economic and Trade Cooperation Arrangement (**IPETCA**),^h as well as other bilateral and multilateral agreements such as the Agreement between New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu of Economic Cooperation (**ANZTEC**).

^f Existing ICAs have been signed with Australia and Canada.

^g Australia, China, European Union, Hong Kong, Malaysia, Singapore, South Korea, Chinese Taipei, Thailand, United Kingdom, TPSEP, ASEAN, CPTPP, PACER Plus, RCEP.

^h Current members are New Zealand, Australia, Canada, and Chinese Taipei. The United States joined as an Observer in early 2024.

The ICAs are the first standalone bilateral arrangements of their kind in the world and formalise the commitment between governments on international Indigenous policy.

All FTAs concluded since 2001 include the Treaty of Waitangi exception clause, which allows the New Zealand government to implement measures to fulfil its obligations to Māori under the Te Tiriti o Waitangi/the Treaty of Waitangi.

Additionally, the IPETCA is an open plurilateral arrangement designed to support greater Indigenous economic inclusion and participation, as well as Indigenous trade in regional and domestic economies.

Leveraging these instruments will enable the government to harness our international connections to enhance trade and export potential for indigenous/premium biotechnology products.

New Zealand has a chance to catch up with overseas trends by establishing a biodiscovery system which:

- better recognises and protects what makes us uniquely New Zealand; and
- makes it easier for companies, particularly overseas ones, to invest in research and science projects and buy our unique New Zealand products.

1.2 Waitangi Tribunal recommendations

Bioprospecting is directly referenced in the Waitangi Tribunal's report on the Wai 262 claim, *Ko Aotearoa Tēnei* (**KAT**). The Tribunal made several recommendations, including recommending a regulatory regime for bioprospecting, and implementing a disclosure of origin requirement for patent applicants to identify where indigenous biodiversity or traditional knowledge has been used.

While the Tribunal did not set out a specific set of findings around the full shape of a future bioprospecting system, it identified that a system could provide protection for the kaitiaki relationship that iwi, hapū and Māori have with taonga species and associated mātauranga Māori, as well as provide benefits including economic benefits from negotiating mutually agreed terms for use.

Additional to this is the Waitangi Tribunal's Wai 2522 findings on the Crown's Review of the Plant Variety Rights Regime. The report outlined the Tribunal's support for the Crown's decision to go beyond the recommendations set out in the KAT report regarding plant variety rights. This led to Cabinet agreeing to implement additional measures to recognise and protect kaitiaki relationships with both taonga species and non-indigenous species of significance within the Plant Variety Rights Act 2022.

Following on from the Tribunal's findings outlined in the KAT report, descendants of the original Wai 262 claimants, Te Taumata Whakapūmau and their technical advisory rūpū Kahu Aronui, have developed Tiaki Taonga, which is designed to be a sui generis (or bespoke) framework that can guide access, benefit-sharing and decision-making for engagement with taonga or taonga-related activity. It is guided by a set of values or principles, including that:

- the mauri of taonga Māori including mātauranga Māori is affirmed as an intrinsic value in its own right;



- the whakapapa relationships of taonga Māori with other taonga, and the whakapapa relationships of taonga Māori with Māori people, whānau, hapū and iwi is affirmed;
- the mana motuhake and tino rangatiratanga of kaitiaki, (whether expressed and implemented by Māori people, whānau, hapū or iwi) with taonga Māori is guaranteed, actively protected and enhanced;
- mana whakahaere and exercise of kaitiakitanga in relation to taonga is exercised in a manner that supports the benefit and wellbeing of Māori; and as a consequence, the benefit and wellbeing of Aotearoa/New Zealand as a whole; and
- the obligation of manaakitanga is upheld for the collective benefit of all.²⁸

It is an example of a kaitiaki-led protocol and provides decision-making processes and structures such as Pātaka Taonga (an example of a domestic clearing-house mechanism) which ensure authority rests with appropriate Māori entities.

1.3 Previous public consultation on biodiscovery

2002 and 2007 public consultation

In 2002 and 2007, the then Ministry of Economic Development (**MED**) carried out public consultation on this kaupapa, producing *Bioprospecting in New Zealand: Discussing the Options* and *Bioprospecting: Harnessing Benefits for New Zealand* respectively.²⁹ These papers asked whether New Zealand should promote the potential economic development opportunities and other benefits from biodiscovery. It covered the opportunities available, problems with the state of the regulatory framework and the advantages of having a bioprospecting policy. In general, participants considered New Zealand does need a coordinated framework for biodiscovery, access for biodiscovery activities should be regulated and benefits should be shared appropriately. A summary of these submissions is set out in Appendix 2.

1.4 What is Te Puni Kōkiri doing to take this work forward?

Policy work on biodiscovery has ebbed and flowed over the years, exploring a range of issues including kaitiaki relationships, protection of mātauranga Māori and taonga species, as well as how to unlock capital, expertise and regulatory pathways across the value chain. Since the 2002 and 2007 consultation on biodiscovery, advancements have been made such as the release *Ko Aotearoa Tēnei* (as discussed above) in 2011 and setting up a dedicated team to progress the biodiscovery kaupapa within TPK in 2021.

To date, TPK has carried out policy research, analysis and targeted engagement with a range of iwi, hapū, Māori, Crown agencies, research institutes, independent science entities, universities, biotech industry representatives and overseas government officials to form a picture of what is happening on the ground here in New Zealand and overseas. We have also gathered recommendations on what an ethical and effective biodiscovery system should look like.

We have heard these themes so far:

- collection of genetic and biological resources for biodiscovery is happening within New Zealand's terrestrial, freshwater and marine environments. In other words, everywhere around us, all the time;
- although biodiscovery is happening all around us, we are seeing a lot of biodiscovery research and development happening with taonga species of plants, fungi and algae;
- the biggest challenge is progressing from research and development into commercialisation without sufficient legal certainty, investment and mechanisms to protect IP, kaitiaki relationships with taonga species and associated mātauranga Māori, as well as realise and share benefits;
- despite this, there are many examples of initiatives demonstrating 'good practice', particularly those that are iwi, hapū or Māori-led;
- New Zealand's biodiscovery practices should learn from overseas experiences, be aligned with international best practice and be consistent with international obligations;
- we need to carefully consider how a Biodiscovery system, can balance use and protection elements. We have heard a spectrum of views ranging from creating more opportunities for kaitiaki to use and develop taonga species through commercial biodiscovery, to creating mechanisms which better protect those taonga and the relationships kaitiaki have with them. Therefore, a balance needs to be struck; and
- we also need to carefully consider how a biodiscovery system can strike the right balance between fostering innovation and putting regulatory controls in place, while preserving open access to resources for science and research, and safeguarding New Zealand's primary industries including the agriculture and horticulture sectors.

This has helped us to develop a vision, outcomes and guiding principles along with potential options for a biodiscovery system which we want to test with you. After this, we will be seeking policy decisions from Cabinet in 2026 on which policy option(s) will be progressed. This work extends beyond both the 2002 and 2007 consultations led by MED as this is the first time high-level policy options for a biodiscovery system are being proposed, taking into consideration the findings of the Waitangi Tribunal in *Ko Aotearoa Tēnei*.

What is the scope of this work right now? Where do we start?

We are looking at the whole bioeconomy value chain, from initial identification and innovative research through to taking biotechnology products and IP to key markets such as the United States, Europe and Asia.

The first phase of this work explores how more research and science relating to **taonga species of plants, fungi and algae and associated mātauranga Māori** can be appropriately accessed, researched and commercialised.

Given the complexities and existing policies relating to genetic and biological resources derived from indigenous fauna and other categories such as microbials and digital sequence information, we are starting with commercial biodiscovery with taonga species of plants, fungi and algae and associated mātauranga Māori first, which we are seeing significant activity underway with. Later, we will look at how a biodiscovery system could capture other categories such as indigenous fauna, microbials and digital sequence information. We note that other regulatory reform work may affect how a biodiscovery system would interact with legislation, for example the Department of Conservation's (DOC) planned review of the Wildlife Act 1953.

This phased approach allows the policy work to build and grow over time, enabling us to remain focused on where the biggest risks and benefits are likely to be for iwi, hapū and Māori in biodiscovery, balanced with the need for foundational policies that are durable.

Consultation questions

1. What are your views on the phasing of this work, starting with taonga species of plants, fungi and algae and associated mātauranga Māori?

Why is Te Puni Kōkiri only focussing on commercial biodiscovery?

The biodiscovery policy work TPK leads is first focused on biodiscovery initiatives with commercial intent or commercial potential that focus on taking innovations derived from taonga species of plants, fungi and algae and mātauranga Māori to commercial markets. We call this *commercial biodiscovery* throughout the rest of this Discussion Document.

This commercial focus aligns with trends we are seeing internationally with overseas biodiscovery legislation, including South Africa and Queensland, Australia, and the Government's current direction and priorities for Māori economic growth and the Science, Innovation and Technology (SI&T) system.

The starting scope of a biodiscovery system in New Zealand would be specifically designed to exclude customary use of taonga species and associated mātauranga Māori, e.g., rongoā rākau, or personal use of these taonga on private land or whenua Māori that has no commercial intent or commercial potential. For example, someone wanting to learn more about species naturally occurring in an environment such as within their own backyard.

As discussed below in section 3.2, one aspect we are consulting on is whether there should be access permission mechanisms in place where people are taking genetic or biological resources derived from taonga species for scientific research purposes, where the purpose of the research is to explore any commercial potential.

This recognises that in some cases it is difficult to know whether there is commercial potential at the start of a biodiscovery project. Although scientific research is not strictly within the scope of 'commercial biodiscovery', we think it is still important to

have a process for researchers to gain the appropriate level of permission to enable a baseline assessment of whether protocols around free, prior and informed consent and benefit sharing would apply. In this sense, it is a stepping stone for collaboration with kaitiaki should a project end up heading towards commercialisation.

Consultation questions

2. What are your views on our description of “commercial biodiscovery”, e.g., is the scope clear or how should we make the scope clearer?
3. What are your views on what type of scientific research should be in scope of a commercial biodiscovery system, and what should be excluded?
4. What protections are needed to ensure that any insights into indigenous species obtained as a result of the use of mātauranga Māori remain accessible to iwi, hapū and Māori in the future?
5. What protections are needed to ensure that any resulting data, knowledge and insights into both indigenous species and non-indigenous species of significance remain accessible for the purposes of public good research or the future growth of New Zealand's primary sectors?

Section 2. Key challenges and status quo

It is useful to understand the challenges that New Zealand's current legal and policy settings cause people when they are trying to lead commercial biodiscovery activities with taonga species and associated mātauranga Māori throughout the value chain.

2.1 Addressing the challenges of biodiscovery

The regulatory framework for biodiscovery activities is complex. It does not adequately recognise and protect kaitiaki relationships that iwi, hapū and Māori have with taonga species and mātauranga Māori or enable monetary and non-monetary benefits derived from biodiscovery with these taonga to be captured and shared fairly and equitably.

New Zealand's current way of working is unstructured, meaning it does not incentivise best practice with taonga species and mātauranga Māori, or provide guardrails to prevent misuse or mechanisms to address misappropriation of those taonga.

For example, there has been an increase of 8-10x the number of annual patent applications over the last 15 years that use indigenous plants, including mānuka, harakeke, kōkihi, kānuka, totara, kawakawa, horopito and mamaku. Nearly all these patents are issued in the United States of America to businesses based in Asia, Europe and North America.

This stems from a range of problems:

The process towards realising commercialisation potential for biodiscovery research is complicated, expensive and unclear

Some of the main issues New Zealand faces is capacity and capability challenges, particularly for kaitiaki wanting to lead more projects with taonga species and associated mātauranga Māori, limited research and science funding, and a lack of coordination to ensure resources are used efficiently and effectively.

For entities, such as researchers or businesses, who want to collaborate with kaitiaki, struggle with the lack of clarity on processes to obtain free, prior and informed consent from kaitiaki to utilise taonga species and associated mātauranga Māori in research and development activities. There is also low trust from iwi, hapū and Māori on existing government settings and practices.

Commercialisation of taonga species and associated mātauranga Māori carries risk and complexity for all parties as well, involving management of multiple stakeholders which are sometimes unknown, addressing trade challenges such as market access requirements, and there are risks to ensuring ongoing protections and access to taonga.

New Zealand's current IP settings for commercial biodiscovery are limited, because there is no standalone legal framework in New Zealand that fully protects Māori cultural and genetic IP and recognises collective rights.

New Zealand is missing out on potential benefits of biodiscovery since our current regulations are limited to medicines and foods, with limited ways that enable commercial biodiscovery opportunities in other categories such as natural health products or nutritional supplements. There are limited domestic and foreign investment pathways.

There are few provenance mechanisms or ways to trace back to origin and kaitiaki relationships

This means consumers and markets cannot differentiate indigenous/premium biotechnology products from basic ones. In some cases, particularly pharmaceuticals, there are regulatory restrictions on disclosing provenance.³⁰

New Zealand could better harness our international connections to enhance trade and export potential for indigenous/premium biotechnology products

Channels to new markets for new products can be difficult to establish from New Zealand. Regulatory barriers for new ingredients derived from taonga species that have not been commercialised previously are often significant, requiring in-country expertise and significant resources to navigate successfully.

Consultation questions

6. Have we correctly identified the problems? Are there other problems that make it difficult for people to progress their projects through the value chain towards commercialisation?

Access and benefit sharing (ABS) protocols

The Nagoya Protocol aims to ensure there is both a transparent legal framework governing access to genetic resources and fair and equitable sharing of the benefits that arise from their use, including mechanisms to support monitoring and compliance of the framework. It also requires that Indigenous Peoples provide their free, prior and informed consent to the use of their resources and the genetic material itself.

New Zealand has not yet become a signatory to the Nagoya Protocol. We do not have a biodiversity system in place which standardises practices to provide certainty and transparency for those wanting to do commercial biodiversity, including through enabling:

- clear and fair rules for access to taonga species and associated mātauranga Māori;
- access and benefit sharing (**ABS**) based on free, prior and informed consent of kaitiaki and mutually agreed terms; and
- monitoring and compliance mechanisms to address unethical practice and misappropriation.

Access and Benefit Sharing protocols

The current laws and processes around accessing taonga species is hard to navigate

For people wanting to access and collect samples of taonga species from land, marine and freshwater environments where they naturally occur (i.e., *in-situ*), there are permission mechanisms in legislation and government guidance available. For example, some laws that govern this in New Zealand are the Conservation Act 1987, the Fisheries Act 1996, and the Resource Management Act 1991, under which government agencies and councils grant permits, resource consents or authorisations. Guidance is published on how to apply for these permissions on government websites.¹

For people who want to access and collect samples of taonga species found *in-situ* on private land or whenua Māori, there are no protocols in legislation at all or any government guidance. Access and use are arranged privately with landowners and occupiers, e.g., through entering private contracts. This is distinct from access to indigenous fauna, where protections under the Wildlife Act 1953 apply regardless of where indigenous wildlife is found. For example, permits are required from DOC to catch, kill, disturb and sample species of indigenous wildlife that are absolutely protected under the Wildlife Act, wherever they are.

For people who want to access and collect samples of taonga species from *ex-situ* environments, e.g., private collections found in research organisations, botanical gardens, seed banks, museums and herbaria, any access protocols that are in place are ad-hoc and prescribed by the relevant institution.

¹ For example, [DOC permit guidance](#) and [council permit guidance](#).

However, this is different to processes in place for access to indigenous fauna such as protected wildlife and marine mammals from *ex-situ* environments.

Existing Access and Benefit Sharing protocols and government guidance were not designed with commercial biodiscovery in mind

There are limited or sometimes no ways for kaitiaki to provide their free, prior and informed consent for people to access and use taonga species and associated mātauranga Māori, no protocols around accessing and using these taonga appropriately, and no requirements to share benefits which arise from commercial biodiscovery in a fair and equitable way.

In the absence of ABS protocols, some ABS arrangements are in place between Public Research Organisations and kaitiaki which are based on free, prior and informed consent and mutually agreed terms. For example, Hikurangi Bioactives Limited Partnership has signed a commercial deal for a clinically proven product that includes kānuka oil as a key ingredient for treating eczema. Most of the revenue gained from this deal has been committed to conservation and community development initiatives in Te Tairāwhiti. In addition, this deal requires kānuka oil producers owned by and employing Māori throughout the production process to be prioritised by the company that has secured the licence to take the product to market.³¹

In the absence of comprehensive government guidance, Māori have provided guidance for communities to use. For example, Te Kotahi Research Institute (**TKRI**) is a Māori-led research institute that demonstrates appropriate access and utilisation of indigenous species based on free, prior and informed consent through collaboration with iwi, hapū and Māori communities. TKRI has produced resources on approaches and guidelines to benefit-sharing and appropriate research on taonga species and associated mātauranga Māori.³²

Monitoring and compliance mechanisms

Under the Nagoya Protocol, a biodiscovery system needs to be monitored and enforced by a Competent National Authority (e.g., a decision-making and administering body), along with a designated National Focal Point (i.e., a country's main contact agency for an international agreement, programme or initiative).

New Zealand does not yet have a Competent National Authority and, without specific biodiscovery legislation in place, does not yet have ABS monitoring and compliance mechanisms.

The Ministry of Foreign Affairs and Trade (**MFAT**) is designated as the National Focal Point for the Nagoya Protocol, however in practice is limited to referring requests from researchers to relevant central and local government agencies such as DOC and MPI.³

New Zealand is required to report on our domestic implementation of the CBD, including our progress towards our National Biodiversity Strategy and Action Plan and our national targets towards the GBF adopted by the CBD in 2022.

³ TPK is the National Focal Point for Article 8(j) of the CBD which is focused on recognising and respecting the rights of Indigenous and Local Communities to their knowledge, innovations, and practices related to biodiversity conservation.

As part of our national report, we are expected to report against a common set of global indicators which will track progress towards the global targets. The GBF outcome monitoring framework includes indicators regarding the sharing of benefits arising from biodiversity that New Zealand will report on.

The role of TPK under the CBD includes supporting access and benefit-sharing where needed. TPK regularly engages with Māori stakeholders and experts to discuss what Article 8(j) means in practice, and this helps shape negotiation briefs for hui such as COP16, Article 8(j) working group meetings, and the upcoming Subsidiary Body on Implementation meeting in Panama. These briefs ensure Māori rights and interests are reflected in New Zealand's negotiating position and help guide contributions in international discussions and international policy.

TPK also supports Māori to apply for funding through the CBD to enable their participation in these international processes alongside other Indigenous representatives.

Pathways to taking innovations with taonga species and associated mātauranga Māori towards commercialisation

People engaging in commercial biodiscovery with taonga species and associated mātauranga Māori currently face limited and long pathways for realising commercialisation potential for their research.

This is due to:

- capacity and capability challenges, particularly for kaitiaki leading or wanting to lead projects;
- limited research funding;
- limited foreign investment pathways; and
- New Zealand's current IP settings for commercial biodiscovery.

Capacity and capability challenges

The Nagoya Protocol establishes the ABS Clearing-House as a means for sharing information related to ABS. It allows countries to share information on procedures for accessing genetic resources and monitor the utilisation of the resources along the value chain. The ABS Clearing-House plays a key role in enhancing the legal certainty and transparency that both providers and users of genetic resources, as well as associated traditional knowledge, are looking for. New Zealand is not yet a Party to the Nagoya Protocol and does not share information on the ABS Clearing-House.

At a domestic level, a biodiscovery system should enable Māori and kaitiaki-led approaches to addressing capacity and capability challenges. For example, there are already some developments underway that explore Māori-led biotechnology collaborations and kaitiaki-led utilisation of taonga species.

Limited research funding

There are several public research funds which kaitiaki and other researchers can access for science and research activities with taonga species and associated mātauranga Māori. For example, MPI's Primary Sector Growth Fund³³ (previously Sustainable Food and Fibre Futures) and Māori Agribusiness Innovation Fund,³⁴ MBIE's Vision Mātauranga Capability Fund (now replaced by He Ara Whakahihiho Capability Fund)³⁵ and Strategic Science Investment Fund,³⁶ and NZTE co-funding services (International Growth Fund).³⁷

There is limited research funding available outside of government, including the Agricultural and Marketing Research and Development Trust (**AGMARDT**) Fund which provides grants to support innovation, research, and capability development in the food and fibres sector.³⁸

Aside from these funding streams, there appears to be no other public funding or tools dedicated to uplifting kaitiaki capacity and capability to lead more commercial biodiscovery with their taonga species and associated mātauranga Māori.

Some Public Research Organisations have invested in uplifting kaitiaki capacity and capability within their existing resources, including Plant & Food Research through their provision of technical advice and templates for ABS.

Iwi, hapū and Māori are leading the way with uplifting kaitiaki capacity and capability, often in their own time and at their own expense. For example, through collaborating on biodiscovery initiatives with indigenous plants such as kānuka, wairuakohu, karamu, makomako and pekepeke kiore and developing structures and frameworks for collectivising to pursue biodiscovery initiatives, such as Tiaki Taonga.³⁹

Limited foreign investment pathways

Pillar 3 of the Government's Going for Growth plan⁴⁰ has a particular focus on enabling more foreign investment to support growth of New Zealand's businesses and strengthening international connections. One key lever is the newly formed Invest New Zealand (**Invest NZ**). Invest NZ provides resources and applications to help investors raise capital and become an eligible investment, including Active Investor Plus (**AIP**).⁴¹ Also, there is an NZTE team (within Invest NZ) dedicated to supporting Māori investment with strategy and planning tools, preparation services and connections to investors and partners.⁴²

We are hearing researchers, scientists and businesses face complex challenges in accessing investment to stimulate more of their commercially viable biodiscovery projects towards commercialisation. The global biotechnology market was estimated to be worth US\$1.6 trillion (approximately NZ\$2.78 trillion) in 2024. It is predicted to achieve a compound annual growth rate (**CAGR**) of 13.6%, advancing to approximately US\$5.85 trillion by 2034.⁴³ New Zealand is positioned well in the world, ranking fourth for innovation potential in biotechnology,⁴⁴ however more investment is needed.

We are seeing very few examples of foreign investment into commercial biodiscovery in New Zealand at the moment. Some examples are the partnership between Te Rūnanga o Ngāti Whātua and Roche Pharmaceuticals⁴⁵ and the deal Hikurangi Bioactives Partnership has done with a United States company for the kānuka-based eczema treatment. Some iwi representatives at the New Zealand Infrastructure Investment Summit 2025 identified access to capital as being one of the key barriers to progressing projects to commercialisation.⁴⁶

There are various overseas biotechnology fora including AusBiotech⁴⁷ and ChinaBio⁴⁸ which could generate investment opportunities, however it appears kaitiaki are not yet represented within New Zealand's industry sector representatives at those fora.

New Zealand's current intellectual property settings for commercial biodiscovery

Intellectual property (IP) legislation in New Zealand is designed to provide creators and innovators certain exclusive abilities to allow them to control the use of their creations and inventions (so long as they are expressed in tangible form), ensuring they can benefit from their investment in developing their creation or innovation, for example:

- the Patents Act 2013 provides protection for new inventions, granting exclusive rights to the inventor for up to 20 years; and
- the Plant Variety Rights Act 2022 grants breeders' exclusive rights to new plant varieties, encouraging agricultural innovation and provides protections for kaitiaki relationships with taonga species.

Under the Patents Act 2013, a researcher who isolates a novel microorganism from a native ecosystem that produces a unique antibiotic compound could seek patent protection under the Patents Act 2013. Provided the invention meets the criteria of novelty, inventive step, and industrial applicability, the patent would grant the researcher exclusive rights to manufacture, use, and license the compound, subject to renewal fees being paid at regular intervals.⁴⁹

Under the Plant Variety Rights Act 2022, a plant breeder who develops a new cultivar of native flax with enhanced fibre strength and disease resistance could apply for Plant Variety Rights under the Act. If the variety is novel, distinct, uniform, and stable, the breeder would gain exclusive rights to propagate and sell the plant for up to 25 years, subject to renewal fees. This enables commercialisation through licensing agreements with growers or textile producers. Importantly, the Act also includes provisions for Māori consultation, ensuring that kaitiaki relationships with taonga species are respected during the IP process.⁵⁰

However, the mechanisms within these pieces of legislation do not specifically address the nuances associated with IP generated from commercial biodiscovery with taonga species and associated mātauranga Māori as the primary purpose of the patent and PVR system is to enable exploitation. It was never intended to accommodate mātauranga Māori or respond to the interests of kaitiaki.⁵¹ While the Plant Variety Rights Act 2022 has made some strides in this space, the rest of the system is yet to catch up.

Obtaining patents and plant variety rights are not the only tools to enable biodiscovery commercialisation in New Zealand, however as we are approaching this work in a phased manner, they are within our initial scope.

Additionally, through the government's current SI&T reforms, there is a proposal to grant IP ownership to researchers within universities and public research institutes. While these reforms do not involve changes to IP legislation, they may influence how IP arising from publicly funded biodiscovery research is managed. This could be relevant to a Biodiscovery system in terms of ensuring alignment with benefit sharing and kaitiaki interests.

There are limited provenance mechanisms within current biodiscovery practices

Demonstrating provenance, including the cultural attributes, origins and kaitiaki relationships with taonga species and associated mātauranga in a commercial biodiscovery context enables people to differentiate indigenous/premium biotechnology products from standard offerings. For example, globally there is increasing demand from consumers for sustainably and ethically produced products, with consumers willing to pay premiums for these attributes.⁵²

There are ways to do this through disclosure of origin requirements, demonstrating provenance and certification processes.

Disclosure of origin requirements

In May 2024, TPK contributed to the successful conclusion of the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (**GRATK Treaty**) at the World Intellectual Property Organization (**WIPO**) headquarters in Geneva, Switzerland. This Treaty centres around implementing a disclosure of origin mechanism for genetic resources and associated traditional knowledge in patent applications.

Disclosure of origin is not currently a requirement in New Zealand patent applications, but some processes exist to protect genetic and biological resources derived from taonga species and associated mātauranga Māori.

The Patents Māori Advisory Committee (**PMAC**), which was established in 2013, aims to protect taonga species and mātauranga Māori. The New Zealand Intellectual Property Office (**IPONZ**) refers some applications to PMAC if the invention is derived from taonga species or associated mātauranga Māori (regardless of whether the applicant indicates it is derived from those sources). PMAC advises on whether the commercial exploitation is likely to be contrary to Māori values.

Currently, an issue with this process is it is not mandatory to disclose whether an invention is derived from taonga species or associated mātauranga Māori when applying for a patent in New Zealand. There are also some complexities around working out the meaning of 'derived'. When filing a patent application, applicants are invited to indicate whether their invention is derived from taonga species or

associated mātauranga Māori by ticking a box^k and optionally providing supporting information. This is not a mandatory requirement under the Patents Act 2013. Rather, it is a voluntary disclosure mechanism intended to help facilitate consideration of the application by the PMAC, which assesses whether the commercial exploitation of the invention may be contrary to Māori values.

PMAC has reviewed 18 patent applications since its establishment, nine of these related to mānuka. Only two applications have been identified as being deemed contrary to Māori values and were subsequently abandoned by the applicants.^{l53}

Demonstrating provenance

New Zealand has not yet put in place provenance mechanisms or any specific certification system which would enable consumers to distinguish products in this way.

There are some indigenous-led examples of provenance mechanisms, for example Local Context labels – an initiative for Indigenous communities and local organisations. Developed through sustained partnership and testing within Indigenous communities across multiple countries, the labels allow communities to express local and specific conditions for sharing and engaging in future research and relationships in ways that are consistent with already existing community rules, governance and protocols for using, sharing and circulating knowledge and data.⁵⁴

Certification processes

There is currently no process to demonstrate to consumers and investors that a product is an ethical, premium indigenous product, and no ability for sellers to benefit from a certification of ethical, premium indigenous product.

However, there are certification processes that exist which allows sellers to benefit and differentiate their product by using certification marks to communicate to consumers that it meets a particular standard. For example, industry sector-specific processes within the cosmetics, pharmaceuticals and natural health products sectors, NZ Inc (FernMark)⁵⁵ and an ethical biotrade mark.⁵⁶

New Zealand could better leverage trade and export opportunities

There are opportunities to harness and leverage New Zealand's international connections to enhance trade and export potential for indigenous/premium biotechnology products, including through existing Free Trade Agreements (FTAs), the Indigenous Collaboration Arrangements (ICAs)⁵⁷ and the Indigenous Peoples Economic and Trade Cooperation Arrangement (IPETCA).⁵⁸

If a biodiscovery system was to be developed, it will need to look at using existing and formalised FTAs and arrangements, such as the IPETCA, to create more international trade relationships for the benefit of the Māori economy.

^k The official terminology used is 'New Zealand plants or animals' and 'Māori traditional knowledge' in this process. This is synonymous with our use of taonga species and associated mātauranga Māori.

^l These two applications were regarding a 'Mānuka Honey Based Dietary Supplement' and a 'Kawakawa Pesto'. Regarding the mānuka honey application, when considering whether commercial exploitation of the invention may be contrary to Māori values, the Patents Māori Advisory Committee noted 'that Māori have significant interest in the commercial exploitation of Mānuka honey and therefore growing objections to the commercial exploitation of Mānuka honey at the expense of Māori producers.' On these grounds, the PMAC advised that the commercial exploitation of the invention was likely to be contrary to Māori values. The kawakawa pesto applicant did not respond to the issues raised and their application was abandoned.

For example, potentially through leveraging Te Tiriti o Waitangi/the Treaty of Waitangi exception clauses, as well as dedicated provisions for Māori and Indigenous Economic and Trade Cooperation chapters.

It will also need to leverage international connections under the ICAs to enable collaboration between iwi and Māori exporters and researchers, and other Indigenous communities whose point of difference provides them with high export markets in biotechnology products, for example South Africa's Rooibos Tea Market.⁵⁹

Consultation questions

7. Have we correctly described the status quo and its challenges, or are there other aspects we should consider as well?

Section 3. Biodiscovery policy aspects for public consultation

3.1 A proposed vision, guiding principles and outcomes for a biodiscovery system

We have developed a proposed overarching vision, guiding principles and outcomes for a biodiscovery system in New Zealand using findings from our early engagement and research. We intend to draw on these concepts as the foundations for our ongoing policy development and will continue to test and refine them through engagement with iwi, hapū, Māori and other stakeholders.

Overarching vision

New Zealand has a pathway for biodiscovery with indigenous species and associated mātauranga Māori (from access to commercialisation) in a way that allows for sustainable use of our unique biodiversity, recognises kaitiaki relationships, and realises the benefits of biodiscovery through appropriate mechanisms.

Guiding principles

- Supports the protection and restoration of indigenous biodiversity.
- Is consistent with Te Tiriti o Waitangi/the Treaty of Waitangi including iwi, hapū and Māori-led approaches to kaitiakitanga.
- Supports the protection and restoration of indigenous biodiversity.
- Ensures ethical and reputable practice.
- Creates transparency and certainty.
- Ensures fair and equitable benefit sharing.
- Is accessible and builds capability and capacity.
- Is consistent with New Zealand's existing international obligations and related agreements under consideration.

Outcomes

- Biodiversity underpins biodiscovery so New Zealand's indigenous species and their habitats are thriving.
- Benefits derived from biodiscovery are realised and shared by kaitiaki, users, researchers and providers, and flow back to taonga species and te taiao.
- Social, cultural and environmental values and roles of kaitiaki, taonga species and te taiao are respected.

- Mātauranga Māori underpins kaitiaki relationships so mātauranga associated with taonga species should be recognised, protected, and supported to thrive.
- Enables and creates clear pathways for investment and innovation in biodiscovery.
- Provide certainty and efficiency, with appropriate mechanisms for recognising multiple interests in taonga species and mātauranga Māori.
- Economic development and innovation are fostered and enabled to support both the Māori and wider New Zealand Economy.

The overarching outcome for the first phase of this work is to enable new economic development and social opportunities, including ora or health benefits, for Māori and all New Zealand through:

- adherence to Te Tiriti o Waitangi/the Treaty of Waitangi and consistency with the values and principles of Tiaki Taonga;⁶⁰
- adherence to international obligations; and
- through better recognition and protection of kaitiaki relationships with taonga species and associated mātauranga Māori within a biodiscovery system.

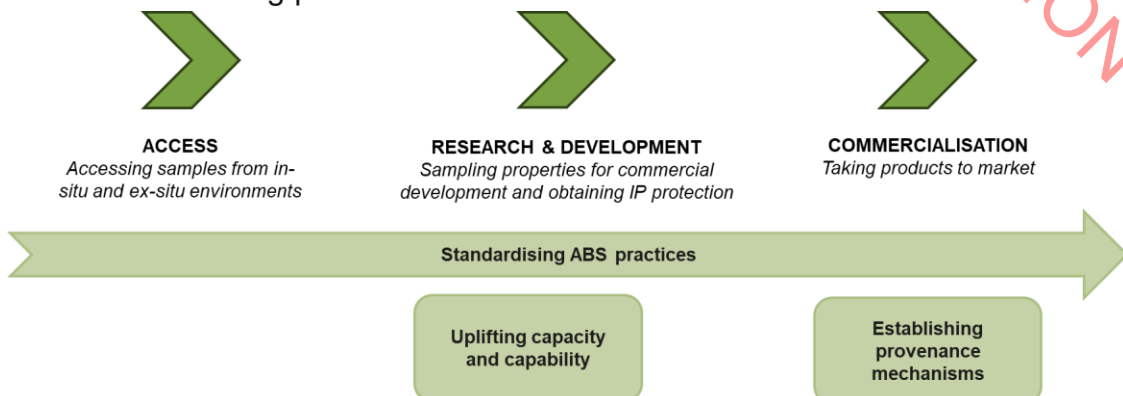
Consultation questions

8. What are your views on the proposed vision, guiding principles and outcomes for a biodiscovery system in New Zealand?

The key levers

The key levers for embedding the proposed overarching vision, guiding principles and outcomes within development of a biodiscovery system sit across the biotechnology chain, from access through to commercialisation. We propose these are:

- standardising ABS practices;
- uplifting capacity and capability; and
- establishing provenance mechanisms.



Embedding these key levers would help to create a biodiscovery system that:

- **clarifies what the rules** are for people and organisations to do commercial biodiscovery in an appropriate way. This means setting up things like access permissions, benefit sharing protocols and guidance for people and companies;
- **establishes clear pathways** for Māori entities, Government and companies to collaborate to accelerate and increase the number of positive and sustainable biotechnologies with indigenous plants; and
- **establishes standard ways of doing things** to align us with international standards and practices for commercial biodiscovery.

3.2 Standardising Access and Benefit Sharing practices

New Zealand's current settings for commercial biodiscovery are unstructured, do not incentivise best practice or enable benefits to be realised for New Zealand.

This means current settings do not:

- adequately recognise and protect kaitiaki relationships with taonga species and associated mātauranga Māori;
- incentivise people to use best practice when accessing and utilising taonga species and associated mātauranga Māori for commercial biodiscovery;
- provide protection and benefit sharing mechanisms to address misuse of those taonga;
- economic and health benefits, including monetary and non-monetary benefits¹³ derived from commercial biodiscovery, to be captured and fair and equitably shared with iwi, hapū, Māori, all of New Zealand and the environment;
- provide an avenue to address individual and collective kaitiaki relationships in the instances of any crossover, including where there is no established kaitiaki mandate; or
- address risks of users bypassing collective decision-making processes in ABS arrangements.

Outcome

Standardising ABS practices, will ensure that users, providers and investors have confidence that their commercial biodiscovery practices align with international standards, better recognise and protect kaitiaki relationships with taonga, and will result in broad benefits for and with Māori, regionally and across New Zealand.

¹³ A description of monetary and non-monetary benefits can be found here [Text of the Nagoya Protocol](#).



Proposal 1 – standardising access practices

Existing access practices have not been explicitly designed with commercial biodiscovery in mind. Therefore, developing **standardised access practices**, starting with taonga species of plants, fungi and algae and associated mātauranga Māori, will provide certainty and transparency for people undertaking commercial biodiscovery activities with taonga species and associated mātauranga Māori.

This involves first establishing clear and fair rules for access to taonga species and associated mātauranga Māori based on free (i.e. reaching the point of willing agreement), prior and informed consent of kaitiaki and mutually agreed terms, informed by and implemented alongside kaitiaki-led protocols such as Tiaki Taonga (see **Proposal 2** below).



Option 1 – legislative access mechanism

The first step in the value chain is to access samples derived from taonga species from their environments. Currently, there is no standardised way to do this in New Zealand which creates uncertainty and complexity for those wanting to undertake commercial biodiscovery activities with taonga species and associated mātauranga Māori.

Standardising access practices through a legislative mechanism that would involve **establishing an integrated access and permissions regime based on free, prior and informed consent** could address the current challenges. This would mean developing comprehensive permitting (or similar) procedures and guidelines for access to taonga species and associated mātauranga Māori that have embedded requirements for free, prior and informed consent of kaitiaki, together with benefit-sharing agreements prescribed within a Biodiscovery Bill and monitored by a Competent National Authority (see **Proposal 2** below).

This could be similarly designed to South Africa's Bioprospecting, Access and Benefit-Sharing Regulatory framework.⁶¹

Policy design could be phased, starting with access to taonga species of plants, fungi and algae and associated mātauranga Māori located on:

- Crown land, including public conservation land; and
- city parks and reserves.

The next phase of policy design could cover access to taonga species of plants, fungi and algae and associated mātauranga Māori located on:

- private land and whenua Māori; and
- in *ex-situ* collections, including collections held in research organisations, botanical gardens, seed banks, museums and herbaria. We could start first with domestic *ex-situ* collections then look at international collections.

We propose there could be two types of access permissions. For example, permits (or similar), procedures and guidelines which cover access to taonga species and associated mātauranga Māori for the following reasons:

- scientific research which is intended to explore any commercial potential; and
- commercial use – including the subsequent use of third parties across the value chain and the export of taonga species and associated mātauranga Māori.

Under this option, applicants would need to obtain free, prior and informed consent of kaitiaki to access taonga species and associated mātauranga Māori, with requirements varying depending on the nature of intended use. This could be informed by frameworks established within kaitiaki-led protocols such as Tiaki Taonga.

Commercial use would be subject to performance-based criteria, while conditions for scientific research purposes may be less stringent. Where genetic or biological resources initially accessed for scientific research purposes are subsequently intended for commercial use, the applicant will be required to follow an alternative process aligned with commercial access requirements.

The specific permit procedures for each type of access will be clearly outlined. Additionally, permit procedures may vary depending on the location. For instance, taonga species and associated mātauranga Māori on public land may require a permit, whereas those on private land would likely involve a private agreement or contract.

A legislative access mechanism would need to be designed in a way that considers and addresses any areas of overlap with existing central government roles and responsibilities for indigenous biodiversity. For example, the current primary biodiversity functions, powers and responsibilities of DOC.

Considerations will also need to be made for any existing Iwi Management Plans (or similar) and hapū protocols relevant to the location that applicants intend to access to ensure taonga species are sustainably collected. They must also consider other relevant legislation that may be applicable (e.g. Resource Management Act 1991) as different resources are regulated by different laws and procedures.

Furthermore, resource management and potential risks to taonga species and associated mātauranga Māori may be incorporated into a new mechanism such as a Taonga Management Plan (or similar) which could be led jointly by kaitiaki,

communities, local council and/or central government. For example, South Africa has biodiversity management plans in place for some of its key indigenous plant species.⁶²

In the future phase of this work, different considerations will be required when designing access provisions for ex-situ collections. Permitting procedures for ex-situ material may differ slightly, as identifying the appropriate kaitiaki group can be more challenging. Applicants would primarily be seeking permission from the person or organisation responsible for managing or overseeing the taonga species and associated mātauranga Māori, however the details of this option would need to be worked through carefully and is not addressed in detail in this Discussion Document.

The continued development of the legislative access mechanism will need to take into account how collective rights and interests are recognised and addressed. For example, considerations should be made for situations where some kaitiaki within a collective agree to grant access, while others do not. To ensure fairness and transparency, these issues could be addressed through a structured dispute resolution process as a function of a Competent National Authority, or through collective negotiation of a Taonga Management Strategy (or similar) for the species, both of which would need to be established within a biodiscovery system.

Consultation questions

9. What potential approaches could be implemented to effectively manage and resolve overlapping interests?

Option 2 – enhancing existing access mechanisms

Alternatively, existing processes and mechanisms could be enhanced to better standardise ways of accessing samples derived from taonga species from their environments for commercial biodiscovery which are based on obtaining free, prior and informed consent of relevant kaitiaki.

This requires consideration of:

Scope:

- We could consider starting with enhancing existing access permission mechanisms for taonga species of plants, fungi and algae (e.g., on Crown land, including public conservation land and city parks and reserves) where there is strong research and development and commercialisation potential then progressively expand to include indigenous fauna, microbials, digital sequence information etc.
- We need to carefully consider where to start with any policy and operational changes. For example, whether we begin with Crown land, including public conservation land administered by DOC and city parks and reserves administered

by local authorities then progressively expand to private land, whenua Māori and ex-situ collections, for example starting with domestic collections then expanding out to international collections.

Level of Government Intervention and Role:

- Within this option, we need to consider what aspects should Government lead or enable, and what should be led by kaitiaki. Who is best positioned to take on system monitoring and enforcement responsibilities—should it be a government entity or a collaborative model across national, regional, and local bodies, for example.

Level of Compliance:

- E.g., which components should be mandatory versus voluntary based on best practice, how detailed and directive should the guidance be etc.

Potential implications of standardising access practices

- Capacity and resourcing – the proposed options will require either additional resource for implementation or may necessitate reallocation of existing resources.
- Regulatory alignment and integration – considerations must be given to how an integrated access and permissions regime would align or interact with existing legislation and regulatory frameworks administered by government agencies and local authorities. Misalignment could result in regulatory conflicts, enforcement challenges and greater ambiguity for both applicants and agencies.

Consultation questions

10. Where do you see the greatest need for improvement in existing access processes for taonga species and associated mātauranga Māori?

Proposal 2 – standardising benefit sharing practices

Currently there is no standardised way to capture and share benefits derived from commercial biodiscovery with iwi, hapū, Māori and all New Zealand across the value chain.

Developing **standardised benefit sharing practices** which provide certainty and transparency for people doing commercial biodiscovery with taonga species and associated mātauranga Māori could address the current challenges.

This would be through establishing benefit sharing protocols based on free, prior and informed consent of kaitiaki and mutually agreed terms. Standardised benefit sharing practices could be informed by frameworks established within kaitiaki-led protocols such as Tiaki Taonga.



Option 1 – legislative benefit sharing mechanism

Developing biodiscovery legislation, starting with taonga species of plants, fungi and algae and associated mātauranga Māori, which is supported by kaitiaki-led protocols is one way of ensuring that there is a standardised way to capture and share benefits derived from commercial biodiscovery across the value chain.

For example, this could be through a **Biodiscovery Bill** with associated secondary and tertiary instruments, including ABS regulations, notices/codes of practice, tools and templates informed that first applies to taonga species of plants, fungi and algae and associated mātauranga Māori. There would be an ability to increase coverage of the Bill over time, building it up and out in a way that enables it to cover other categories such as indigenous fauna, microbials, digital sequencing information etc. The Bill would be accompanied by **kaitiaki-led protocols** such as Tiaki Taonga.

A Biodiscovery Bill which first applies to taonga species of plants, fungi and algae and associated mātauranga Māori could be built around the following features (in Table 2 below).

Table 2

Establish standards	- For access and export of genetic and biological resources derived from taonga species and associated mātauranga Māori (see Proposal 1 above). - For the scope of commercial biodiscovery with genetic and biological resources derived from taonga species and associated mātauranga Māori. - For ABS, including what is fair and equitable sharing of monetary and non-monetary benefits arising from commercial biodiscovery with genetic and biological resources derived from taonga species and associated mātauranga Māori, and who the standards will apply to (e.g. which individuals and collectives in New Zealand and overseas). - For what constitutes free, prior and informed consent of iwi, hapū and Māori as kaitiaki, and how this can be evidenced (which also addresses aspects of Proposal 1 above).
----------------------------	--

Establish ABS processes	• Who can enter benefit sharing arrangements and associated approval requirements and processes. For example, Brazil's law requires benefit-sharing agreements between users and providers (generally indigenous communities) which outline how benefits, both monetary and non-monetary, will be shared. Agreements must be approved by Genetic Heritage Management Council. • How benefits will be captured and distributed. For example, a benefit sharing fund administered at a central (e.g., Competent National Authority), regional or local level (for example, by governance entities established for specific taonga species or kaitiaki collectives). Consider multilateral and bilateral mechanisms (e.g. Brazil's National Benefit Sharing Fund).¹⁴
Enable kaitiaki-led protocols	• Establish mechanisms for iwi, hapū and Māori as kaitiaki to establish and implement community protocols as one way of establishing and demonstrating free, prior and informed consent. For example, existing Tiaki Taonga framework⁶³ and Hikurangi Bioactives IP Guide.⁶⁴
Establish Competent National Authority and National Focal Point	• Establish infrastructure for a Competent National Authority and National Focal Point, including roles and responsibilities. This requires consideration of where these roles would best sit, for example within existing government agency(ies), within a new government agency or outside of government e.g., through a Māori-led entity; • Establish a New Zealand clearing-house mechanism (see Proposal 4 below). • Establish dispute resolution processes, e.g. mediation or other alternative dispute resolution service (including funding pathway) to support resolution of issues such as competing claims to taonga species and kaitiaki governance arrangements. • Establish monitoring and compliance mechanisms (see Proposal 3 below).
Establish biodiscovery regulations	• Start with ABS regulations for monetary and non-monetary benefits derived from commercial biodiscovery with taonga species of plants, fungi and algae and associated mātauranga Māori.

¹⁴ The National Fund for Benefit-Sharing (FNRB) was established to receive the money from benefit sharing and fines and aims to support actions and activities that acknowledge the value of genetic heritage and associated traditional knowledge and promote its use in a sustainable way. When benefit sharing comes from genetic heritage or ATK with unidentifiable origin, the Federal Government is indicated as the recipient of the benefit sharing to be deposited in the FNRB, which is set at 1% of annual net revenue obtained from the use of the TK resource. When the economic exploitation comes from ATK of identifiable origin, the deposit in the FNRB will be 0.5% of the annual net revenue, in addition to the amount negotiated directly with the user.



- | | |
|--|--|
| | <ul style="list-style-type: none"> • Establish processes (when, how and who the parties are). • Establish standard terms and conditions. • Establish processes for fees and waivers. • Establish processes for evidencing free, prior and informed consent. • Establish benefit sharing outcomes e.g. South African benefit sharing regulations require alignment with building capability and capacity of indigenous communities and conservation/utilisation or commercial development of the taonga itself. • Establish disbursement mechanisms including frequency. • Establish review and reporting mechanisms, including triggers for when benefit sharing agreements need to be renegotiated, which could include: <ul style="list-style-type: none"> ○ a change in the utilisation of taonga species and associated mātauranga Māori from non-commercial to commercial purposes; ○ a new or different use is discovered on unexpected properties, new stakeholders are introduced to the project. This would require a subsequent use agreement to be entered into with the downstream user which includes additional terms that align with existing benefit sharing agreement. In these circumstances, the original user as well as the provider of the genetic or biological resource should be required to enter into the subsequent use agreement; an application for IP rights; and/or ○ transfer (e.g. distribution) of genetic or biological material to a commercial partner. • Enable other tertiary instruments e.g. codes of practice/notices which establish benefit sharing protocols. These could be specific to particular taonga species, starting with those species we are seeing widespread commercial activity with. Consider a model such as MPI's Official Assurance Scheme.⁶⁵ |
|--|--|

Tools and templates to complement Biodiscovery Bill and regulations could include:

- benefit sharing agreement model templates;
- checklists;
- guidelines for entering benefit sharing agreements and subsequent use agreements; and
- kaitiaki-led protocol model templates.

Kaitiaki-led protocols could address:

- appropriate and ethical access, use and sharing of taonga species and associated mātauranga Māori;
- appropriate engagement with kaitiaki;
- identification of kaitiaki relationships;
- kaitiaki governance arrangements; and
- standards and processes for obtaining free, prior and informed consent of kaitiaki.

Option 2 – Government benefit sharing policy mechanism

Alternatively, we could look at standardising ABS practices starting with taonga species of plants, fungi and algae and associated mātauranga Māori through developing and implementing all-of-government **policy settings** accompanied by **kaitiaki-led protocols**. Policy settings could be adapted over time to cover additional categories such as indigenous fauna, microbials, digital sequence information etc.

For example, develop a government policy statement or strategy for ABS starting with taonga species of plants, fungi and algae and associated mātauranga Māori. This could be accompanied by agency policies, implementation plans, tools and templates and kaitiaki-led protocols.

A government policy statement of strategy for ABS could be designed in a similar way to:

- The New Zealand Biodiversity Strategy, Te Mana o Te Taiao⁶⁶ which sets an overarching strategy with targeted implementation initiatives; or
- the Queensland Biotechnology Code of Ethics⁶⁷ which is not legally binding, but it is considered mandatory for all organisations undertaking biotechnology activities, including biodiscovery, who receive state funding or assistance.

Kaitiaki-led protocols could address:

- Same as option 1.

It is proposed that **development of monitoring and compliance mechanisms** to address unethical practice and misuse should happen at a later stage, once access and benefit sharing mechanisms have been established. This could include looking at how to establish a Competent National Authority and considerations of where this role best sits. For example, as a function within an existing government agency, through establishing a new entity e.g. a new biodiscovery regulator, or outside of government e.g. through a Māori-led entity.

It would also involve considering what roles and responsibilities a Competent National Authority would have, including for example:

- administration of a Biodiscovery Bill and regulations;
- monitoring and compliance of access and benefit sharing;

- assisting in operationalising the use of the Cali fund and DSI mechanism⁶⁸ where appropriate;
- setting standards for commercial biodiscovery;
- assessing triggers for when access and benefit sharing arrangements need to be renegotiated, including subsequent use scenarios;
- dispute resolution services;
- data analysis and reporting back to CBD on access and benefit sharing to meet the requirements of the Nagoya Protocol; and
- whether it will be designated as the National Focal Point which has responsibility for international coordination (e.g. serving both roles at the same time).

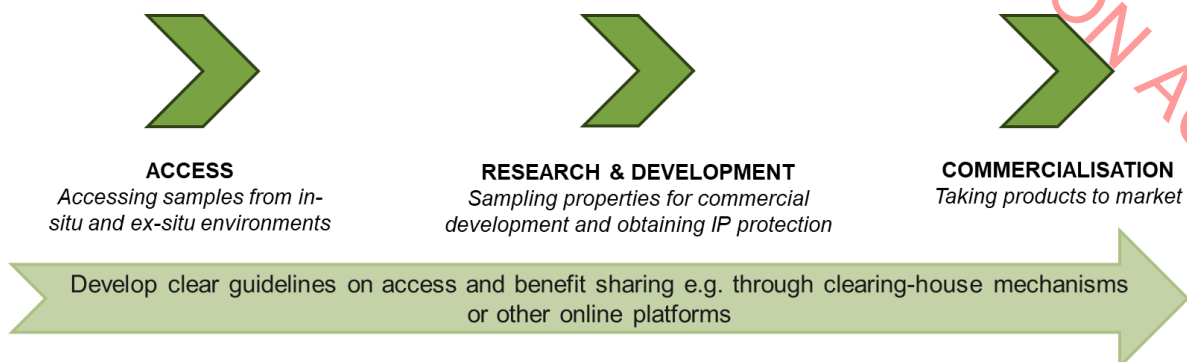
Potential implications of standardising benefit sharing practices

- Consideration of how a Biodiscovery Bill would interact with other legislative mechanisms, including those where currently Māori Advisory Committees are part of decision-making processes (e.g. under the Plant Variety Rights Act 2022 and the proposed Gene Technology Bill).
- Potential resource implications, for example costs associated with establishing new legislation, processes and system infrastructure.
- Practical aspects of the proposal, including how free, prior and informed consent can be evidenced and where functions of a Competent National authority might best sit.

Proposal 3 – establishing access and benefit sharing guidance

Currently there are no clear guidelines on access and benefit sharing guidance which enable researchers and other users to interact in a standard way.

Establishing clear and accessible **access and benefit sharing guidance** to support decision-making around processes across the value chain could address the current challenges.



Option 1 – domestic clearing-house mechanism

Establishing a **domestic clearing-house mechanism** (e.g., online portal or platform) starting with taonga species of plants, fungi and algae and associated mātauranga Māori which is administered by the Competent National Authority is one way of ensuring there is clear guidance available for researchers and other users to interact in a standard way.

A clearing-house mechanism would:

- provide comprehensive guidance on the ABS process (including legislative and non-legislative requirements);
- provide model templates (e.g. for benefit sharing agreements and kaitiaki-led protocols);
- direct users to relevant stakeholders and existing mechanisms (e.g., kaitiaki-led protocols and guidelines); and
- require users to provide proof of ABS based on free, prior and informed consent and mutually agreed terms with relevant provider/kaitiaki upon requesting to access information from the clearing-house mechanism. For example, the Competent National Authority could work alongside the relevant regional and local competent authority representatives (e.g. Regional Māori Advisory Board and Taonga Secretariat) to assess/consider applications alongside kaitiaki prior to approving access.

Option 2 – enhancing existing guidance

Alternatively, we could use existing government agency websites (i.e., agencies that have a current role in the biodiscovery process, such as MBIE, DOC etc.) to improve the profile and reach of existing guidance on ethical practice for benefit sharing in relation to genetic resources and biological resources derived from taonga species and associated mātauranga Māori.

This could include:

- existing guidance on cultural IP protection (i.e., safeguarding Māori and other Indigenous Peoples' traditional knowledge, cultural expressions and taonga from misuse and exploitation) and data sovereignty. E.g., He Tohu Ārahi Guidelines and Te Nohonga Kaitiaki; and
- kaitiaki-led protocols (e.g., Tiaki Taonga).

Potential implications of establishing access and benefit sharing guidance

- Considerations of how to align any new information systems with data sovereignty principles, including CARE and FAIR principles and who is responsible for data governance.

- Alignment of any new guidance with existing guidance on cultural IP protection and data sovereignty (e.g., He Tohu Ārahi Guidelines and Te Nohonga Kaitiaki); and kaitiaki-led protocols (e.g., Tiaki Taonga).
- Resource implications, including establishment of new system infrastructure.

Consultation questions

11. What are your views on the policy proposals and options to standardise ABS practices? What else should we be considering?

3.3 Uplifting capacity and capability

There are limited and complex pathways to commercialising biodiscovery involving taonga species and mātauranga Māori. Challenges include navigating an IP system that does not fully recognise collective rights or mātauranga Māori (as discussed in section 2.1). Kaitiaki may also face barriers such as high costs or difficulty meeting patent criteria, making it harder to protect and commercialise their innovations.

These challenges stem from a range of things, including:

- capacity and capability challenges, particularly for kaitiaki leading projects;
- limited research funding;
- limited foreign investment pathways; and
- New Zealand's current IP settings for commercial biodiscovery not fully recognising the relationship that kaitiaki have with taonga species and associated mātauranga Māori.

Outcome

Iwi, hapū and Māori as kaitiaki of taonga species and mātauranga Māori have the tools, resources and system settings they need to lead more Biodiscovery initiatives through to commercialisation.

Proposal – gather insights from a platform prototype

Gather insights from a platform prototype to streamline commercial pathways and to test and evaluate a potential biodiscovery system, starting with a focus on taonga species of plants, fungi and algae and associated mātauranga Māori. This prototype is a chance to further test, at scale, access and benefit sharing processes operationally. It will also act as an early enabler of early stage biodiscovery while wider policy work is being undertaken.

This prototype focuses on how Māori entities, Government and private organisations can collaborate to accelerate and increase the number of positive and sustainable biotechnologies relating to taonga species. Features of the platform prototype would include:

- the Māori-led areas will have mechanisms to recognise Māori interests, including outreach to increase involvement, enable dispute resolution and facilitate biotechnology collaboration;
- private entities will have opportunities to collaborate, participate and invest in these activities including providing capability and capacity to support faster commercialisation;
- the Government will act in a facilitation role to connect the interested parties. This includes facilitating access to capital, providing guidance on best practice, monitoring and compliance, and data collection and reporting requirements; and
- improving connections between existing and new science and research funding to ensure they stimulate funding towards kaitiaki-led research projects. This may include the development of a funding portal to make it easier for people to see and access government funding that is available for research and science initiatives with taonga species and associated mātauranga Māori, for example He Ara Whakahiriko.⁶⁹

The platform prototype aims to:

- align global standards, connects kaitiaki, scientists, investors and innovators within a framework that safeguards mātauranga Māori, ensures benefit sharing and drives growth and diversification of New Zealand's bioeconomy;
- provide a clear framework for all players within the bioeconomy to know how to recognise kaitiaki relationships and work collaboratively;
- ensure iwi, hapū and Māori are enablers of innovation rather than stakeholders creating barriers to research and development activities with taonga species and associated mātauranga Māori; and
- maximise iwi, hapū and Māori involvement to ensure appropriate utilisation happens in a way that meets customers and consumers' expectations that products from New Zealand have met a high ethical standard necessary to have premium value.

What is the outcome we expect:

- It is expected this proposed platform prototype will contribute to the doubling of export values in ten years by enabling the biotechnology, cosmetics, functional food and natural health supplements industries to rapidly expand and accelerate the development and commercialisation of a much wider range of products and ingredients.
- This structure enables New Zealand to be compliant with international standards.
- Enables the development and testing of potential infrastructure to build interest and acceptance to a critical mass if the system works well and avoids the need for compliance-based regulation being imposed before industry and communities are

ready to adopt the new ways of undertaking biodiscovery and commercialisation of products derived from taonga species.

- Provides valuable insights for the biodiscovery system policy work that TPK is leading.

Consultation questions

12. What are your views on how the platform prototype to uplift capacity and capability could inform TPK's ongoing biodiscovery system policy work?

3.4 Establishing provenance mechanisms

Globally, there is increasing demand from consumers to know where their products come from and how they were produced (which are provenance elements).

Global consumers are increasingly wanting sustainably and ethically produced products, with consumers willing to pay premiums for these attributes.⁷⁰ However, because New Zealand does not have biodiscovery system mechanisms in place to enable people to demonstrate provenance, which includes things like the cultural attributes of their products, where they come from (i.e., their origins) and kaitiaki relationships, consumers and markets cannot differentiate indigenous/premium biotechnology products from standard offerings.

Outcome

Increasing value of indigenous products through highlighting their point of difference commercially, increasing transparency and accountability, facilitating international cooperation and preventing biopiracy.



Proposal 1 – establishing a Disclosure of Origin mechanism

Accede to the **WIPO GRATK Treaty** and establish a **Disclosure of Origin** setting in the **Patents Act**.

49

In 2018, MBIE undertook public consultation on whether New Zealand should implement a disclosure of origin setting in the patent application process. This was prior to the conclusion of the WIPO GRATK Treaty, however at that time the public was responsive and widely in favour of introducing such a mechanism in New Zealand.⁷¹

At that time, MBIE considered two problems that could be addressed by the introduction of a disclosure of origin requirement in New Zealand's patents regime:

- a. New Zealand's patents regime has measures to prevent the grant of patents over inventions for which commercial exploitation could be offensive to Māori. Relevant applications should be referred to the Patents Māori Advisory Committee. However, there is a currently a risk that patent applications for inventions that involve indigenous plant and fauna species or mātauranga Māori may be missed during the patent examination process, and therefore not be referred to the Patents Māori Advisory Committee for consideration. A disclosure of origin requirement would help to ensure relevant applications are put before the Committee.
- b. It is difficult for interested groups, including Māori, the public and Government, to find information on uses of New Zealand genetic resources and/or mātauranga Māori. This is an issue for all providers of genetic resources and traditional knowledge. A disclosure of origin requirement would allow New Zealand's patents register to be used by interested groups to potentially identify some uses and users of genetic resources and/or traditional knowledge that they have an interest in.

Joining the GRATK Treaty could help address the issues above. The GRATK Treaty establishes a mandatory patent disclosure of origin requirement for patent applicants to disclose the country of origin of the genetic resources and/or the Indigenous Peoples or local community providing the associated traditional knowledge, if the claimed inventions are based on genetic resources and/or associated traditional knowledge.

The objectives of this Treaty are to:

- enhance the efficacy, transparency and quality of the patent system with regard to genetic resources and traditional knowledge associated with genetic resources; and
- prevent patents from being granted erroneously for inventions that are not novel or inventive with regard to genetic resources and traditional knowledge associated with genetic resources.



Joining the GRATK Treaty is considered an 'easy win' mechanism because of its low cost, high benefit opportunities when it is implemented. In 2024, Te Puni Kōkiri Commissioned Castalia to undertake an economic analysis as well as potential advantages and disadvantages of the proposed disclosure or origin regime as outlined within the GRATK Treaty, building off similar work they did for MBIE in 2018. This report is attached as supplementary paper A.

Some additional advantages are outlined below:

- The GRATK Treaty acknowledges the role Indigenous Peoples and local communities hold as stewards of biodiversity and holders of valuable traditional knowledge;
- The Treaty may also help promote responsible innovation by ensuring traditional knowledge (i.e., mātauranga Māori in the New Zealand context) is integrated into research ethically; and
- becoming a Contracting Party signals support for global efforts to increase transparency in patent processes globally, enhancing diplomatic credibility.

Disclosure of origin requirements provide a mechanism for states and Indigenous Peoples to monitor the use of their genetic resources and traditional knowledge in research and development that results in patent applications being applied for. This is particularly important where Indigenous Peoples have not permitted access to the genetic resources or traditional knowledge, or the benefits from the commercialisation of those inventions could be shared with them. Disclosure of origin requirements may also facilitate better quality patent examination, by providing intellectual property offices with information that is relevant to patentability.

If implemented domestically, the proposed disclosure of origin requirement under the treaty would mandate applicants to disclose the country of origin of any genetic resource. If the country of origin of origin is unknown, or if the genetic resources was obtained ex-situ, applicants must declare the source of it.

Where the claimed invention in a patent application is based on traditional knowledge associated with genetic resources, applicants must also disclose the Indigenous Peoples or local community who provided the traditional knowledge associated with genetic resources, or the source of the traditional knowledge if the origin is unknown.

If the origin or source for both genetic resources and associated traditional knowledge is unknown to the applicant, they must provide a declaration to this effect. The Government, through IPONZ, must provide guidance, put measures in place to address failures to disclose, and make the disclosed information available by standard patent procedures.

Ultimately, joining the WIPO GRATK Treaty is a transparency mechanism to show the origin or source of genetic resources and any associated traditional knowledge in patent applications. It may provide opportunity for consumers to gain more knowledge of patented products on the market.

The full text of the GRATK Treaty can be read here: [WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge](#).

Additional to the above, joining the GRATK Treaty may have the following environmental, cultural and social impacts:

- Environmental - by requiring disclosure of genetic resource origins in patent applications, the Treaty encourages responsible sourcing and helps prevent biopiracy, which can support conservation efforts. It also promotes awareness of the ecological value of genetic resources, potentially leading to more sustainable harvesting and use practices.
- Cultural - by formalising the link between patents and traditional knowledge, the treaty may encourage better documentation and safeguarding of mātauranga Māori.
- Social –the Treaty may become an avenue to ensure communities contributing genetic resources and knowledge are not excluded from the benefits of innovation if uses in conjunction with other access and benefit sharing arrangements (like those discussed in this paper).

Any feedback received on the GRATK in particular will be used to inform a National Interest Analysis (**NIA**). The NIA is a report that helps the government decide whether signing an international treaty is a good idea for the country. It outlines and explains why New Zealand is considering joining, what the benefits and risks (if any) are, and what changes in policy and/or law might be needed.

A broader review of the IP system

In addition to becoming a Contracting Party, at such a point a biodiscovery system is set up, deeper elements could be introduced in the patent application process. For example, it could become a check point for free, prior and informed consent and mutually agreed terms (for example, providing evidence of compliance with ABS mechanisms as part of the application process), or it could consider applications with digital sequence information (digitised data derived from genetic resources). Something like this would not be able to be implemented until a biodiscovery system is stood up and functional for some time.

WIPO is continuing ongoing work to protect creative and cultural IP and develop international standards in this space. Member States including New Zealand are continuing the development of international legal instruments to protect traditional knowledge and traditional cultural expressions from misuse and misappropriation. As these instruments develop, New Zealand may wish to consider a review of our IP settings on a wider scale as this work is currently limited to biological and genetic resources of indigenous species and non-indigenous species of significance. For example, an aspect of this review could consider how current settings could be revisited to better recognise the decision-making authority of Māori and ensure the protection and promotion of taonga Māori and mātauranga consistent with a Māori world view.



Work is also ongoing within the CBD in relation to digital sequence information and how it should be governed, especially regarding benefit sharing.

Potential implications of establishing a disclosure of origin mechanism

The following areas need further consideration regarding the implementation of the GRATK Treaty. This is both for submitters to consider, and for officials to undertake further analysis. Additional to the Castalia report, supplementary paper B provides further details on where legislative change may be needed.

- What amendments would be needed to legislation, if any (Patents Act 2013).
- Resource required to develop guidance and stand-up new process under the GRATK Treaty.
- What domestic sanctions and remedies look like when the required information is not provided, or the information provided is fraudulent.
- Administration and compliance costs.
- Impact on the functioning of the Patents Māori Advisory Committee.

Consultation questions

13. Do you see benefit in New Zealand becoming a contracting party to the WIPO GRATK Treaty? Why/Why not?
14. Do you have any comments on disclosure of origin as a concept or the GRATK Treaty?
15. What do you think will be the impact, economically, socially, and/or environmentally for New Zealand if we have a mandatory disclosure of origin mechanism?
16. Do you agree with the advantages of implementing the GRATK Treaty domestically (i.e., introducing a mandatory disclosure of origin mechanism)? Are there any further advantages or disadvantages we need to consider?
17. Are there other ways to implement the GRATK Treaty, other than changes to the Patents Act 2013, to have a mandatory disclosure of origin mechanism in New Zealand?

Proposal 2 – establishing certification marks for goods and services

Certification marks identify to consumers that goods or services have been independently certified as possessing certain characteristics. Existing certification marks include Bio-Gro Certified Organic⁷² and Cruelty-free Leaping Bunny logo.⁷³

This proposal discusses options on establishing certification marks for consumers to distinguish which businesses offering goods or services have met any required access and benefit sharing arrangements at the point of sale.

By using the certification marks, it can:

- increase customer trust by signalling that goods or services meets certain quality, safety or environmental standards;
- enhance a business' reputation by showing its commitment to quality and compliance;
- provide transparency for consumers and accountability for businesses; and
- incentivise businesses to do the right thing and provide a high point of difference commercially, domestically and internationally.

Option 1 – use existing certification marks

This could be achieved by including new criteria to existing certification marks.

However, there are currently no government-funded certification marks in New Zealand relevant to commercial biodiscovery. Existing marks such as FernMark are government-endorsed but independently run, limiting the Government's ability to influence their criteria. This option may only be feasible if suitable marks can be adapted.

You are invited to advise whether any existing marks could support ethical commercial biodiscovery with taonga species and associated mātauranga Māori and benefit sharing. A bespoke certification mechanism may ultimately be needed to meet the system's objectives.

Option 2 – create new certification marks

We could look at creating new certification marks that sellers can use to put on their goods or services as evidence that it has been created and produced ethically. For example, that ABS arrangements based on free, prior and informed consent and mutually agreed terms have been met when creating and producing goods and services.

Potential implications of establishing certification marks for goods and services

Creating a new certification mark will likely be a long-term solution in order for it to be effective and meaningful. This will require considerations such as:

- setting up the biodiscovery infrastructure first such as a provenance mechanism i.e. transparency mechanisms to disclose the origin or kaitiaki relationships, and an ABS arrangement process.
- Any support that may be required for the operationalisation of any certification mark for biodiscovery. This may include on-going costs to administer certification marks and to promote the marks to both businesses to use and consumers to recognise so that value can be derived from it i.e. consumers will pay premium price for such goods and services.
- Any information management systems and data sovereignty matters, in particular for any provenance systems that may be set up.

- Ensuring any new certification mark regime is aligned with existing regulatory labelling requirements (e.g. domestic and international export labelling requirements for functional foods).

Consultation questions

18. What do you think are the advantages and disadvantages of the options in amending or creating a certification mark for biodiversity?
19. What other ways are there to incentivise businesses to act ethically for biodiversity activities i.e. to act in accordance with the principles of free, prior, entered consent and enter access and benefit sharing arrangements based on mutually agreed terms?

Appendix 1 – how to have your say

Making a submission

Public consultation will run from [X October – X December] 2025.

Te Puni Kōkiri will be hosting online sessions, including with specific organisations and groups about the proposed changes. You can provide your feedback by attending an information session and/or completing a feedback form. You do not have to attend an information session to provide your feedback, these are to assist understanding of the proposed changes and an opportunity to find out more.

Your feedback form can be provided to Te Puni Kōkiri via email or post to the below addresses:

Email address:

biodiscovery@tpk.govt.nz

Postal address: Te Puni Kōkiri National Office (Te Puni Kōkiri, 1 Bowen Street, Pipitea, Wellington, 6011, CO [to be added])

Please see the website of Te Puni Kōkiri for more information on these information sessions and how to provide your feedback: [www.tpk.govt.nz/\[webpage to be set up\]](http://www.tpk.govt.nz/[webpage to be set up]).

Use and access to information

Information provided through this consultation will help us develop policy advice to Ministers on a biodiscovery system for New Zealand. It is important you understand people can request

access to submissions under the Official Information Act 1982. Please make it clear in the beginning of your submission if you do not want your submission to be released, which parts you don't want released and why. We may get in touch with you if there is an Official Information Act request. If you have any questions about this, please contact OIA@tpk.govt.nz.



Full list of consultation questions

You can choose which questions you would like to respond to or respond in any other way that is meaningful for you.

1. What are your views on the phasing of this work, starting with taonga species of plants, fungi and algae and associated mātauranga Māori?
2. What are your views on our description of “commercial biodiscovery”, e.g., is the scope clear or how should we make the scope clearer?
3. What are your views on what type of scientific research should be in scope of a commercial biodiscovery system, and what should be excluded?
4. What protections are needed to ensure that any insights into indigenous species obtained as a result of the use of mātauranga Māori remain accessible to iwi, hapū and Māori in the future?
5. What protections are needed to ensure that any resulting data, knowledge and insights into both indigenous species and non-indigenous species of significance remain accessible for the purposes of public good research or the future growth of New Zealand's primary sectors?
6. Have we correctly identified the problems? Are there other problems that make it difficult for people to progress their projects through the value chain towards commercialisation?
7. Have we correctly described the status quo and its challenges, or are there other aspects we should consider as well?
8. What are your views on the proposed vision, guiding principles and outcomes for a biodiscovery system in New Zealand?
9. What potential approaches could be implemented to effectively manage and resolve overlapping interests?
10. Where do you see the greatest need for improvement in existing access processes for taonga species and associated mātauranga Māori?
11. What are your views on the policy proposals and options to standardise ABS practices? What else should we be considering?
12. What are your views on how the platform prototype to uplift capacity and capability could inform TPK's ongoing biodiscovery system policy work?
13. Do you see benefit in New Zealand becoming a contracting party to the WIPO GRATK Treaty? Why/Why not?



14. Do you have any comments on disclosure of origin as a concept or the GRATK Treaty?
15. What do you think will be the impact, economically, socially, and/or environmentally for New Zealand if we have a mandatory disclosure of origin mechanism?
16. Do you agree with the advantages of implementing the GRATK Treaty domestically (i.e., introducing a mandatory disclosure of origin mechanism)? Are there any further advantages or disadvantages we need to consider?
17. Are there other ways to implement the GRATK Treaty, other than changes to the Patents Act 2013, to have a mandatory disclosure of origin mechanism in New Zealand?
18. What do you think are the advantages and disadvantages of the options in amending or creating a certification mark for biodiscovery?
19. What other ways are there to incentivise businesses to act ethically for biodiscovery activities i.e. to act in accordance with the principles of free, prior, entered consent and enter access and benefit sharing arrangements based on mutually agreed terms?



Appendix 2 - submission themes from 2002 and 2007 public consultations

2002 Ministry of Economic Development consultation

Genetic engineering/Modification

Many submissions opposed genetic engineering or modification of life forms, despite acknowledging that biodiscovery does not involve genetic engineering. Concerns were raised about patenting genetic material, citing environmental, social, economic, and ethical risks, as well as threats to Māori and Te Tiriti o Waitangi/ Treaty of Waitangi. Some called for a complete ban on biodiscovery for these reasons.

Wai 262/Ownership of biological resources

The unresolved Wai 262 claim on biological resource ownership was a major concern throughout submissions. Many believed that clear ownership is crucial to avoid uncertainty and lost opportunities in biodiscovery. Some argued that biodiscovery policies should wait until the claim was resolved to prevent the Crown from influencing the outcome.

IP and protection of traditional knowledge

Considerable attention was given to IP and its impact on traditional knowledge. Some submitters called for a complete ban on patenting life forms, while others focused on prohibiting patents on indigenous biological resources to protect

traditional knowledge and uphold Māori rights under Te Tiriti o Waitangi/Treaty of Waitangi. It was also acknowledged that using traditional knowledge could benefit biodiscovery, and Māori should benefit from its use. The suitability of IP mechanisms for protecting traditional knowledge was questioned.

Benefit retention and benefit-sharing

It was widely asserted that bioprospecting benefits should accrue to New Zealand and be shared equitably among participants. Submitters noted significant non-commercial benefits from biodiscovery should be acknowledged. There was concern about adequately controlling international researchers to prevent unauthorised export of biological resources and protect New Zealand's biodiversity from exploitation.

Māori roles/rights over indigenous flora and fauna

Many submitters emphasised the need to recognize and uphold Māori rights over indigenous resources as outlined in Te Tiriti o Waitangi/Treaty of Waitangi. Article II grants Māori full and exclusive rights (rangatiratanga) and guardianship (kaitiakitanga) over these resources. Consequently, submitters argued that biodiscovery policy development should be based on principles of equality, partnership,



and active self-representation by Māori.

Consultation

A considerable number of submitters commented that widespread consultation, in particular with Māori, is imperative in developing a biodiversity policy. It was submitted that consultation with Māori be conducted kanohi te kanohi (face to face).

Access regimes for private and crown land

Submissions discussed access regimes for Crown and private land, with differing opinions on whether a generic regime should apply to both. Proponents of standardised treatment cited equity, environmental protection, and national interest, while those favouring different regimes aimed to protect private landowners' rights.

Importance of non-commercial objectives

There was almost unanimous agreement that commercial benefit must not be the sole objective of a bioprospecting policy. Various parties raised the importance of ethical, cultural, social and environmental concerns that should inform policy development.

2007 Ministry of Economic Development public consultation

The centrality of Te Tiriti o Waitangi/Treaty of Waitangi and the relationship between tangata whenua and the government

Māori highlighted their deep connection to the natural environment, especially indigenous biological resources, as a vital aspect of their worldview and identity. Consequently, they expect to be actively involved in developing a biodiversity policy.

The Wai 262 claim and whether the government should undertake policy development ahead of the Waitangi Tribunal's report on the claim (Ko Aotearoa Tēnei)

Many participants were frank in expressing their concern of the development of a framework ahead of the release of Ko Aotearoa Tēnei could undermine their interests in the Wai 262 claim. Furthermore, recognising rangatiratanga and kaitiakitanga rights over flora and fauna in any biodiversity framework.

Opportunities from biodiversity activities

Participants observed that biodiversity activities offered significant opportunities for Māori, including but not exclusive to economic opportunities, but also opportunities to regain/revitalise important mātauranga Māori. Māori also expressed the need to have contracts in place with regard to ownership of IP and knowledge as the foundation for joint ventures.

IP rights and traditional knowledge

Participants expressed the need for government to take leadership on designing systems that offer adequate protection to Māori and their taonga beyond the existing range of IP rights. There were



particular concerns over the potential of private or individuals or companies using patents to lock up knowledge or resources in which Māori have an interest.

Definitions of knowledge, and biodiscovery itself

There was extensive discussion on defining traditional knowledge and mātauranga Māori, with Māori emphasising it as a dynamic, evolving body of knowledge. Participants highlighted the intrinsic links between knowledge and biological resources. The term "bioprospecting" had negative connotations, and "access and benefit sharing" was suggested as more appropriate. There was consensus that ex situ collections should be included in a biodiscovery framework, but significant holders of these collections did not participate in the consultations, limiting conclusions on this approach's viability.

Importance of the development of an appropriate domestic biodiscovery policy ahead of international negotiations

A number of participants emphasised the need for international systems to back up and enforce an appropriate New Zealand system for the protection and promotion of traditional knowledge and physical

resources. Involvement in international fora should be closely guided and informed by domestic policy. Māori requested direct representation at international fora. It was said that this representation should be resourced by the government but chosen by Māori themselves.

The appropriate process for engaging Māori in the development of biodiscovery policy

Māori emphasised the need for biodiscovery policy development to recognise their Treaty partner status and rights over flora and fauna. They requested government financial support to consider these issues through their own forums. Government officials saw value in allowing Māori to explore biodiscovery's implications and opportunities. Māori leaders called for engagement with Ministers to discuss policy options, share understandings, and align policy development with the Tribunal's report on the Wai 262 Claim.

References

- ¹ Ministry of Economic Development. (2002). Bioprospecting in New Zealand: Discussing the Options.
- ² Kahu Aronui. (2024). Bioprospecting – Application of Tiaki Taonga.
- ³ Secretariat of the Convention on Biological Diversity. (2011). Convention on Biological Diversity: Text and Annexes. p.4-5.
- ⁴ BioTech New Zealand. (2020). Aotearoa New Zealand Boosted by Biotech: Innovating for a Sustainable Future. p.12.
- ⁵ World Intellectual Property Organization. (2024). *WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge*. Retrieved from www.wipo.int/wipolex/en/text/592504.
- ⁶ Plant Variety Rights Act. (2022). Section 56.
- ⁷ World Intellectual Property Organization. Retrieved from: www.wipo.int/en/web/about-ip.
- ⁸ Drawn from definitions of 'kaitiaki' in Waitangi Tribunal. (2011). *Ko Aotearoa Tēnei Report*, Vol 2. p.745; Gene Technology Bill. (2024). *Clause 7 – Interpretation*; and Plant Variety Rights Act. (2022). Section 39.
- ⁹ Department of Environmental Affairs. *South Africa's Bioprospecting, Access and Benefit-Sharing Regulatory Framework: Guidelines for Providers, Users and Regulators*. p. 21.
- ¹⁰ Kahu Aronui. (2024). *Bioprospecting – Application of Tiaki Taonga*.
- ¹¹ Noting the use of 'traditional knowledge' in the following sources: World Intellectual Property Organization. (2025). *Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore*. p.42; and Waitangi Tribunal. (2011). *Ko Aotearoa Tēnei*, Vol 1. p.32.
- ¹² Kahu Aronui. (2024). *Bioprospecting – Application of Tiaki Taonga*.
- ¹³ Waitangi Tribunal. (2011). *Ko Aotearoa Tēnei Report*, Vol 1. p. 2 & 309. & Plant Varieties Rights Regulations. (2022). *Schedule 2 – Non-indigenous species of significance*. Retrieved from www.legislation.govt.nz/act/public/2022/0061/latest/whole.html.
- ¹⁴ World Intellectual Property Organization. Retrieved from: www.wipo.int/en/web/patents.
- ¹⁵ Plant Variety Rights Act (2022). Section 15.
- ¹⁶ Collins English Dictionary. (n.d.) Provenance. In *Collins English Dictionary*. Retrieved from www.collinsdictionary.com/dictionary/english/provenance
- ¹⁷ World Intellectual Property Organization. (2025). *Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore*.

¹⁸ Hon Tama Potaka. (2025). *Māori economic growth plan aimed at boosting jobs and incomes (press release)*. Retrieved from www.beehive.govt.nz/release/economic-growth-plan-aimed-boosting-jobs-and-incomes.

¹⁹ Hon Dr Shane Reti. (2025). *Bold science reforms to fuel economic growth (press release)*. Retrieved from www.beehive.govt.nz/release/bold-science-reforms-fuel-economic-growth.

²⁰ Hon Todd McClay. (2025). *Invest New Zealand opens doors to the world (press release)*. Retrieved from www.beehive.govt.nz/release/invest-new-zealand-opens-doors-world.

²¹ Ministry for the Environment. (2021). *Environment New Zealand 2007*, Chapter 12: Biodiversity.

²² Data sourced from: BIOTech New Zealand. (2020). *Aotearoa New Zealand boosted by BioTech - Innovating for a Sustainable Future*. Retrieved from www.biotechnz.org.nz/Biotech-Report-2020_online.pdf.

Coriolis & Ministry of Business, Innovation and Employment. (2023). *Finding the Way – Emerging and future platforms in New Zealand's bioeconomy*. Retrieved from: www.mbie.govt.nz/assets/finding-the-way.pdf.

Coriolis & Ministry of Business, Innovation and Employment. (2023). *Finding the Way – Emerging and future platforms in New Zealand's bioeconomy*. Retrieved from: www.mbie.govt.nz/assets/finding-the-way.pdf.

Newman, D. J., & Cragg, G. M. (2012). *Natural products as sources of new drugs over the 30 years from 1981 to 2010*. *Journal of natural products*, 75(3), 311-335. doi.org/10.1021/np200906s.

Ministry of Economic Development. (2007). *Bioprospecting Harnessing Benefits for New Zealand Policy Framework: Discussion Report*.

Polaris Market Research. *Biotechnology Market Size, Share, Trends & Industry Analysis Report By Technology (PCR Technology, Nanobiotechnology, Cell-based Assays, DNA Sequencing), By Application, By Region – Market Forecast, 2025–2034*. (2025). Retrieved from www.polarismarketresearch.com/industry-analysis/biotechnology-market.

²³ World Intellectual Property Organization. PATENTSCOPE Database. Retrieved from www.wipo.int/en/web/patentscope.

²⁴ Data sourced from: Science in Public (2023) *Making high tech medical gels with Australian spinifex grass*. www.scienceinpublic.com.au. Retrieved from www.scienceinpublic.com.au/media-releases/trioda.

Labiotech and Cornall, J. (2022) *Report shows growth of life sciences sector in eastern Denmark*. Labiotech.eu. Labiotech UG. Retrieved from www.labiotech.eu/trends-news/life-sciences-denmark/.

Horizon Grandview Research. (2023). *South Korea Biotechnology Market Size & Outlook, 2023-2030*. Retrieved from www.grandviewresearch.com/horizon/outlook/biotechnology-market/south-korea.

Metastat Insight. (2025). *Rooibos Tea Market Size & Share Report Analysis by 2032*. Retrieved from www.metastatinsight.com/report/rooibos-tea-market.

²⁵ World Intellectual Property Organisation. (2024). *WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge*. Retrieved from www.wipo.int/treaties/en/ip/gratk/.

²⁶ Convention on Biological Diversity. (2025). *The Cali Fund Launches in the Margins of the Resumed Session of COP16*. Retrieved from www.cbd.int/article/cali-fund-launch-2025.

²⁷ Secretariat of the Convention on Biological Diversity. (2011). *The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity*.

²⁸ Wai 262 Kia Whakapūmau. *Ngā Pou Uara O Tiaki Taonga*. Retrieved from www.tiakitaonga.com/wp-content/uploads/2023/07/Tiaki-Taonga-4ppA4_Finalv1.pdf.

²⁹ Ministry of Economic Development. (2002). *Bioprospecting: Discussing the Options*; and Ministry of Economic Development. (2007). *Bioprospecting Harnessing Benefits for New Zealand Policy Framework: Discussion Report*.

³⁰ MedSafe. (2025). *Current Regulatory Guidelines*. Retrieved from www.medsafe.govt.nz/regulatory/current-guidelines.asp.

³¹ Hikurangi Bioactives Limited Partnership. *Kānuka oil for eczema*. Retrieved from www.hikurangibioactives.co.nz/kanuka-oil-for-eczema.

³² University of Waikato. (2025). *Te Mata Punenga o Te Kotahi | Te Kotahi Research Institute*. Retrieved from www.waikato.ac.nz/research/institutes-centres-entities/institutes/tkri/.

³³ Ministry for Primary Industries. *Primary Sector Growth Fund*. Retrieved from www.mpi.govt.nz/funding-rural-support/primary-sector-growth-fund/.

³⁴ Ministry for Primary Industries. (2023). *Māori Agribusiness Innovation Fund*. Retrieved from www.mpi.govt.nz/funding-rural-support/maori-agribusiness-funding-support/maori-agribusiness-innovation-fund/.

³⁵ Ministry of Business, Innovation and Employment. (2025). *Government Launches He Ara Whakahihiko Capability Fund*. Retrieved from Government Launches He Ara Whakahihiko Capability Fund | Ministry of Business, Innovation & Employment.

³⁶ Ministry of Business, Innovation and Employment. (2025). *Strategic Science Investment Fund*. Retrieved from www.mbie.govt.nz/science-and-technology/science-and-innovation/funding-information-and-opportunities/investment-funds/strategic-science-investment-fund.

³⁷ New Zealand Trade & Enterprise. (2025). Co-funding and investment services. Retrieved from my.nzte.govt.nz/article/co-funding-and-investment-services.

³⁸ Agricultural and Marketing Research and Development Trust (AGMARDT). (2025). *Our Funding Programmes*. Retrieved from agmardt.org.nz/our-funding-programmes/.

³⁹ Tiaki Taonga. (2024) *Tiaki Taonga*. Retrieved from www.tiakitaonga.com/.

-
- ⁴⁰ Ministry of Business, Innovation & Employment. (2025). *Going for Growth*. Retrieved from www.mbie.govt.nz/business-and-employment/economic-growth/going-for-growth.
- ⁴¹ New Zealand Trade and Enterprise. (2025). *About Active Investor Plus, Invest and Live in New Zealand*. Retrieved from www.nzte.govt.nz/page/investor-migrants.
- ⁴² New Zealand Trade and Enterprise. (2022). *Iwi Investor Support*. Retrieved from www.nzte.govt.nz/page/iwi-investor-support.
- ⁴³ Polaris Market Research. *Biotechnology Market Size, Share, Trends & Industry Analysis Report By Technology (PCR Technology, Nanobiotechnology, Cell-based Assays, DNA Sequencing), By Application, By Region – Market Forecast, 2025–2034*. (2025). Retrieved from www.polarismarketresearch.com/industry-analysis/biotechnology-market.
- ⁴⁴ BIOTech New Zealand. (2020). *Aotearoa New Zealand boosted by BioTech - Innovating for a Sustainable Future*. Retrieved from biotechnz.org.nz/wp-content/uploads/sites/16/2021/01/Biotech-Report-2020_online.pdf.
- ⁴⁵ Roche Products. (2023). *Media release: First ever agreement between global pharmaceuticals company and Iwi Māori tribal organisation*. Retrieved from www.roche.co.nz/media/first-ever-agreement-between-global-pharmaceuticals-company-and-iwi-maori-tribal-organisation.
- ⁴⁶ The Treasury. (2025). *New Zealand Infrastructure Investment Summit 2025*. Retrieved from www.treasury.govt.nz/information-and-services/nz-economy/infrastructure/new-zealand-infrastructure-investment-summit-2025.
- ⁴⁷ AusBiotech. (2025). *AusBiotech*. Retrieved from www.ausbiotech.org/.
- ⁴⁸ Informaconnect. (2025). *ChinaBio Partnering Forum*. Retrieved from informaconnect.com/chinabio-partnering/.
- ⁴⁹ James & Wells Intellectual Property. (2014). *Patents Act 2013: Biological Exclusions and indigenous Rights*. Retrieved from: www.lexology.com.
- ⁵⁰ Intellectual Property Office New Zealand. (2025). *Plant Variety Rights*. Retrieved from: www.iponz.govt.nz/get-ip/pvr/.
- ⁵¹ Waitangi Tribunal. (2011). *Ko Aotearoa Tēnei Report*, pg. 84-86. Retrieved from: www.forms.justice.govt.nz/search/Documents.
- ⁵² Ministry for Primary Industries. (2025). *Market insights for the primary sector*. Retrieved from www.mpi.govt.nz/resources-and-forms/economic-intelligence/market-insights-for-the-primary-sector/#maori.
- ⁵³ Wright, E., & Robinson, D. (2024). The Patents Māori Advisory Committee of Aotearoa New Zealand: Lessons for indigenous knowledge protection. *The Journal of World Intellectual Property*, 27(2), 222-241. Retrieved from doi.org/10.1111/jwip.12295.
- ⁵⁴ Local Contexts. (n.d.). *Labels*. Retrieved from localcontexts.org/labels/about-the-labels/.
- ⁵⁵ New Zealand Story. (2025). *Fernmark Licence Programme*. Retrieved from www.nzstory.govt.nz/fernmark-licence-programme.

⁵⁶ UEBT. (n.d.). *Our label*. Retrieved from uebt.org/our-label.

⁵⁷ Te Puni Kōkiri. (2020). *Indigenous Collaboration Arrangement with Australia*. Retrieved from www.tpk.govt.nz/en/o-matou-mohiotanga/culture/indigenous-collaboration-arrangement.

& Te Puni Kōkiri. (2022). *Indigenous Collaboration Arrangement with Canada*. Retrieved from www.tpk.govt.nz/en/o-matou-mohiotanga/culture/indigenous-collaboration-arrangement-nzcan.

⁵⁸ Ministry of Foreign Affairs and Trade. *The Indigenous Peoples Economic and Trade Cooperation Arrangement*. Retrieved from: www.mfat.govt.nz/en/trade/nz-trade-policy/the-indigenous-peoples-economic-and-trade-cooperation-arrangement.

⁵⁹ Singh, S. (2024). *Rooibos Tea Market Report*. Retrieved from www.cognitivemarketresearch.com/rooibos-tea-market-report#tab_report_details.

⁶⁰ Wai 262 Kia Whakapūmau. *Ngā Pou Uara O Tiaki Taonga*. Retrieved from www.tiakitaonga.com/wp-content/uploads/2023/07/Tiaki-Taonga-4ppA4_Finalv1.pdf.

⁶¹ Department: Environmental Affairs, Republic of South Africa. (2012). *South Africa's Bioprospecting, Access and Benefit-Sharing Regulatory Framework*. Retrieved from www.dffe.gov.za/sites/default/files/legislations/bioprospecting_regulatory_framework_guideline.pdf.

⁶² Department of Forestry, Fisheries and the Environment, Republic of South Africa. (2022). *Biodiversity Management Plans for Aloe Ferox and Two Honeybush Species*. Retrieved from www.dffe.gov.za/Biodiversity-management-plans-for-aloe-ferox-and-two-honeybush-species-published-for-implementation.

⁶³ Tiaki Taonga. (2024) *Tiaki Taonga*. Retrieved from www.tiakitaonga.com/.

⁶⁴ Hikurangi Bioactives Limited Partnership, & Whare, T. (2021). *Taonga Species & Intellectual Property*. Hikurangi Bioactives Limited Partnership.

⁶⁵ Ministry for Primary Industries. (2024). *Official assurance programme*. Retrieved from www.mpi.govt.nz/export/animals/live-animals-including-livestock/official-assurance-programme/.

⁶⁶ Department of Conservation. (2020). *Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy*. Retrieved from www.doc.govt.nz/nature/biodiversity/te-mana-o-te-taiao-aotearoa-new-zealand-biodiversity-strategy-2020/.

⁶⁷ Queensland Government. (2018). *Queensland Biotechnology Code of Ethics*. Retrieved from www.publications.qld.gov.au/dataset/qld-biotechnology-ethics/resource/47bf0b73-a1ed-4677-863f-f960b667b952.

⁶⁸ Convention on Biological Diversity. (2025). *Digital sequence information on genetic resources*. Retrieved from www.cbd.int/dsi-gr.

⁶⁹ Hon Tama Potaka & Hon Shane Reti. (2025). New science fund to boost Māori economy. (press release). Retrieved from www.beehive.govt.nz/release/new-science-fund-boost-economy.

⁷⁰ Ministry for Primary Industries. (2025). *Market insights for the primary sector*. Retrieved from www.mpi.govt.nz/resources-and-forms/economic-intelligence/market-insights-for-the-primary-sector/maori.

⁷¹ Ministry of Business, Innovation and Employment (2018). *Discussion Paper – Disclosure of Origin of Genetic Resources and Traditional Knowledge in the Patents Regime*. Retrieved from: www.mbie.govt.nz/have-your-say/disclosure-of-origin-discussion-document.

⁷² BioGro (n.d.). *Simplifying Organic Certification since 1983*. Retrieved from www.biogro.co.nz.

⁷³ Leaping Bunny Program. (2025). *The Leaping Bunny Logo*. Retrieved from www.leapingbunny.org/leaping-bunny-logo.

RELEASED UNDER THE OFFICIAL INFORMATION ACT