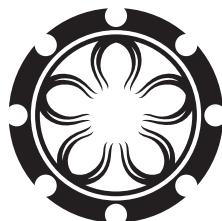


Taonga Governance & Ethical Innovation

Building a Kaitiaki-led Access & Benefit-Sharing
System for Taonga from Aotearoa New Zealand



Kānuka Charitable Trust

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Executive Summary

This project began as an investigation into the implications of the Nagoya Protocol and related international frameworks for Māori ownership, access and benefit-sharing (ABS) in relation to indigenous organisms in Aotearoa New Zealand. It evolved into a broader exploration of Indigenous governance, taonga species coordination, ethical commercialisation systems, mechanisms for exercising shared rangatiratanga rights and responsibilities, and the practical infrastructure required to support Treaty-consistent biodiscovery in Aotearoa.

This report identifies two fundamental gaps in Aotearoa's emerging biodiscovery system. The first is the absence of practical mechanisms through which kaitiaki can exercise shared rights and responsibilities in relation to taonga species, ecosystems, mātauranga Māori and innovation. The second is the absence of institutions capable of representing the interests of taonga themselves within research, investment, commercialisation and governance arrangements.

The work occurred during a period of major national transition. During the life of the project, the Government committed NZ\$42.8 million toward the Biodiscovery Platform led by the Bioeconomy Science Institute (BSI). Project participants contributed actively to the Platform's development, and to Te Puni Kōkiri's options for a biodiscovery framework

and ABS policy work as part of the Government's response to WAI 262. That policy process, which reached the stage of a discussion document ready for public consultation, appears to have been placed on hold at the end of 2025.

This combination of significant investment in biodiscovery infrastructure alongside a stalled regulatory framework creates a policy contradiction and defines the challenge addressed by this report.

The project identified persistent weaknesses across Aotearoa's biodiscovery ecosystem, including fragmented governance, weak institutional coordination, inconsistent engagement with kaitiaki, limited practical ABS mechanisms, severe capability shortages, and the absence of coherent infrastructure for coordinating Indigenous governance interests. These findings were independently reinforced through Biodiscovery Platform design work and by the Indigenous Biodiscovery Wānanga held in March 2026, which brought together researchers, kaitiaki, entrepreneurs and policymakers to explore the future of Indigenous-led biodiscovery.

A central finding of the project is that existing governance arrangements provide no consistent mechanism through which multiple kaitiaki groups with overlapping interests can exercise shared rights and responsibilities. The emerging taonga trust



network and Te Pūnaha Taonga, an online platform designed to facilitate engagement by all groups associated with a taonga, provide the foundation for a system capable of coordinating shared authority, managing overlapping interests, supporting responsible research and commercialisation, and ensuring that rights, responsibilities and benefits remain connected to the communities from which taonga and mātauranga originate. An independent Māori-led Competent National Authority operating within a sphere-of-authority framework could provide the national architecture within which these mechanisms operate.

The project also highlights the emergence of taonga governance entities as a potentially significant institutional innovation. Entities established to act in the interests of taonga species and their ecosystems provide a practical mechanism through which the interests of taonga can participate directly within research, investment, commercialisation and benefitsharing arrangements. Rather than remaining external stakeholders, these entities can become enduring participants in the biodiscovery system itself.

The emerging kānuka industry provides a practical case study of this approach. The Hikurangi Bioactives Limited Partnership royalty model – allocating almost equal profit shares to investors, communities of origin,

and activities intended to benefit the taonga itself – demonstrates a practical expression of commercial benefit-sharing in Aotearoa. The Kānuka Charitable Trust's work on certification, industry standards and landowner engagement illustrates the kind of collective infrastructure that could be supported at scale through the Biodiscovery Platform for other taonga-derived products and sectors.

Aotearoa is at a genuine inflection point. While the absence of a legislated ABS regime remains a critical gap, the larger opportunity identified in this report is the creation of practical mechanisms through which Indigenous communities can exercise shared rights and responsibilities, and through which the interests of taonga can be represented within innovation systems. The emergence of taonga governance entities, Te Pūnaha Taonga, and the Biodiscovery Platform collectively create a unique opportunity to build governance arrangements unlike any currently operating elsewhere in the world.

Whether the outcome is a coherent, Treaty-consistent biodiscovery system that provides for the interests of both people and taonga, or a fragmented and partial one, will depend on decisions made now about governance architecture, legislative foundations, the exercise of kaitiaki authority, commercial structures, capability investment and accountability.

Key Findings

Finding 1

New Zealand lacks the legislative and regulatory architecture for a comprehensive ABS system, and this gap is leaving Māori rights unprotected.

There is currently no dedicated domestic ABS legislation, no Competent National Authority (CNA), no national permitting regime, and no coordinated benefit-sharing framework. The 8-10x increase in overseas patent applications for Aotearoa's indigenous plants over the past fifteen years demonstrates that this vacuum is resulting in the continued appropriation of value from Aotearoa's indigenous biodiversity without corresponding mechanisms to recognise kaitiaki interests or share benefits. Establishing a Biodiscovery Act and CNA is the most urgent single priority in the system.

Finding 2

Effective biodiscovery governance depends on practical mechanisms through which kaitiaki can exercise shared rights and responsibilities.

The key governance challenge in biodiscovery is not simply how Māori participate in decisionmaking, but how multiple kaitiaki groups with overlapping interests can coordinate stewardship of taonga species, ecosystems, mātauranga and innovation. Existing governance arrangements provide no consistent mechanism through which these collective responsibilities can be exercised. The emerging taonga trust network and Te Pūnaha Taonga provide the foundation for a system capable of coordinating shared authority, managing overlapping interests, supporting responsible research and commercialisation, and ensuring rights, responsibilities and benefits remain connected to the communities from which taonga and mātauranga originate. An independent Māori-led CNA operating within a sphere-of-authority framework could provide the national institutional architecture within which these mechanisms operate.

Finding 3

Taonga governance entities provide a practical mechanism for representing the interests of taonga within research, investment and commercialisation systems.

Emerging entities such as the Kānuka Charitable Trust and other taonga governance organisations demonstrate how governance bodies can receive benefits on behalf of taonga, participate in decision-making, support stewardship outcomes, and remain engaged throughout the innovation lifecycle. This model moves beyond consultation and benefit-sharing alone, embedding the interests of taonga directly within biodiscovery systems.

Finding 4

Standardised, practical FPIC and ABS frameworks are necessary for both kaitiaki and commercial users, and must include non-monetary as well as monetary benefit-sharing.

The absence of standardised mechanisms creates uncertainty and inequity for all parties. Critically, ABS frameworks designed solely around financial returns systematically undervalue what kaitiaki communities seek from biodiscovery relationships – including co-authorship, data repatriation, knowledge documentation, capacity-building, and benefits flowing back to taonga, taiao and the communities responsible for their stewardship.

Finding 5

Capability and relationship-building are as foundational to a functional biodiscovery system as legislation and infrastructure, and are currently severely under-resourced.

The sector lacks multi-level capability across scientific literacy, IP and commercialisation skills, regulatory navigation, and governance – particularly for Māori entrepreneurs and community governors. Relationship-building between institutions and kaitiaki collectives must be explicitly funded rather than left to chance. The new Biodiscovery Platform's investment must extend to individual and community capacity, not only sector coordination and direct co-funding of biodiscovery.

Finding 6

The Biodiscovery Platform, if designed with Māori governance authority and proper accountability mechanisms from the outset, has the potential to support enabling infrastructure for a coherent national biodiscovery system.

This requires formal decision-making authority for kaitiaki entities; integration with taonga entities and kaitiaki collectives as recognised governance and benefit-sharing nodes; a facility like Te Pūnaha Taonga as a recognised kaitiaki registry and governance infrastructure layer; ABS processes explicitly anticipatory of future legislation; and a monitoring and evaluation framework with indicators agreed in co-design with kaitiaki entities. Without these design choices made now, the Platform risks creating path dependencies that are difficult to correct once embedded.



01. Background & Context

Introduction

Aotearoa New Zealand possesses globally distinctive biodiversity shaped by approximately 80 million years of geographic isolation. This biodiversity increasingly underpins opportunities in high-value sectors including nutraceuticals, pharmaceuticals, cosmetics, functional foods, biomaterials, biotechnology, advanced extraction technologies, and precision natural-product development. Many of these opportunities are closely associated with taonga species and mātauranga Māori.

Today, biodiscovery sits at the intersection of Te Tiriti o Waitangi, biodiversity conservation, biotechnology innovation, international access and benefit-sharing (ABS) obligations, Māori aspirations for greater authority in relation to taonga species, and the rights of Nature itself.

Early Biodiscovery and Colonial Science

The history of biodiscovery in Aotearoa begins with Māori, who developed sophisticated systems of observation, experimentation, classification, and resource management, generating extensive knowledge about the medicinal, nutritional, ecological, and cultural properties of native species. Through mātauranga Māori, rongoā Māori, mahinga kai, and kaitiakitanga, this knowledge was accumulated and transmitted across generations – making Māori communities the oldest practitioners of biodiscovery in Aotearoa.

The next wave of biodiscovery began with Cook's first voyage and the botanists Joseph Banks, Daniel Solander and Herman Spöring. Banks named harakeke 'New Zealand hemp' for its remarkable fibre strength, a resource the Endeavour was tasked with finding as alternative to Russian hemp that was powering the British navy but at risk through vulnerable supply routes. Solander's foundational manuscript *Primitiae Florae Novae Zelandiae* lives

on through Banks' *Florilegium*. Throughout the nineteenth and early twentieth centuries, native plants, animals, fungi, and marine organisms were collected for scientific study and commercial evaluation, often without recognition of Māori knowledge of and relationships with the taonga or any benefit-sharing with kaitiaki. The colonial project alienated Māori from our taonga through the expropriation of land and waterways, as well as legislation that explicitly outlawed practices based on centuries of biodiscovery by tohunga.

WAI 262 and the Reframing of Biodiscovery

The most significant development in biodiscovery governance was the WAI 262 claim, lodged in 1991 and ultimately reported upon by the Waitangi Tribunal in the document *Ko Aotearoa Tēnei* in 2011 (Waitangi Tribunal, 2011). The Tribunal recommended a regulatory regime for bioprospecting and a disclosure of origin requirement for patent applicants. It proposed a partnership-based approach recognising kaitiaki relationships. Since 2018 Te Puni Kōkiri has been actively developing policy options for a Biodiscovery System as the most substantive government response to these recommendations to date, though this work appears to have been put on hold since a discussion document ready for public consultation was withheld at the end of 2025 (Te Puni Kōkiri, 2026; Te Puni Kōkiri 2025a-e).

The Convention on Biological Diversity and the Emergence of Bioprospecting Policy

A major shift occurred with the adoption of the Convention on Biological Diversity (CBD) in 1992, which recognised sovereign rights over genetic resources and established principles relating to



conservation, sustainable use, and the fair and equitable sharing of benefits (Convention on Biological Diversity, 1992). For Aotearoa, this raised new questions about how access to genetic resources need to be managed and how Māori interests can be recognised within emerging biotechnology sectors.

This culminated in the 2002 and 2007 Ministry of Economic Development discussion papers on bioprospecting (Ministry of Economic Development, 2002; 2007), which acknowledged Māori interests but highlighted the absence of a coherent national framework. No legislation resulted.

Vision Mātauranga: Origins, Development and Influence on Research Involving Taonga and Mātauranga Māori

Vision Mātauranga is the New Zealand government's science and innovation policy framework for unlocking the potential of Māori knowledge, resources, and people through research and innovation. Developed with significant input from Māori researchers and policy experts during the early 2000s, it responded to growing recognition that Māori were underrepresented within the science and innovation system despite possessing significant cultural, environmental, and economic assets that could contribute to Aotearoa's future prosperity.

Launched in 2005 by the Foundation for Research, Science and Technology, the policy represented a significant shift in how Māori participation in research was understood. Rather than viewing Māori solely as stakeholders or end-users of research, Vision Mātauranga recognised Māori as innovators, knowledge holders, investors, researchers, and partners in the development of new knowledge and technologies. It established four interconnected themes: Indigenous Innovation, Taiao, Hauora, and Mātauranga.

Over the following two decades, Vision Mātauranga has become increasingly embedded within Aotearoa's science and innovation system. Today it forms a core component of most government-funded research programmes, with applicants expected to demonstrate how their work contributes to one or more Vision Mātauranga themes. As a result, the policy has become one of the most influential drivers of change within the research sector and is arguably a de facto, albeit limited, access and benefit-sharing framework in itself.

One of its most significant impacts has been the increased recognition of mātauranga Māori as a valuable knowledge system capable of contributing to scientific discovery, environmental management,

health research, biotechnology, climate adaptation, and innovation. This has encouraged researchers to engage more deeply with Māori communities and knowledge holders and created opportunities for mātauranga Māori to inform research questions, methodologies, and outcomes.

The policy has also contributed to a shift in research involving taonga species and associated mātauranga Māori. Whereas earlier approaches often relied primarily on consultation, many contemporary projects now incorporate partnership, co-design, shared governance, and benefit-sharing arrangements, with Māori entities increasingly initiating and leading their own research and development programmes. Research involving species such as mānuka, kānuka, kawakawa, harakeke, native fungi, and marine organisms is increasingly conceived and led by iwi, hapū, whenua Māori entities, and Māori entrepreneurs.

While Vision Mātauranga does not create legal rights or regulatory obligations relating to taonga species, intellectual property, or access and benefit-sharing, it has established important expectations regarding how research involving Māori interests should be conducted. It has influenced subsequent developments in areas such as Māori data sovereignty, genomics governance, biodiscovery, and implementation discussions arising from WAI 262, helping create an environment in which Māori participation, leadership, and benefit are increasingly viewed as integral components of high-quality research.

Twenty years after its introduction, Vision Mātauranga remains the principal framework guiding the relationship between Māori and the science and innovation system and has fundamentally reshaped expectations around the role of Māori knowledge, resources, and leadership within publicly funded research.

The Governance Gap in Aotearoa

Despite these global and domestic developments that all directly connect with ABS issues for Māori, Aotearoa continues to lack a comprehensive domestic ABS framework. Unlike many biodiversity-rich countries, Aotearoa still cannot even publish a government discussion document on options for an ABS framework, and there is no national permitting regime governing access to genetic resources, no recognised Competent National Authority, and no coordinated framework for benefit-sharing. Sector analysis undertaken during the Biodiscovery Platform design process identified an 8-10x increase in annual patent applications over the past 15 years utilising Aotearoa's indigenous plants, including mānuka, harakeke, kōkihi, kānuka, tōtara, kawakawa,

horopito and mamaku – with nearly all patents issued in the United States to overseas companies. This trajectory, along with many other systemic governance gaps related to taonga and mātauranga utilisation, underscores the urgency of establishing a coordinated domestic system.





02. Project Purpose, Process & Evolution

The project originally aimed to assess the implications of access and benefit-sharing frameworks for businesses, researchers, and Māori entities involved in the utilisation of indigenous organisms and associated mātauranga Māori. Particular attention was given to: Māori ownership and governance issues; ethical commercialisation pathways; Indigenous Peoples rights and responsibilities; emerging Rights of Nature considerations; and implications for the emerging kākara sector and related industries.

It is important to acknowledge the positionality of the project lead. The work was undertaken not as an external observer, but by someone directly involved in multiple aspects of the emerging biodiscovery system, including commercialisation of taonga-derived products in partnership with kaitiaki groups, development of legal and governance structures, establishment of taonga governance entities, creation of platforms to support collective decision-making, and public policy development. These overlapping roles create a perspective that is both practically informed and interventionist. While some may view aspects of this involvement as creating potential tensions or conflicts of interest, it has also enabled direct testing of concepts, institutions and governance arrangements in real-world settings. As a result, the project has contributed not only to analysis of the biodiscovery system, but also to the development of practical responses to the challenges identified.

As the project progressed, it became clear that the underlying issues extended far beyond technical legal compliance. Deeper structural questions emerged concerning Indigenous governance, distributed authority, capability development, species stewardship, innovation-system architecture, and the relationship between localised kaitiakitanga and global commercial systems. In particular, questions emerged regarding how multiple kaitiaki groups could exercise shared rights and responsibilities in relation to taonga species, and how the interests of taonga themselves might be represented within research, investment and commercialisation systems.

Unlike many policy reviews that focus primarily

on legislative reform, this project increasingly became concerned with the practical question of how rights and responsibilities are exercised in practice. This shift in focus moved the work beyond questions of regulatory compliance toward the design of institutions, governance arrangements and operational mechanisms capable of supporting shared stewardship, ethical utilisation and long-term benefit-sharing.

The work therefore evolved into a broader systems-design and governance exploration focused on practical mechanisms capable of supporting: shared rangatiratanga in relation to taonga species; practical ABS arrangements in the absence of legislation; Indigenous data sovereignty; coordinated species governance; and Māori participation in what is being called the biodiscovery economy. This evolution coincided with the emergence of wider national discussions regarding the Biodiscovery Platform and future biodiscovery infrastructure, in which project participants engaged actively.

The work employed a mixed qualitative and strategic-analysis approach incorporating: literature review; international policy analysis; stakeholder engagement through meetings and events; platform concept development; and strategic systems analysis. Engagement extended to Māori organisations and kaitiaki groups, Crown Research Institutes and Public Research Organisations, universities, industry participants, government agencies, Indigenous governance experts, and international ABS and Indigenous rights processes.

Project participants engaged deeply with discussions and developments relating to the scope of the project and contributed to a range of outputs including reports, platforms, legal templates and public policy documents.

The project also reviewed and drew upon wider sector activities, including analysis commissioned during the Biodiscovery Platform design phase and OIA disclosures provided by Te Puni Kōkiri on the development of a Biodiscovery Framework and related mechanisms including accession to the



Nagoya Protocol, WIPO GRATK Treaty, Biodiversity Beyond National Jurisdictions Treaty and the Multilateral Mechanism on the Fair and Equitable Sharing of Benefits related to Digital Sequence Information, including the Cali Fund.

Engagement included participation in national and international forums relating to biodiversity governance, Indigenous research, intellectual property, biotechnology, ABS, and Indigenous rights, including CBD COP16, WIPO IGC, the International Indigenous Research Conference, the Tri-Academy Indigenous Summit, the Biodiscovery Symposium, and the Indigenous Biodiscovery Wānanga, alongside numerous engagements with iwi, researchers, businesses, government agencies, and international delegations.

The project culminated in a national Indigenous Biodiversity Wānanga in March 2026 involving more than 50 participants from kaitiaki collectives, Māori businesses, researchers and regulatory agencies. The wānanga provided an opportunity to test emerging ideas, identify areas of consensus and disagreement, and assess whether the governance, access and benefit-sharing, capability, and institutional challenges identified throughout the project resonated with those actively working in the sector. The strong alignment between issues raised during the wānanga and those emerging through the wider research process provided important validation of the report's findings and recommendations. A summary report from the wānanga is attached as an appendix.



03. International Frameworks & Global Context



As noted above, a broad array of international frameworks on access and benefit sharing have been emerging over the last 35 years including: the Convention on Biological Diversity (1992); the Nagoya Protocol (2010); the Cartagena Protocol; the Kunming-Montreal Global Biodiversity Framework (CBD, 2022); the WIPO GRATK Treaty (WIPO, 2024); Cali Fund negotiations (CBD, 2024); ongoing DSI discussions; the Mataatua Declaration; Mo'otz Kuxtal Guidelines; Akwé: Kon Guidelines; CARE Principles for Indigenous Data Governance; Local Contexts Traditional Knowledge Labels (Local Contexts, n.d.); and emerging Rights of Nature frameworks.

A recurring theme in these agreements has been the expectation that Indigenous Peoples should not merely be consulted but should participate directly in governance, decision-making, benefit-sharing, and innovation systems. International frameworks are moving progressively toward recognising collective governance rights, Indigenous data sovereignty, obligations regarding DSI, and practical benefit-sharing responsibilities extending beyond simple financial compensation.

The Nagoya Protocol (2010) established a global framework for access to genetic resources and the fair and equitable sharing of benefits arising from their utilisation (Nagoya Protocol, 2010). The Protocol requires signatory countries to establish measures that ensure access to genetic resources occurs with the prior informed consent (PIC) of the provider country and, where applicable, Indigenous Peoples and local communities, and that benefits arising from research, development, and commercialisation are shared on mutually agreed terms (MAT). Signatories are also expected to implement compliance mechanisms, designate national focal points and competent national authorities, and establish procedures to monitor the use of genetic resources and associated traditional knowledge throughout the research and innovation lifecycle. The Protocol seeks to create greater legal certainty for both providers and users of genetic resources while supporting biodiversity conservation, sustainable use, and equitable participation in the benefits generated from

biodiversity-based innovation.

The New Zealand government's position on the Nagoya Protocol has never been that it opposes the Protocol's objectives. In fact, successive governments have generally supported the principles of conservation, sustainable use, and fair and equitable benefit-sharing. The New Zealand government has never ratified the Protocol is largely because of unresolved domestic policy, legal, and Treaty issues – unresolved mostly due to the political priorities of successive administrations.

A central issue is the relationship between the Protocol and the recommendations arising from the WAI 262 claim. The Nagoya Protocol requires countries to establish systems governing access to genetic resources and associated traditional knowledge, including mechanisms for prior informed consent and benefit-sharing. In Aotearoa, implementing such a system immediately raises questions about who has authority to provide consent, who should receive benefits, how kaitiaki relationships are recognised, and what role Māori (and which Māori entities) should play in governance and decision-making. These are precisely the kinds of issues examined in WAI 262, and governments have been reluctant to commit internationally before determining how those matters should be addressed domestically.

A second factor is that New Zealand has historically viewed itself as both a provider and user of genetic resources. Crown Research Institutes, universities, biotechnology companies, plant breeders, and agricultural researchers routinely access genetic resources from overseas. Some stakeholders have expressed concern that implementing a comprehensive ABS regime could increase compliance costs, create administrative complexity, or affect research and innovation activities. While many countries have successfully managed these issues, they have contributed to a cautious approach here in Aotearoa.

There has also been uncertainty about the scope and design of a domestic ABS system. The Protocol

requires national focal points, competent national authorities, compliance measures, monitoring systems, and legal mechanisms for enforcing benefit-sharing obligations. New Zealand has never developed a dedicated legislative framework for these functions, and responsibility is currently spread across multiple agencies and legal regimes.

A further consideration is that Aotearoa already has a range of biodiversity, conservation, biosecurity, intellectual property, and Māori policy frameworks. Governments have often argued that implementing Nagoya properly would require a coordinated review of several interconnected systems rather than a simple ratification decision.

Ironically, many of the concepts embodied in the Nagoya Protocol – such as prior informed consent, recognition of traditional knowledge, provenance, and benefit-sharing – have become increasingly influential in Aotearoa despite the country not being a Party. Vision Mātauranga, Māori data sovereignty initiatives, WAI 262 implementation discussions, the Biodiscovery Platform, and the recent but unreleased Te Puni Kōkiri biodiscovery policy work all reflect growing interest in ABS-type approaches. In many respects, New Zealand appears to be moving gradually toward elements of a Nagoya-style system, albeit without some of the institutional mechanisms, before deciding whether formal ratification should occur.

Other recent international agreements have implications for New Zealand policy, the 2022 Kunming-Montreal Global Biodiversity Framework (CBD, 2022) further strengthened international expectations regarding Indigenous rights, biodiversity stewardship, and benefit-sharing, with Targets 13 and 22 explicitly recognising the importance of equitable benefit-sharing and Indigenous Peoples' participation.

Modern biotechnology increasingly derives value from digital information. Advances in genomics, synthetic biology, artificial intelligence, metabolomics, and bioinformatics mean that researchers often utilise DNA sequences and genomic databases rather than physical specimens. The Cali Fund – a multilateral benefit-sharing mechanism for Digital Sequence Information (DSI) agreed at CBD COP16 in October 2024 (CBD, 2024) – was a landmark development, though many operational details remain under negotiation. For Māori, DSI intersects directly with questions of data sovereignty, authority over genomic information derived from taonga species, and the governance of digital representations of biological and cultural knowledge.

The CARE Principles for Indigenous Data Governance – Collective Benefit, Authority to Control, Responsibility, and Ethics – were developed with significant input from Professor Maui Hudson at Te Kotahi Research Institute in the University of Waikato – and have emerged as an important framework for



addressing these issues. Prof Hudson's particular contribution came out of his longstanding work on Māori data sovereignty, genomic governance, biobanking ethics, and Indigenous research governance. Prior to CARE, he had already been involved in developing Māori approaches to genomic research, cultural consent processes, and data governance through projects such as Te Mata Ira (the Māori Genome Project), Māori biobanking initiatives, and ethical frameworks for the use of biological and genetic information. These experiences helped shape the CARE emphasis on Indigenous authority, collective rights, stewardship responsibilities, and ethical relationships.

International efforts to align IP systems with biodiversity governance culminated in the adoption of the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (GRATK Treaty) in May 2024, agreed by consensus among all 193 WIPO member states (WIPO, 2024). The New Zealand government was instrumental in the negotiations. The treaty introduces mandatory disclosure of origin requirements for patent applicants. For Aotearoa, acceding to the GRATK Treaty is an early and relatively low-cost step with significant benefits for kaitiaki and the broader biodiscovery system.

Progress on WAI 262 and associated matters like Nagoya, DSI and GRATK began under Nanaia Mahuta as Minister for Māori Development from 2018 and continued under Willie Jackson and Tama Potaka. By late 2025, the focus appears to have shifted away from comprehensive biodiscovery system reform toward two more specific initiatives: potential New Zealand ratification of the WIPO Treaty on Genetic Resources and Associated Traditional Knowledge (GRATK), and support for the Biodiscovery Platform led by the Bioeconomy Science Institute. Although officials were still recommending movement toward a Nagoya-aligned access and benefit-sharing framework in 2025, it is not currently clear whether that broader programme of work remains active.

Comparative International Context

There is no single model for implementing ABS commitments. Countries have adopted diverse approaches reflecting their legal traditions, Indigenous rights frameworks, biodiversity assets, and economic development objectives.

Australia has developed a relatively decentralised ABS system, with responsibility divided between Commonwealth, state, and territory governments. Biodiscovery regulation is mostly linked to conservation legislation and permits governing access to biological resources. While implementation has been uneven across states and at the national level,

Australia has generated internationally recognised examples of Indigenous-commercial partnerships. One example involved Aboriginal traditional knowledge holders collaborating with researchers to develop novel injectable medical gels, with commercial returns supporting education, training, employment, and community development initiatives. Australia also provides an example of how Indigenous Protected Areas, Indigenous ranger programmes, and growing recognition of Indigenous Cultural and Intellectual Property rights, including moves this year to ratify the WIPO GRATK Treaty, can intersect with biodiscovery and benefit-sharing.

Europe illustrates the opportunities available within a highly integrated European regulatory environment. Danish companies operate within the European Union's Nagoya Protocol compliance framework, which places due diligence obligations on users of genetic resources. Denmark has become a global leader in industrial biotechnology, biosolutions, enzymes, and bio-based manufacturing. The Danish experience demonstrates that clear compliance requirements need not impede innovation; indeed, regulatory certainty can drive investment and growth. Another European country on the other hand has been so concerned about Nagoya compliance that some institutions have suggested ABS agreements are too risky to even consider getting involved with, so no research and development can proceed if there are ABS issues at play.

South Korea represents a model in which biodiscovery is closely linked to industrial policy, biotechnology investment, and national innovation strategies. The country has invested heavily in biopharmaceuticals, synthetic biology, and precision medicine while simultaneously strengthening frameworks for the utilisation and protection of biological resources. The Korean experience highlights the importance of coordinated investment across research, commercialisation, regulation, and intellectual property systems.

South Africa provides one of the most relevant examples for Aotearoa. Its Bioprospecting, Access and Benefit-Sharing Regulations require permits, benefit-sharing agreements, and recognition of Indigenous and local community interests. The Rooibos benefit-sharing agreement involving the San and Khoi peoples is internationally recognised as a landmark example of ABS implementation, creating both monetary and non-monetary benefits linked to a globally successful natural product sector. South Africa demonstrates that ABS systems can be designed to support commercial activity while simultaneously strengthening Indigenous participation and rights.

Brazil offers a contrasting model. Rather than relying primarily on project-by-project negotiations, Brazil's Biodiversity Law establishes a more diffuse and standardised benefit-sharing framework. Commercial

users of Brazilian genetic resources are generally required to contribute a percentage of revenues either directly to knowledge holders where traditional knowledge can be identified, or into the National Benefit-Sharing Fund where beneficiaries are diffuse or cannot be readily determined. The Brazilian model reduces transaction costs and provides greater certainty for industry, but has also attracted criticism from Indigenous Peoples who argue that standardised benefit-sharing mechanisms can weaken local decision-making authority and fail to fully recognise the diversity of Indigenous governance systems. Brazil's experience highlights an important tension between efficiency and self-determination that is highly relevant to Aotearoa.

Peru provides one of the most developed examples of Indigenous rights-based governance in the biodiversity and traditional knowledge domain. Law No. 27811, the Protection Regime for the Collective Knowledge of Indigenous Peoples Related to Biological Resources, was adopted in 2002 and established a *sui generis* legal framework recognising Indigenous peoples as collective rights holders in relation to traditional knowledge associated with biodiversity. The legislation requires prior informed consent for access to collective knowledge, establishes Indigenous-controlled knowledge registers, and provides for benefit-sharing through licensing arrangements and a national fund. A proportion of revenues derived from commercial use of traditional knowledge is directed into the Indigenous Peoples Development Fund to support community development and cultural revitalisation. Unlike many ABS systems that focus primarily on access to genetic resources, Peru explicitly recognises Indigenous knowledge as a protected subject in its own right. The regime therefore operates alongside biodiversity and intellectual property laws rather than being subordinate to them. While implementation has faced challenges, including limited awareness, enforcement difficulties, and the complexity of documenting traditional knowledge, the Peruvian model remains one of the most developed examples of a legislative framework designed specifically to recognise collective Indigenous rights within innovation and commercialisation systems.

There are many useful lessons for Aotearoa in the experience of other countries. Peru provides an important illustration of how WAI 262 aspirations might be reflected in legislation. The concepts of collective rights, prior informed consent, Indigenous-controlled registers, and dedicated benefit-sharing mechanisms all resonate strongly with recommendations emerging from WAI 262 and the Tiaki Taonga framework. While Aotearoa's constitutional arrangements differ significantly from Peru's, the Peruvian experience demonstrates that it is possible to move beyond conventional intellectual property frameworks and create legal mechanisms specifically designed around Indigenous relationships

with biodiversity and knowledge.

Taken together, these examples suggest several lessons for Aotearoa. First, successful biodiscovery systems provide certainty regarding access, benefit-sharing, and intellectual property. Second, Indigenous rights and commercial development need not be viewed as competing objectives. Third, standardised frameworks can reduce transaction costs and increase investment, but may risk undermining local authority if they become overly centralised. Finally, the strongest systems tend to combine clear national infrastructure with meaningful Indigenous participation in governance and decision-making.

Companies in pharmaceutical, cosmetic, food, biotechnology, and natural products sectors increasingly face scrutiny regarding the provenance of biological resources and the treatment of Indigenous rights holders. Certifications, reporting standards, and corporate climate, Nature and human rights obligations have contributed to growing expectations that organisations can demonstrate ethical sourcing practices. For Aotearoa's biodiscovery sectors, this represents both a risk and a major commercial opportunity.

For Aotearoa, the key lesson is not that any one model need be replicated. Rather, the international experience suggests that a future biodiscovery system should combine the strengths of multiple approaches: the legal certainty and compliance infrastructure found in Europe; the Indigenous partnership models emerging in Australia and South Africa; the innovation focus seen in South Korea; the scalable administrative mechanisms developed in Brazil; and the explicit recognition of collective Indigenous rights found in Peru. Such a system would need to be adapted to Aotearoa's unique constitutional context, Te Tiriti o Waitangi obligations, the aspirations of WAI 262, and the distinctive role of kaitiaki in relation to mātauranga Māori and shared rights and interests in relation to taonga species.





04. The Biodiscovery Landscape in Aotearoa

The project identified significant fragmentation across Aotearoa's biodiscovery ecosystem. Governance systems relating to taonga species, mātauranga Māori, ABS, and Indigenous participation remain inconsistent across sectors and institutions. Many organisations rely on generic references to Te Tiriti o Waitangi without possessing robust operational systems capable of addressing practical governance, consent, provenance, or benefit-sharing questions.

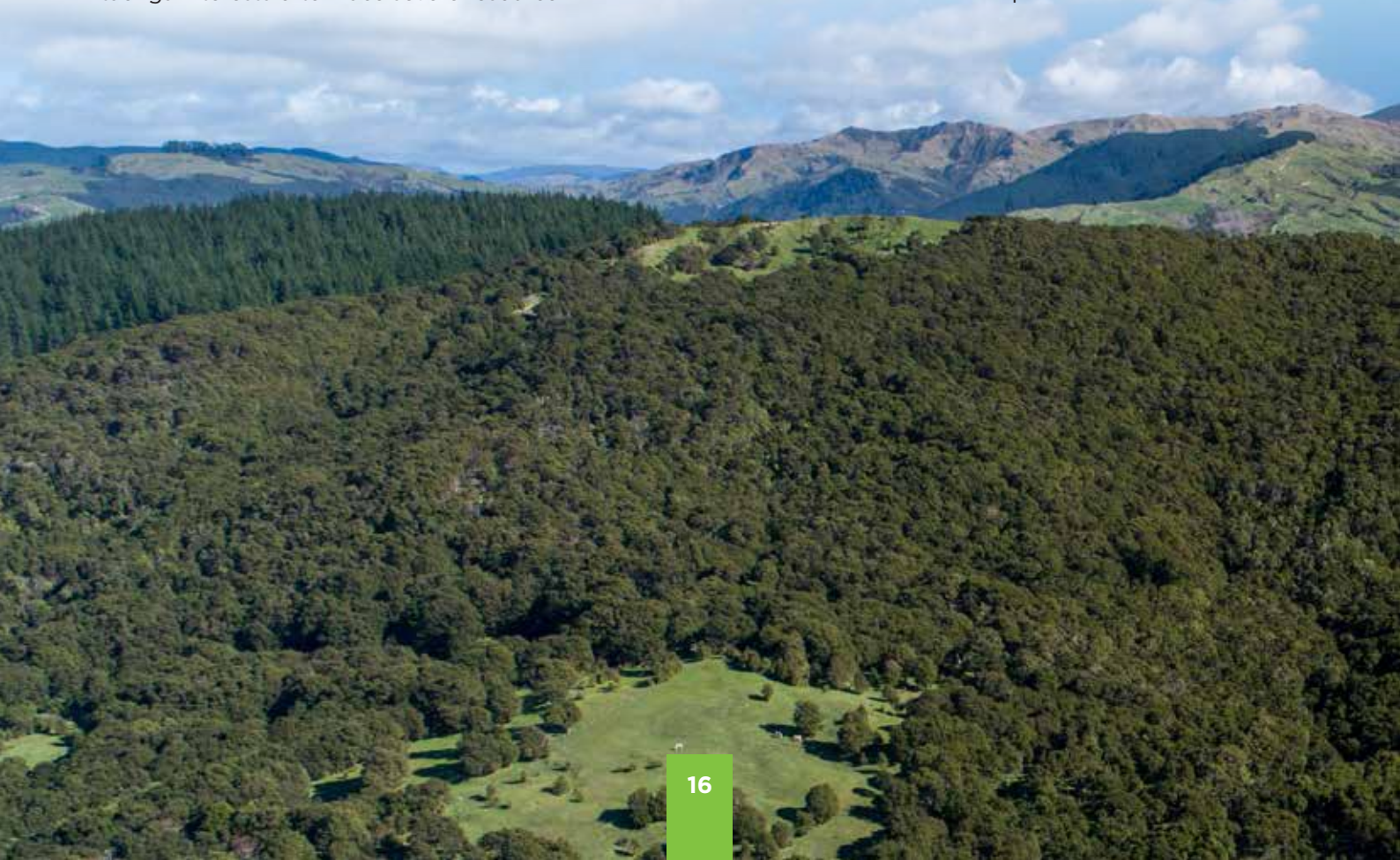
A particularly significant gap is the absence of coherent infrastructure through which kaitiaki can exercise shared rights and responsibilities in relation to taonga species. Researchers and companies seeking access to taonga frequently encounter overlapping governance interests, inconsistent engagement processes, and uncertainty regarding legitimate authority.

Conversely, Māori entities attempting to protect taonga interests often face severe resource

constraints and uneven access to legal, scientific, regulatory, and commercial expertise.

Despite increasing recognition that many taonga involve shared rights and overlapping interests, few practical mechanisms currently exist to support collective deliberation, decision-making, and coordination.

Analysis undertaken through the development of the Biodiscovery Framework, planning for the Biodiscovery Platform, and wider engagement across the sector points to a consistent picture of both opportunity and structural weakness within Aotearoa's biodiscovery system. Alongside governance fragmentation, a parallel challenge is the poor visibility and connectivity of existing capability. The sector possesses considerable scientific expertise, biodiversity assets, mātauranga Māori, commercial experience, collections, and research infrastructure, but these assets remain dispersed across institutions



and are often difficult to locate, access, or coordinate effectively. The challenge is therefore not simply one of investment, but of visibility, connectivity, and collective action.

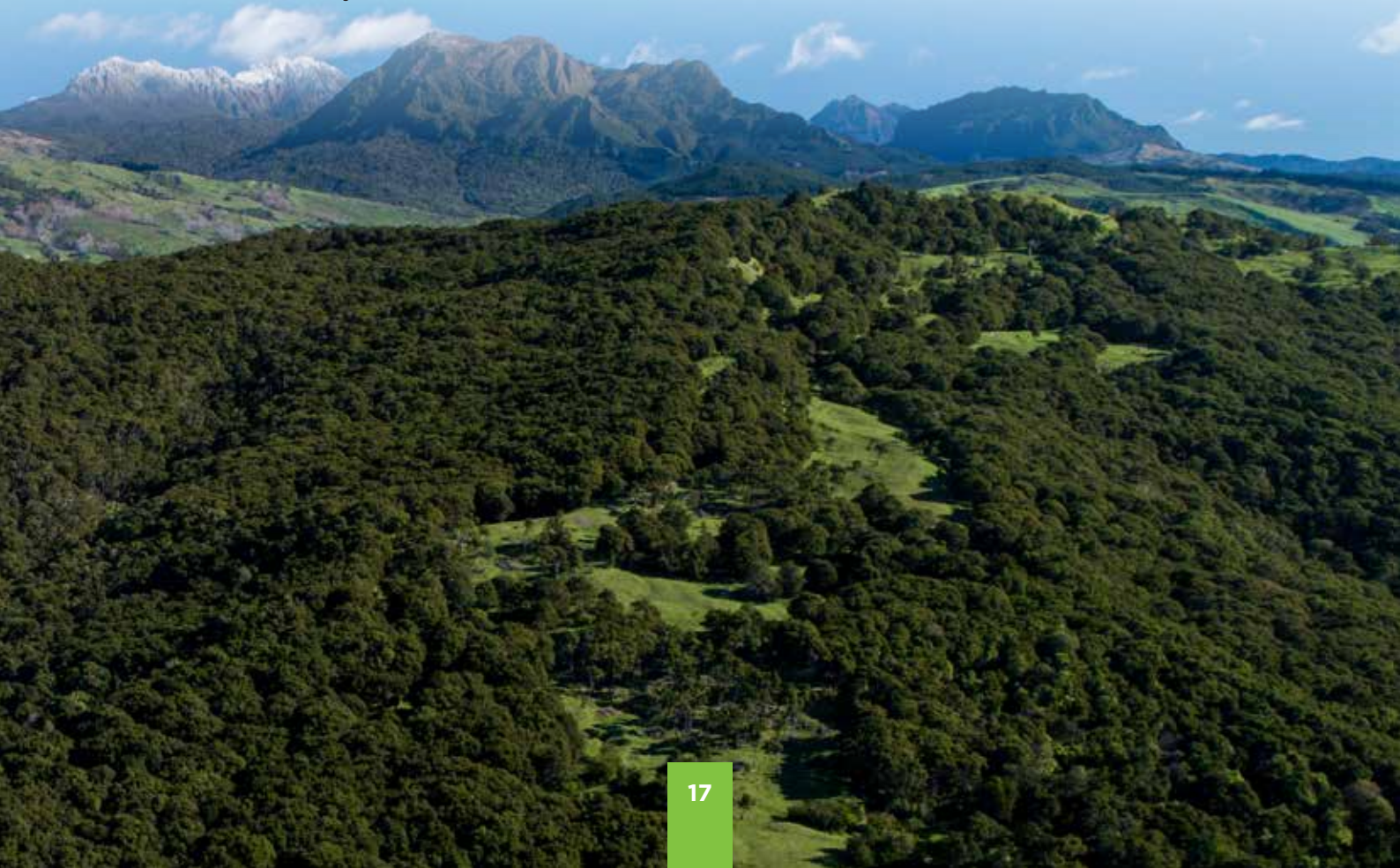
Alongside capability fragmentation, the sector continues to face relational challenges. Long-term collaboration between researchers, Māori organisations, businesses, government agencies, investors, and communities is often constrained by project-based funding, institutional silos, and the absence of enduring structures that support collective planning and relationship-building. Competition for funding and opportunities can further weaken trust and inhibit cooperation. These challenges are particularly significant in a field that depends upon long-term stewardship relationships and shared responsibility for biological resources and associated knowledge. As discussed throughout this report, relationships between kaitiaki may be just as important as relationships between kaitiaki and external stakeholders, particularly where shared rights and responsibilities in relation to taonga must be exercised collectively.

The sector also appears to be entering a phase where the greatest opportunities lie not in primary research and discovery alone, but in the translation of existing knowledge into practical applications and ethical commercialisation. Product pathways with the strongest near-term potential are likely to be concentrated around standardised natural ingredients, premium consumer products, veterinary applications, agrichemicals, anti-microbial products, and related sectors that build upon existing research and commercial activity. Investment in formulation,

market validation, regulatory pathways, and distribution channels may deliver greater short- to medium-term returns than a sole focus on early-stage scientific discovery.

Across almost all discussions regarding the future of biodiscovery, Māori governance emerged not as a peripheral consideration but as a foundational design requirement. There is growing recognition that future investment systems will require meaningful Māori participation in governance, decision-making, data stewardship, ABS processes, and intellectual property pathways. More broadly, there is increasing acknowledgement that biodiscovery systems must move beyond consultation-based approaches and toward structures capable of supporting the practical exercise of kaitiaki rights and responsibilities throughout the innovation lifecycle.

Taken together, these observations reinforce a central conclusion of this report: the primary challenge facing biodiscovery in Aotearoa is not a lack of biodiversity, scientific capability, mātauranga Māori, or commercial opportunity. Rather, it is the absence of practical mechanisms through which kaitiaki can exercise shared rights and responsibilities, and the absence of institutions capable of representing the interests of taonga within research, innovation, and commercialisation systems. The Biodiscovery Platform presents an opportunity to address many of these structural gaps, but its success will depend more on governance design, capability development, relationship-building, provenance systems, and accountability mechanisms than on new scientific discoveries alone.





05. Kaitiaki Rights, Shared Interests & Taonga Governance

Kaitiaki Rights & Shared Interests

Kaitiaki relationships with taonga species are typically derived through whakapapa, mātauranga and association, use and development (Waitangi Tribunal, 2011). These relationships are collective, enduring, and not reducible to simple ownership rights. They encompass responsibilities for stewardship of species and their habitats, authority to make decisions about how species and associated knowledge are used, and obligations to ensure that use is consistent with the wellbeing of the species itself, the people, and the taiao.

The Tiaki Taonga framework (WAI 262 Kia Whakapūmau, 2023; Kahu Aronui, 2024), developed by the WAI 262 claimants group Te Taumata

Whakapūmau and their technical advisory rūpū Kahu Aronui, provides the most developed articulation of these principles in an operational framework. It is guided by values including: affirming the mauri of taonga Māori as an intrinsic value in its own right; recognising whakapapa relationships of taonga with people; guaranteeing mana motuhake and tino rangatiratanga of kaitiaki; upholding manaakitanga for the collective benefit of all; and exercising kaitiakitanga in a manner that supports the benefit and wellbeing of Māori and of Aotearoa as a whole. Tiaki Taonga also includes structural elements such as Pātaka Taonga – an example of a domestic clearing-house mechanism that ensures authority rests with appropriate Māori entities.

Operationalising these principles between kaitiaki or Māori entities (hapū, iwi, etc.) that hold rights and interests for the same or similar taonga has been a significant structural challenges. Since the Mānuka Charitable Trust was established to represent the interests of mānuka (and, at least in the trust deed provisions, also other taonga), other legal entities have been established to participate in research and commercialisation projects. These are designed to represent the interests of taonga, the ecosystems that support them, and kaitiaki with shared interests in the taonga.

The Landscape: Parallel Trusts, Distributed Authority

Aotearoa is witnessing the ad hoc emergence of a network of autonomous entities – charitable trusts – established to protect, govern, and benefit-share from specific taonga species. The Kānuka Charitable Trust (KCT), Ngā Rauropi o Aotearoa Charitable Trust (NRACT), Wairuakohu Charitable Trust (WCT), and Mānuka Charitable Trust (MCT) embody a novel governance model rooted in Te Tiriti o Waitangi and kaitiakitanga. The table on the following page summarises their current configuration.



Trust	Taonga Species	Primary Focus	Trustee Appointment
Kānuka Charitable Trust (KCT)	Kānuka	Protection of taonga and kaitiaki interests; industry development. Co-developer of Te Pūnaha Taonga.	Trustees appoint trustees.
Ngā Rauropi o Aotearoa Charitable Trust (NRACT) (formerly Pekepeke Kiore CT)	Originally pekepeke kiore (<i>Hericium novae-zealandiae</i>); scope now expanded to all taonga (indigenous mushrooms, microorganisms, plants, insects, marine organisms, etc).	Explicitly kaitiaki-led; kaitiaki collectives vote on trustee appointments and significant decisions. Most explicitly Te Tiriti-grounded governance model.	Initially trustees appoint trustees, moving to kaitiaki associated with taonga will elect trustees.
Wairuakohu Charitable Trust (WCT)	Wairuakohu (<i>Radula marginata</i>) and other indigenous bryophytes	Trustees appointed by kaitiaki groups; protection and industry development. Co-developer of Te Pūnaha Taonga.	Iwi affiliated with wairuakohu research appoint trustees.
Mānuka Charitable Trust (MCT)	Mānuka, and all other taonga – just not yet.	Protection of taonga and kaitiaki interests; national industry development focus.	Original trustees supported by Iwi Chairs, subsequent trustees appointed by trustees.

These entities differ in governance philosophy and operational structure. KCT follows a traditional charitable trust structure, established to passively receive donations to be applied for benefit of the species and ecosystems that support it. WCT and NRACT trust deeds embed explicit kaitiaki control over the governance and veto power over significant decisions, with appointments derived from recognised kaitiaki groups – a governance innovation that represents an attempt to provide for distributed rangatiratanga and the exercise of shared rights and interests, within modern legal structures. MCT and KCT have a strong focus on supporting industry development and national benefit, whereas NRACT and WCT are more focused on benefits flowing primarily to the taonga and its ecosystems.

Notably, NRACT – originally the Pekepeke Kiore Charitable Trust established for *Hericium novae-zealandiae* – was invited to incorporate additional families of native mushrooms and potentially all indigenous yeasts and microorganisms, and has renamed itself Ngā Rauropi o Aotearoa Charitable Trust accordingly. This reflects an emergent pattern: species-specific trusts being drawn toward broader scope as the need for coordinated governance across the fungal, microbiological, and botanical commons becomes apparent.

Taonga Governance Entities as Indigenous Innovation

The conventional response to Indigenous participation in research and commercialisation has generally been consultation, advisory committees, benefit-sharing agreements, or co-governance arrangements. While these approaches may improve engagement, they often leave Indigenous

interests external to the systems through which research, investment, intellectual property, and commercialisation decisions are made.

The emergence of what this project has called taonga governance entities could be seen as an authentic alternative. Rather than acting solely as stakeholders, these entities participate directly within the innovation system itself. They can hold intellectual property, negotiate access and benefit-sharing agreements, receive and distribute benefits, participate in commercial ventures, commission research, and advocate for the interests of taonga and their associated kaitiaki communities.

Existing iwi and hapū entities remain fundamental holders of rights and responsibilities in relation to taonga. However, biodiversity utilisation often involves multiple overlapping kaitiaki interests, long commercial timeframes, specialist technical and legal expertise, and species-specific stewardship functions that existing institutions were not necessarily designed to perform. Taonga governance entities are therefore proposed as complementary institutions rather than substitutes for iwi and hapū authority. Their purpose is not to replace existing governance arrangements, but to provide practical mechanisms through which rights, responsibilities, benefits, and obligations associated with particular taonga can be exercised and managed over time.

This model creates an institutional mechanism through which the interests of taonga can remain represented throughout the innovation lifecycle, rather than being considered only at the point of consultation or consent or, worst case scenario, benefit-sharing. It also provides continuity beyond individual projects, researchers, funding programmes, or commercial partnerships.

Unlike conventional conservation organisations,

taonga governance entities are not established solely to protect species. Unlike conventional commercial entities, they are not established primarily to maximise financial returns for shareholders or even Indigenous communities. Their purpose is to maintain relationships between taonga, kaitiaki, mātauranga, ecosystems, and utilisation pathways, while ensuring benefits arising from research and commercialisation remain connected to those relationships.

In this sense, taonga governance entities may represent an emerging institutional form that sits somewhere between Indigenous governance organisations, stewardship bodies, and innovation intermediaries. Their significance lies not only in what they do, but in the possibility that they provide a practical mechanism through which the interests of taonga can participate directly within research, investment and commercialisation systems.

Potential Tensions Between Kaitiaki Authority & Taonga Governance Entities

While taonga governance entities may provide important new mechanisms for coordinating stewardship, research engagement, commercialisation, and benefit-sharing, their emergence also raises important governance questions that require careful consideration. While these entities may provide practical mechanisms for protecting taonga interests and participating in research, commercialisation, and benefit-sharing arrangements, they should not be assumed to be synonymous with kaitiaki authority itself.

A fundamental distinction exists between Indigenous rights and responsibilities that arise through whakapapa, tikanga, occupation, use, and enduring relationships with taonga, and the legal entities that may be established to support the exercise of those rights and responsibilities. Trusts, companies, charitable entities, and other governance structures are ultimately institutional tools. They may help facilitate collective action, hold assets, negotiate agreements, and receive benefits, but they do not inherently possess the rights and responsibilities that derive from kaitiaki relationships.

This distinction creates a number of potential tensions – and possibly conflict – if not thought through carefully at the outset. Taonga governance entities may gradually become more accountable to their own trustees, funding requirements, operational priorities, or commercial interests than to the wider communities they were established to serve. They may take positions that do not fully reflect the diversity of views held by kaitiaki groups. Structures will need to be developed around who appoints leaders, how legitimacy is maintained,

who can participate in decision-making, and how disagreements between kaitiaki groups and a taonga governance entity – even if the leadership is appointed by kaitiaki – should be resolved.

A further consideration is that entities established to represent the interests of taonga may intentionally include expertise that extends beyond Indigenous communities. Ecologists, taxonomists, lawyers, commercial specialists, researchers, and other experts may all contribute valuable knowledge and capability. While such participation may strengthen decision-making and improve outcomes for taonga, it also creates the possibility that technical, scientific, financial, or organisational perspectives become privileged over the authority of kaitiaki themselves. The challenge is not whether such expertise should be involved, but how it can contribute without displacing the rights and responsibilities of those who hold enduring relationships with the taonga.

There is also a philosophical tension between representing the interests of taonga and representing the interests of people. A governance entity established to act in the interests of a species, ecosystem, or taonga may occasionally reach different conclusions from those preferred by some kaitiaki groups, researchers, commercial partners, or government agencies. Indeed, if such entities are genuinely intended to represent the interests of taonga, situations may arise where ecological, cultural, commercial, and community aspirations do not align perfectly. Governance systems must therefore provide transparent mechanisms through which these tensions can be identified, debated, and resolved.

These questions also intersect with emerging international discussions regarding the Rights of Nature and legal personhood for ecosystems, rivers, forests, and other non-human entities.

While taonga governance entities are not themselves full Rights of Nature mechanisms, they raise related questions about who is entitled to speak for a species or ecosystem, how those interests are identified and protection exercised, and how they should be balanced alongside human interests. In this sense, taonga governance entities may be understood as a practical governance response to questions that Rights of Nature discourse sometimes leaves unresolved in operational terms. Rather than relying solely on legal recognition of non-human rights, the emerging taonga governance entities seek to create institutions capable of representing taonga interests within research, commercialisation, and stewardship systems and keeping kaitiaki as lead human actors in the system.

For these reasons, the long-term legitimacy of taonga governance entities is likely to depend on constitutional arrangements that clearly distinguish between authority and administration. Authority



must remain grounded in kaitiaki relationships and collective decision-making processes, while governance entities operate as vehicles through which that authority can be exercised. Their legitimacy therefore derives not from their legal status, but from their continuing accountability to the iwi, hapū, marae, whenua Māori entities, and other kaitiaki groups whose rights and responsibilities they are intended to support.

The most successful models are therefore likely to be those that remain accountable to kaitiaki collectives, maintain transparent appointment and review processes, accommodate diverse forms of expertise, and recognise that their legitimacy derives from the communities and taonga they serve rather than from the legal structures themselves.

There is unlikely to be a perfect institutional arrangement for balancing the interests of taonga and kaitiaki, let alone also researchers, commercial partners, and wider society. Questions of legitimacy, representation, accountability, expertise, and authority will continue to evolve as new governance models are tested in practice. However, these challenges should not be viewed as reasons for inaction and maintaining the status quo. Rather, they reflect the reality that Aotearoa is attempting to address a governance problem for which few, if any, mature international precedents exist. The task

is not to design a perfect system from the outset, but to develop institutions and processes capable of supporting the ongoing exercise of shared rights and responsibilities, learning from experience, and adapting over time. In that respect, the emergence of taonga governance entities and mechanisms for the shared exercise of collectively held kaitiaki rights, represent less a final solution than an important institutional experiment in how kaitiaki authority, taonga interests, and ethical innovation might be brought together within a coherent biodiscovery system.

Key Risks of the Current Proliferation Model

Five significant risks of the current model of proliferating taonga entities were identified:

- Fragmentation and conflicting interests – Each trust currently operates independently, with limited participation from some legitimate kaitiaki groups. If a trust negotiates a licensing agreement, kaitiaki not currently connected may be excluded from decision-making and benefit-sharing. Without coordination mechanisms, overlapping governance claims could create confusion for external parties and conflict between kaitiaki groups and trusts.

- Capacity constraints – Effective trust governance requires sustained expertise in IP law, benefit-sharing mechanics, international regulatory frameworks (including the Nagoya Protocol and DSI governance), and strategic planning. Four independent trusts may struggle to build and maintain the necessary depth of knowledge. Duplication of effort – the same individuals representing their kaitiaki collective on multiple trusts; negotiating with the same researcher four times – reduces efficiency and accelerates burnout.
- Strategic vulnerability – A distributed network may be easier to pick off piecemeal. Researchers or companies seeking access to taonga may approach the ‘easiest’ trust while avoiding others. One trust making a weak agreement could normalise unfavourable terms across the network. Conversely, one trust could capture disproportionate benefit-sharing, creating equity tensions.
- Inconsistent standards and external legitimacy – Without shared governance principles, taonga stewardship may appear ad hoc to international or domestic audiences. Researchers and funders may question whether these trusts truly represent kaitiaki authority or are merely self-selected, self-interested entities – undermining the credibility necessary for the entities to fulfil their purpose, particularly in the legislative vacuum that currently exists.
- Collective action problems – If one trust succeeds dramatically in benefit-sharing negotiations, others may feel pressure to match outcomes or compete for the same resource. Without mechanisms to deliberate collectively and manage free-rider or defector problems, trust may erode within the network, even when the same kaitiaki are involved in multiple taonga entities.



Strategic Opportunities: From Proliferation to Joined-Up Network

Conversely, substantial opportunities may arise from the network of entities, provided coordination mechanisms are established:

- Tiered governance and subsidiarity – A federal model in which each trust maintains autonomy in relation to its specific taonga and kaitiaki relationships, while deferring to collective bodies on cross-cutting issues (common standards for benefit-sharing, shared legal resources, coordinated government engagement). This mirrors the Pekepeke Kiore/NRACT model – kaitiaki collectives vote on significant decisions – but scales it across trusts.
- Shared infrastructure and collective strength – The four trusts together could sustain a shared policy team, legal advisors, and data infrastructure that no single trust could afford alone. This pools expertise, reduces duplication, and provides economies of scale. A unified voice in government consultations and industry engagement carries more weight than four separate entities.
- Kaitiaki collective legitimacy – By explicitly recognising that authority stems from kaitiaki collectives rather than the trusts themselves, the network can claim democratic legitimacy and alignment with Te Tiriti o Waitangi. This makes the model more credible to kaitiaki as well as researchers, investors, and government, and aligns with global Indigenous IP governance trends and frameworks.
- Benefit-sharing harmonisation – A collective framework could establish baseline standards for benefit-sharing (minimum royalty rates, equity thresholds, knowledge-sharing provisions) without requiring uniform terms. This protects against a ‘race to the bottom’ while allowing flexibility for species-specific or regional contexts.
- Network effects on Te Pūnaha Taonga – If the trusts position themselves as the anchor organisations within Te Pūnaha Taonga, the platform becomes not just a technical tool but a governance hub. Researchers and companies see all trusts and their kaitiaki partners in one place, reducing search costs and increasing likelihood of compliance.

Te Pūnaha Taonga is designed to provide the practical infrastructure through which either of the governance models described above could operate, and may ultimately support a hybrid approach combining elements of both.

Two Options for a Collective Strategy

No single governance model is likely to be sufficient on its own. Fully decentralised arrangements risk fragmentation and duplication, while highly centralised structures risk weakening the direct relationship between kaitiaki and taonga. The most promising option could be a hybrid approach that combines species-level authority with shared national

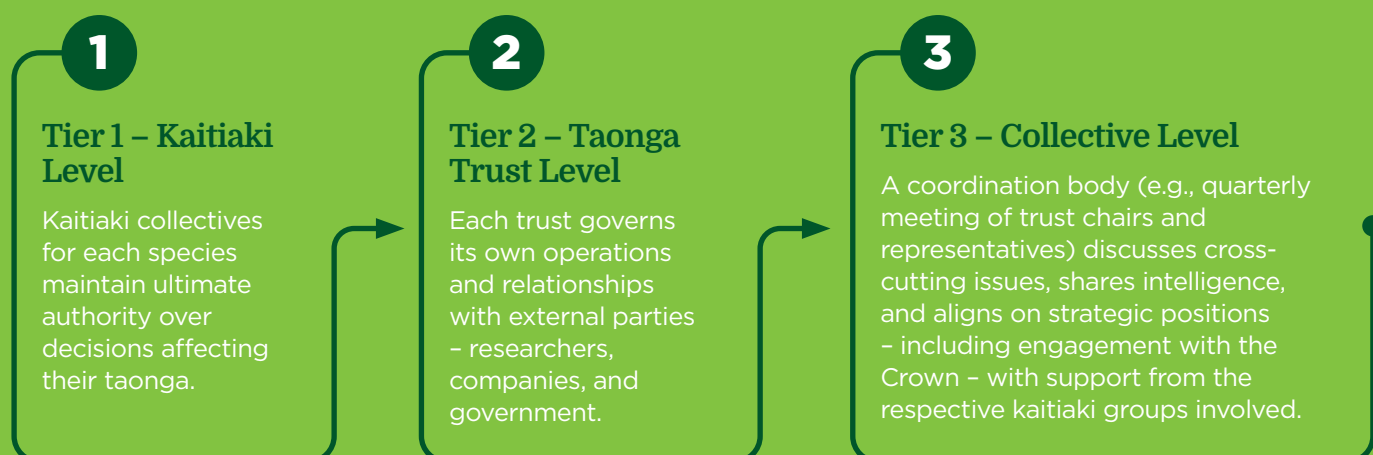
infrastructure, enabling kaitiaki groups to exercise shared rights and responsibilities while benefiting from collective capability, coordination, and administrative support. The two options below should therefore be understood not as mutually exclusive alternatives, but as points on a spectrum from which practical governance architecture may emerge.

01

Federated Governance

The four trusts could formally declare a collective identity – for example, ‘Taonga Trust Network’ or ‘Te Puna o Ngā Taonga Tukuiho’ – and articulate shared principles rooted in Te Tiriti o Waitangi, kaitiakitanga, and benefit-sharing. This is not a merger but a federation: each trust retains independence; the collective speaks only where all agree. Two or more trusts could potentially combine to accommodate more than one taonga and move toward being an entity with internal structures to accommodate the interests of multiple taonga and their respective kaitiaki groups, as NRACT is actively exploring through changes to its trust deed.

A three-tier governance structure is proposed:



Shared resources across the trust network could include:

Legal defence resourcing – pooling resources (cash, expertise, pro bono support) for IP litigation, benefit-sharing agreement negotiation, and regulatory advocacy;

- Policy and intelligence – sharing research on international ABS frameworks, precedent agreements, and researcher and company profiles;
- Technology and data infrastructure – Te Pūnaha Taonga and Local Contexts as shared platforms; negotiated agreements with national biodiversity databases; and
- Capacity building – joint training on benefit-sharing mechanisms, negotiation skills, and regulatory compliance including DSI and the GRATK Treaty.

The collective should agree on principles – not prescriptive terms – such as: minimum benefit-sharing thresholds; recognition of kaitiaki rights; commitment to ethical research standards; and transparency in licensing agreements. Individual trusts retain flexibility to negotiate higher standards or unique arrangements. The goal is to protect against a race to the bottom without imposing uniformity.

The network requires a mechanism to address conflicts: if one trust makes an agreement seen as damaging to others, or if governance structures within a trust fail to adequately represent kaitiaki authority. This could range from informal peer pressure to a formal arbitration process, but must preserve trust autonomy while protecting collective interests.

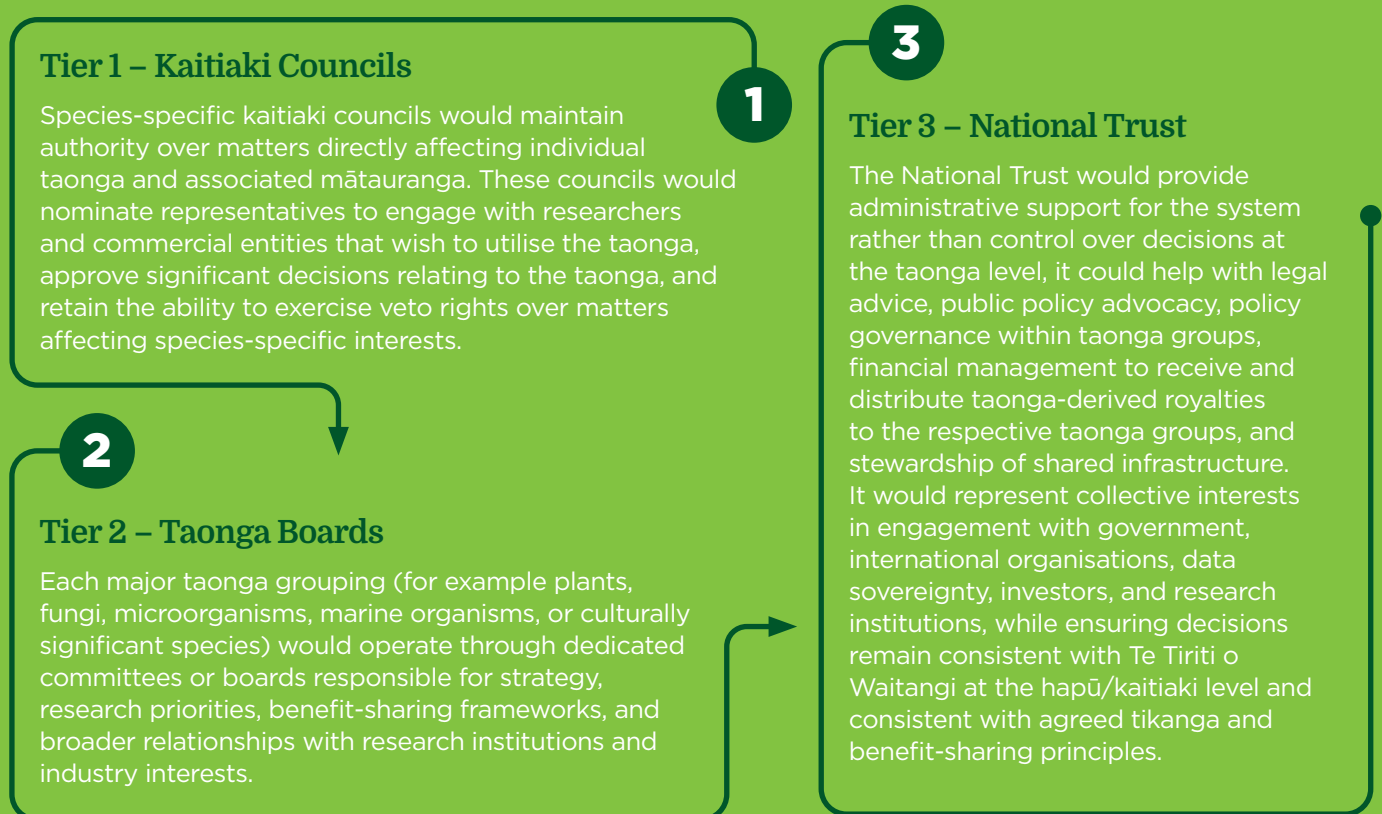
A National Taonga Trust (or National Coordination Entity)

An alternative approach would be the gradual consolidation of taonga-specific trusts into a single national governance entity responsible for representing the interests of taonga species and their kaitiaki within biodiscovery, intellectual property, access and benefit-sharing, and commercialisation processes. Rather than operating as a federation of independent trusts, this model would establish a single charitable trust or similar legal entity with a mandate spanning multiple taonga species and associated mātauranga.

Under this approach, existing entities such as KCT, NRACT, WCT and MCT could either merge into a single organisation or progressively transfer selected functions to a national entity while retaining species-specific advisory structures. The resulting trust would provide a single point of engagement for researchers, companies, investors, government agencies, and international partners seeking to work with taonga species.

The rationale for a National Taonga Trust is that many of the governance, legal, policy, and capability challenges faced by individual trusts are common across species. Access and benefit-sharing agreements, intellectual property protection, Digital Sequence Information governance, provenance systems, international engagement, and regulatory advocacy all require specialist expertise that can be difficult to sustain across multiple small organisations. Consolidation would create economies of scale, reduce duplication, and strengthen negotiating power.

A three-tier governance structure is proposed:



Shared functions within the National Trust could also include communications, and operation of Te Pūnaha Taonga, the digital platform for registering relationships between kaitiaki entities and taonga so kaitiaki can exercise shared rights and responsibilities. A consolidated national trust would also be better positioned to support dedicated technical staff and long-term capability development programmes than multiple small entities operating independently.

The principal risk of the National Trust model is that it

could weaken the direct relationship between kaitiaki and taonga if authority becomes overly centralised. To address this, constitutional safeguards would be required to ensure that authority over species-specific matters remains with the relevant kaitiaki councils where shared rights and interests are managed, and that the National Trust acts primarily as an enabling and coordinating body rather than as a substitute for rangatiratanga. The success of the model would therefore depend on carefully balancing national coordination with iwi/hapū-level authority.

The National Trust model offers the greatest potential for coherence, capability, and influence. It would provide government, industry, and international partners with a single recognised interface for engagement while maintaining structured pathways for kaitiaki authority to be exercised at the species

level. In effect, it would function as a Māori-led institution for taonga governance, analogous to a sector-wide authority for biodiversity stewardship, ABS, and ethical biodiscovery – and if legislation enabled, it could also be the Competent National Authority.



CASE STUDY

Te Pūnaha Taonga: Platform for Shared Taonga Governance

Te Pūnaha Taonga (taonga.maori.nz) is an Indigenous-led digital governance platform designed to enable the exercise of collective rights and responsibilities in relation to taonga species and associated mātauranga. Rather than functioning simply as a registry, the platform provides practical infrastructure through which kaitiaki can identify shared interests in taonga, engage with one another, deliberate collectively, and where appropriate make decisions relating to the protection, research, utilisation, and commercialisation of taonga species. The platform has been developed by Ngā Rauropi o Aotearoa Charitable Trust in collaboration with Kānuka Charitable Trust and Wairuakohu Charitable Trust, with technical support from IO Ltd and Carbon Critical Ltd.

The platform emerged in response to several persistent challenges facing taonga governance in Aotearoa. Taonga species are frequently the subject of research, commercialisation, and conservation activities involving multiple kaitiaki groups, yet there are currently few mechanisms enabling those groups to identify one another, coordinate their responses, exercise collective rights and responsibilities, or engage with researchers and companies through agreed processes. The absence of such mechanisms creates risks of biopiracy, fragmented decision-making, conflicting positions, and missed opportunities for collaboration and benefit-sharing. Te Pūnaha Taonga seeks to address these challenges by providing a structured process through which kaitiaki relationships with taonga can be identified, recognised, and activated.

At its core, the platform enables kaitiaki entities – including iwi, hapū, marae, whenua Māori entities, charitable trusts, and other Indigenous organisations – to register their interests in particular taonga species and the geographical areas with which they have enduring relationships. Registration is supported by evidence relating to whakapapa, occupation, utilisation, biodiversity occurrence records, Treaty settlement information, and other relevant sources. Once registered, kaitiaki can participate in species-specific groups, referred to as Taonga Ohu, through

which collective discussion, relationship building, research engagement, and commercial opportunities can be considered.

A significant recent development is the integration of Global Biodiversity Information Facility (GBIF) occurrence data and related biodiversity datasets. Through geofencing of registered rohe, kaitiaki can now view biodiversity records relating to taonga species occurring within their areas of interest and identify where relationships and responsibilities may overlap with those of other kaitiaki groups. This functionality helps address one of the most difficult operational challenges within access and benefit-sharing systems internationally: identifying who should be engaged when research or commercial activity involves a particular species. By linking biodiversity occurrence data, taonga species, place-based relationships, and kaitiaki governance, Te Pūnaha Taonga has the potential to become a practical mechanism for identifying legitimate interests and facilitating appropriate engagement pathways.

The platform is also designed to support a wider taonga governance ecosystem. Rather than concentrating authority within a single national body, the model envisages kaitiaki groups associated with particular taonga exercising responsibility for decisions relating to those taonga. The role of a national trust would be to provide shared infrastructure that enables these groups to operate effectively, rather than to direct or replace their decision-making authority.

Under this approach, Te Pūnaha Taonga would function as both a digital platform and a governance support system. Kaitiaki groups could utilise common policies, templates, registers, agreements, dispute-resolution processes and administrative systems, reducing the need for each group to establish and maintain separate organisational structures. Where research, intellectual property, investment or commercial activities require a dedicated legal vehicle, individual groups could establish their own trusts, companies or other entities.

However, many groups may choose to operate through the shared infrastructure provided by the national trust, allowing them to focus on deliberation, decision-making and stewardship rather than administration and compliance.

Supporting this ecosystem would be a Secretariat operating under the national trust. The Secretariat would provide capability-building, facilitation, agreement development, policy engagement, conflict resolution, registry management, monitoring, communications and international engagement services. Over time, it could also support negotiations relating to access and benefit-sharing, intellectual property, research partnerships and commercial ventures.

To ensure long-term sustainability and independence, the national trust and Secretariat could receive a modest share of revenues arising from commercial activities undertaken through the network. This would provide an ongoing funding source for the shared infrastructure that supports all taonga and all participating kaitiaki groups, while allowing the majority of benefits to continue flowing to the relevant taonga, kaitiaki communities and project partners.

Analysis undertaken as part of this project identifies four critical success factors for Te Pūnaha Taonga:

1. Governance clarity. Long-term confidence in the

platform will depend on transparent arrangements regarding ownership, control, accountability, and representation.

2. Kaitiaki legitimacy. The platform must remain a mechanism through which kaitiaki exercise authority rather than becoming a top-down administrative tool. These institutions are envisaged as complementary to existing iwi and hapū structures, providing species-specific governance, stewardship, and benefit-sharing functions that many existing organisations were not designed to undertake.
3. Interoperability and flexibility. Different taonga and kaitiaki collectives may require different governance arrangements, benefit-sharing models, and engagement protocols, and the platform must be capable of accommodating this diversity.
4. Alignment with both Te Tiriti o Waitangi and emerging international frameworks including the Convention on Biological Diversity, Nagoya Protocol, Kunming-Montreal Global Biodiversity Framework, WIPO GRATK Treaty, CARE Principles, and Digital Sequence Information governance arrangements.

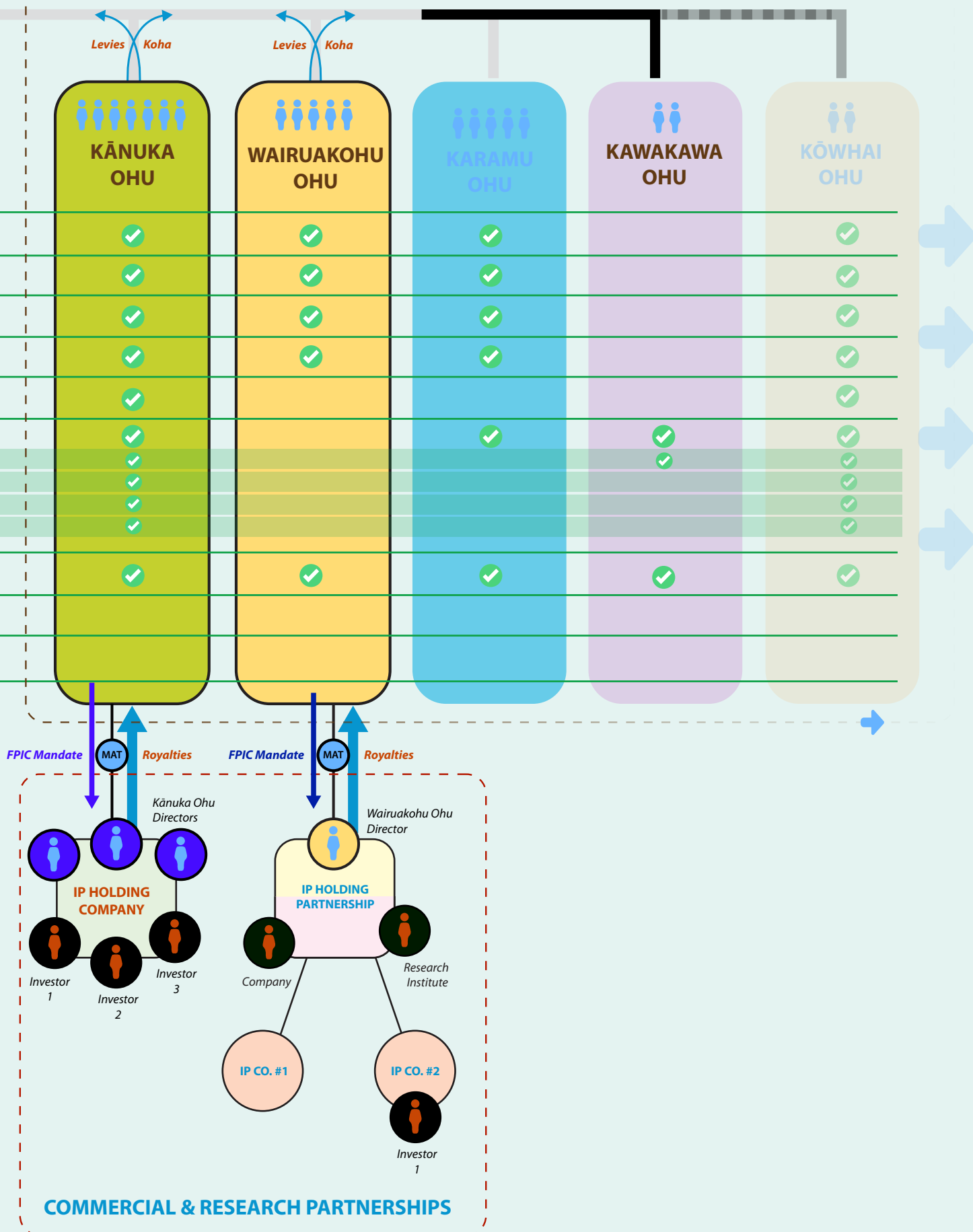


Fig 1: Te Pūnaha Taonga as part of a national trust structure provides for kaitiaki entities to have an association with all or some taonga found in their territories enabling participation in ohu, or groups, for those taonga alongside all other kaitiaki registered with those taonga.



TE PŪNAHA TAONGA TAONGA RŌPŪ

Ohu (groups) of kaitiaki associated with specific taonga consider utilisation opportunities to develop Mutually Agreed Terms (MAT) with researchers and/or commercial entities. Benefits flow to the ohu who decide how to use them in the service of the taonga, taiao and the kaitiaki communities.



The recommended positioning arising from this project is that Te Pūnaha Taonga is best understood as shared governance infrastructure for an emerging network of taonga entities and kaitiaki collectives engaged in biodiversity protection, research, and biodiscovery.

Governance could be exercised collectively by participating taonga entities, through elected kaitiaki representatives, or through a hybrid model that combines both approaches.

Importantly, the need for such a facility has already been identified in Biodiscovery Platform planning discussions as a potential public-good infrastructure project. This reflects growing recognition that future access and benefit-sharing systems will require practical governance infrastructure capable of connecting species, kaitiaki, researchers, companies, and regulators within a common framework.

Viewed in this way, Te Pūnaha Taonga is more than a digital platform. It represents an emerging governance institution capable of operationalising kaitiakitanga, supporting collective decision-making, reducing biopiracy risk, improving certainty for researchers and investors, and providing the practical infrastructure necessary for future biodiscovery and access and benefit-sharing systems. Whether it ultimately functions as a supporting tool, a domestic clearing-house mechanism, or a core component of a future Māori-led Competent National Authority, its significance lies in its ability to translate principles of rangatiratanga, kaitiakitanga, and collective

responsibility into practical governance processes that can operate at national scale.

Operational Architecture and Funding Model

The operational architecture of Te Pūnaha Taonga is designed around a simple principle: authority remains with kaitiaki, while shared infrastructure supports the exercise of that authority. Rather than creating a centralised institution that makes decisions on behalf of kaitiaki, the system seeks to provide practical mechanisms through which multiple groups can identify shared interests, deliberate collectively, coordinate responses, and engage with research, commercialisation, conservation, and policy processes.

At the foundation of the model are affiliated kaitiaki entities, including iwi, hapū, marae, whenua Māori organisations, charitable trusts, and other Indigenous entities. These groups register their interests in particular taonga species and geographic areas through Te Pūnaha Taonga. Registration is supported by evidence relating to whakapapa, occupation, utilisation, biodiversity occurrence records, Treaty settlement information, and other relevant sources.

The objective is not to create exclusive ownership claims, but to identify legitimate relationships and responsibilities that may need to be considered when decisions are made regarding the utilisation of taonga.

POTENTIAL BENEFIT FLOWS

Benefits generated through the commercial utilisation of taonga are distributed to support the taonga, kaitiaki communities and shared governance infrastructure.

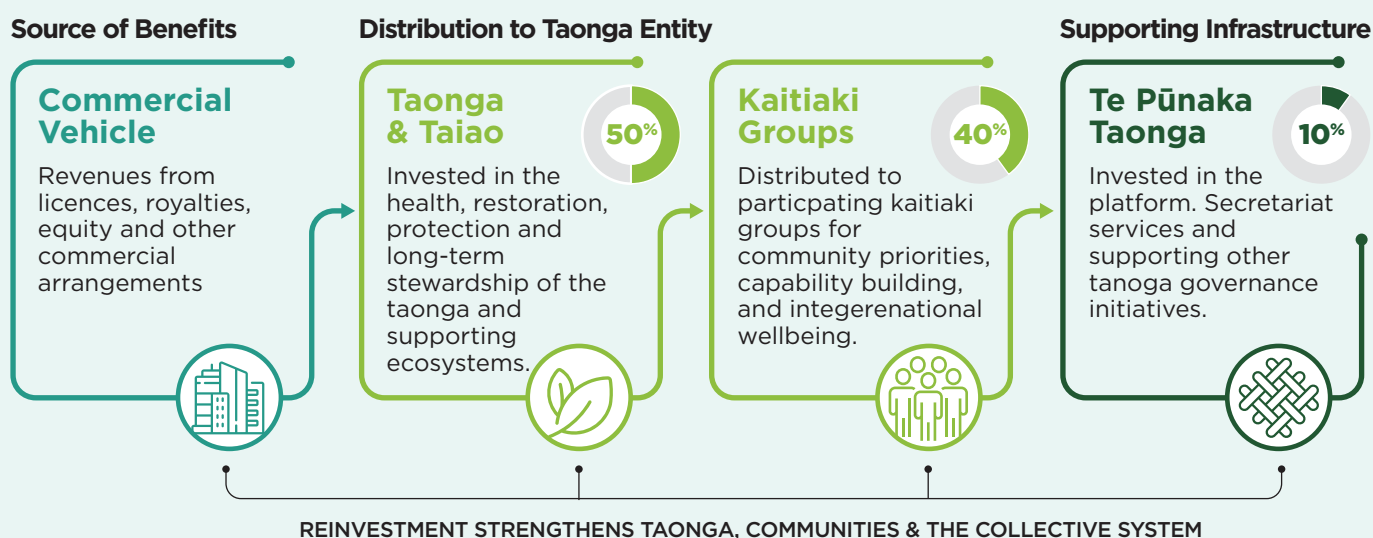


Fig 2: Revenue (and other benefits) may flow in time from commercial ventures involving taonga-derived IP and products. These may be shared between entities and activities with a particular focus on protecting taonga and Te Taiao, and entities serving the needs of the respective kaitiaki communities connected to the taonga. A smaller portion (probably <10%) may be allocated to the system and infrastructure that supports other taonga and their kaitiaki.



Once registered, kaitiaki participate in species-specific or kaupapa-specific Taonga Ohu. These groups provide the primary forum through which shared rights and responsibilities are exercised. Taonga Ohu may operate informally where interests are limited to information sharing and relationship building, or may evolve into formal legal entities where intellectual property, commercialisation opportunities, research partnerships, or access and benefit-sharing arrangements require a more structured governance framework. Different taonga may therefore have different governance arrangements depending on the interests and aspirations of participating kaitiaki.

Supporting these groups is Te Pūnaha Taonga itself, which functions as both a digital platform and a governance infrastructure layer. The platform provides registration systems, biodiversity information, communication tools, deliberation processes, document repositories, agreement templates, governance resources, and mechanisms for identifying overlapping interests. In effect, it acts as a shared operating system through which multiple taonga governance arrangements can function without each group having to develop its own infrastructure independently.

Above the platform sits a National Trust and Secretariat. The role of this entity is not to direct decisions relating to individual taonga, but to provide shared services that enable kaitiaki groups to operate effectively. Functions may include governance support, capability building, policy development, legal

and commercial advice, facilitation, conflict resolution, stakeholder engagement, registry management, monitoring and evaluation, communications, and international engagement. The Secretariat also provides continuity between projects and species, ensuring institutional knowledge is retained and shared across the network.

Over time, a future Competent National Authority (CNA), if established through legislation, could recognise and interact with this network as a practical mechanism for identifying legitimate kaitiaki interests, facilitating engagement processes, and supporting access and benefit-sharing arrangements. Under such a model, Te Pūnaha Taonga would not replace statutory functions, but could provide much of the governance infrastructure required for them to operate effectively.

Potential Funding Structure

A recurring challenge for Indigenous governance initiatives is securing sustainable funding while maintaining independence from government, philanthropic, or commercial interests. The proposed funding model for Te Pūnaha Taonga seeks to address this challenge through a combination of establishment funding, service revenue, and benefit-sharing mechanisms.

During the establishment phase, funding is likely to come from a mixture of public-good investment, philanthropic grants, research funding, and



contributions from participating organisations. This funding would support platform development, governance design, registration processes, capability building, and Secretariat functions. Biodiscovery Platform investment, Māori development funding, and international biodiversity initiatives may all provide potential sources of support.

Over the medium term, the National Trust and Secretariat could develop a diversified revenue base through a combination of membership contributions, training and advisory services, project administration fees, and support contracts associated with research and commercial partnerships. However, these mechanisms alone are unlikely to provide sufficient resources to support a national-scale governance system.

Long-term sustainability is therefore envisaged through benefit-sharing arrangements linked to the utilisation of taonga. Where Taonga Ohu choose to participate in commercial ventures, ABS agreements, IP licensing, royalty arrangements, equity investments, or other value-generating activities, a modest agreed proportion of benefits could be directed to the National Trust and Secretariat. This contribution would fund the shared infrastructure that enables all participating groups to operate while avoiding excessive reliance on external funding.

A possible distribution model could see benefits allocated across three levels:

1. Taonga and ecosystem outcomes – supporting restoration, conservation, monitoring, and species-specific stewardship activities;
2. Kaitiaki communities – supporting cultural, educational, capability-building, and community development priorities;
3. Network infrastructure – supporting Te Pūnaha Taonga, the National Trust, Secretariat functions, and collective capability development.

Under this approach, commercial success in one part of the network contributes not only to the relevant taonga and participating communities, but also to the long-term sustainability of the wider governance system and other taonga species and ecosystems. The model therefore seeks to create a self-reinforcing cycle in which successful biodiscovery activities strengthen both individual taonga initiatives and the collective infrastructure that supports future opportunities.

The ultimate objective is to create a governance ecosystem that is financially sustainable, operationally efficient, and capable of supporting the exercise of shared rights and responsibilities across multiple taonga, kaitiaki groups, and utilisation contexts over the long term.



CASE STUDY

Wairuakohu Charitable Trust – A Kaitiaki-Governed Model for Taonga-Centred Commercialisation

The commercialisation of biodiversity-derived innovations often raises a fundamental question: who represents the interests of the species, ecosystem, and Indigenous communities whose knowledge and stewardship contributed to the discovery? The Wairuakohu project offers an innovative response to this challenge through the creation of a governance structure that places a taonga-centred charitable trust at the heart of the intellectual property and commercialisation pathway.

Wairuakohu (*Radula marginata*) is an endemic liverwort that produces a unique class of cannabinoid-like compounds. Since 2017, researchers, kaitiaki groups, and commercial partners have collaborated to investigate its biology, chemistry, and therapeutic potential. Because the New Zealand government has not implemented the Nagoya Protocol, the project partners sought to develop a private-law access and benefit-sharing model capable of recognising kaitiaki interests and providing long-term stewardship of the species throughout the innovation process.

Central to the model is the Wairuakohu Charitable Trust. The Trust was established not as the kaitiaki of the species itself, but as an advocacy and stewardship entity whose purpose is to protect and nurture taonga species, associated ecosystems, and the interests of tangata whenua. The Trust Deed explicitly states that the interests of the species and supporting ecosystems should be considered before the interests of kaitiaki groups and the wider public, creating a governance framework that extends beyond conventional shareholder value models.

Under the model, intellectual property arising from research can be assigned initially to the Trust or to entities controlled by the Trust, ensuring that ownership is first vested in a body whose primary obligation is stewardship rather than profit maximisation. The Trust then participates as a founding partner in the commercialisation pathway through ownership of the Wairuakohu Limited Partnership and its General Partner company. The governance arrangements provide the Trust with a



50 percent ownership position, ensuring that kaitiaki interests remain influential in strategic decisions relating to commercial development, licensing, and future investment.

The Wairuakohu Limited Partnership brings together the Trust and commercial partners within a common venture structure. This allows intellectual property to be transferred into commercial entities where necessary for investment, product development, and market access while maintaining governance oversight through the Trust's ownership position and participation in decision-making. The model therefore separates stewardship from day-to-day commercial management without severing the connection between them.

A distinguishing feature of the Wairuakohu model is that kaitiaki control is established at the beginning of the innovation pathway rather than being considered only after commercial value has been created. Intellectual property, research partnerships, and commercial opportunities are initially governed through structures in which kaitiaki interests hold significant influence, or full control. This allows kaitiaki to determine whether access is granted, under what conditions research may proceed, how mātauranga may or may not be utilised, how benefits will be shared, and when commercial partners may acquire rights. Control is therefore retained until kaitiaki voluntarily choose to share, license,

or transfer elements of that control in exchange for agreed monetary or non-monetary benefits. In this respect, the model more closely resembles a negotiated Indigenous governance framework than a conventional benefit-sharing arrangement, as it embeds decision-making authority and stewardship obligations at the beginning of the commercialisation process rather than attempting to compensate for their absence later.

Another notable feature of the model is that benefits are intended to flow through multiple pathways. These include potential financial returns from licensing and commercialisation, but also non-monetary benefits such as research participation, capability development, employment opportunities, governance experience, data stewardship, species protection, and ecosystem restoration. This reflects well-established international frameworks expecting access and benefit-sharing to encompass both monetary and non-monetary benefits.

The Wairuakohu model demonstrates how a taonga governance entity can act as a long-term guardian of both cultural and ecological interests while still enabling commercial innovation. Rather than treating benefit-sharing as a transaction that occurs after commercial success, the model embeds kaitiaki participation, stewardship obligations, and species-centred governance into the ownership and governance architecture from the outset.





06. Regulatory Architecture and the Competent National Authority

Current Situation

Aotearoa currently lacks a dedicated Competent National Authority (CNA) for biodiscovery. Under the Nagoya Protocol (2010), the CNA is responsible for making and enforcing decisions about access to genetic resources, monitoring compliance with benefit-sharing obligations, and serving as the primary regulatory interface for biodiscovery activities.

MFAT is designated as the National Focal Point for the Nagoya Protocol but in practice is limited to referring requests from researchers to DOC and MPI. Te Puni Kōkiri serves as the National Focal Point for Article 8(j) of the CBD. Neither agency currently has the mandate, capacity, or legal backing to perform the full CNA function. The consequence is a system that lacks consistency, certainty, and accountability.

What Te Puni Kōkiri's Policy Work Proposes

Te Puni Kōkiri's emerging policy framework identifies two possible models for regulatory architecture:

1

Option 1

Establish a new standalone biodiscovery regulator as the Competent National Authority, with clear mandate, resources, and authority under dedicated Biodiscovery legislation.

2

Option 2

Designate the CNA function within an existing government agency (such as MBIE, MPI, or DOC), augmented by appropriate mandate, resources, and legislative backing.

In either case, the CNA would be responsible for: administration of a Biodiscovery Act and regulations; monitoring and compliance of access and benefit sharing; assessing triggers for renegotiation of ABS arrangements; dispute resolution services; data analysis and reporting to the CBD; operationalising the Cali Fund and DSI mechanisms; and setting standards for commercial biodiscovery. The CNA could also be responsible for identifying relevant kaitiaki interests and consulting with them as part of its decision-making process.

The Case for a Māori-Led Competent National Authority

Reimagining Authority in the Biodiscovery System

The preceding section sets out the structural case for a Competent National Authority and examines the two models under active consideration by Te Puni Kōkiri: a new standalone regulator, or a CNA function housed within an existing Crown agency.

Both represent genuine improvements over the current vacuum. But the fundamental governance question – who should exercise authority over access to taonga species, associated mātauranga Māori, and the benefits arising from their use – deserves a more substantive examination. This section advances a third model for consideration: an independent Māori-led CNA, governed by kaitiaki entities, operating within a “sphere of authority” framework consistent with both Te Tiriti o Waitangi and the international frameworks reviewed in Section 4.

For more than three decades, governments have addressed Māori interests in biodiversity through consultation, advisory committees, partnership arrangements, and project-specific agreements. These mechanisms have improved engagement without fundamentally shifting where authority resides. In almost every case, decision-making power remains vested in

Crown agencies, with Māori participating as stakeholders, advisors, or partners rather than as rights-holders exercising recognised authority. The convergence of WAI 262, the Nagoya Protocol, UNDRIP, the Kunming-Montreal Global Biodiversity Framework, and the WIPO GRATK Treaty all suggest that future governance arrangements will require a more substantive expression of Indigenous authority than consultation-based models can deliver.

The Limits of Crown-Controlled and Co-Governance Models

A Crown-controlled CNA – whether housed in MBIE, MPI, or a new standalone agency – has a fundamental limitation: it leaves the existing distribution of authority largely unchanged. Māori participation would continue primarily through consultation processes, advisory roles, or appointed positions, with ultimate authority remaining with Ministers, officials, and government agencies. This approach satisfies the administrative requirements of international treaty obligations but does little to address the underlying concerns of WAI 262, Te Tiriti jurisprudence, or international Indigenous rights frameworks. The challenge, as WAI 262 made clear, is not simply that consultation has been inadequate – it is that consultation is structurally incapable of addressing questions of authority. A system in which kaitiaki are consulted about decisions made by others is fundamentally different from one in which kaitiaki exercise recognised authority over matters for which they carry enduring responsibilities.

Co-governance arrangements – in which Crown and Māori representatives share decision-making – are a significant improvement but carry their own structural difficulties. Co-governance arrangements often remain dependent on Crown institutions for their authority, funding, and legitimacy, creating ongoing tensions. They have repeatedly become politically



contentious in Aotearoa, as recent debates across freshwater, health, and local government sectors demonstrate. More fundamentally, co-governance may be conceptually misaligned with the nature of the rights involved. Biodiscovery, mātauranga Māori, and taonga species involve relationships, responsibilities, and authorities that pre-date the Crown itself. In such circumstances, the question may not be how authority should be shared within a single institution, but whether authority should be exercised within distinct spheres.

A Sphere of Authority Approach

An independent Māori-led CNA offers a different constitutional logic: rather than sharing authority between Crown and Māori within a single institution, it recognises that different forms of authority may coexist within defined spheres. Under this approach, the Crown remains responsible for legislation, international obligations, public regulation, and national policy; Māori exercise authority regarding Māori knowledge, taonga species, cultural permissions, benefit-sharing arrangements, and associated governance matters; and the CNA provides the interface between these spheres. This model is arguably more consistent with both Te Tiriti and UNDRIP than either Crown control or co-governance, because it recognises that Māori authority does not derive from Crown delegation – it reflects responsibilities and relationships that already exist and that require institutional recognition.

The proposed Māori-led CNA would be an independent statutory entity, recognised in legislation but governed by Māori. Its legitimacy would derive not from ministerial appointment but from election or appointment by accredited kaitiaki entities across Aotearoa – iwi authorities and hapū organisations; perhaps also: Māori land trusts, even rongōā collectives, marae-based environmental organisations, and taonga species governance bodies including the emerging network of taonga trusts. Critically, the CNA would not centralise Māori authority: it would operate within a nested governance framework where decision-making regarding specific taonga species, ecosystems, or mātauranga remains with the relevant iwi, hapū, or kaitiaki authority. The national body would coordinate, support, accredit, monitor, and represent these authorities rather than replace them – an architecture that mirrors the three-tier governance model proposed for the taonga trust network and is consistent with the subsidiarity principle that has proven effective in comparable Indigenous governance systems internationally.

International Precedents

While no country has yet established a fully Māori-equivalent Competent National Authority, a growing number of jurisdictions have moved toward Indigenous-centred governance.

Peru's Law No. 27811 established a regime for protecting collective knowledge of Indigenous peoples with dedicated Indigenous participation in decision-making. India's National Biodiversity Authority requires engagement with local communities and traditional knowledge holders. The Garuwanga Project in Australia is particularly instructive: after extensive consultation with Aboriginal communities, it concluded that any competent authority for Indigenous knowledge must be independent from government and grounded in Indigenous governance systems, ultimately proposing a tiered structure in which local and regional authorities retain primary authority, supported by a national body for coordination, standards, and representation – a structure closely mirroring the federated network architecture proposed as one option for Aotearoa's taonga trust network. These examples demonstrate that Indigenous-centred governance is increasingly viewed not as an exception to modern governance systems but as an essential component of legitimate biodiversity management.

Benefits and Opportunities

The most consequential benefit of a Māori-led CNA is its potential to give practical effect to rangatiratanga in the biodiscovery context. For decades, biodiversity policy has attempted to reconcile Māori interests with state authority; a Māori-led CNA shifts the conversation from participation towards authority. It is a practical mechanism through which kaitiaki can exercise decision-making powers relating to taonga species, mātauranga, and benefit-sharing while remaining connected to national governance systems. The model also offers significant biodiversity and economic benefits: Indigenous governance systems have demonstrated long-term resilience in stewardship, and strengthening kaitiaki authority could improve conservation outcomes alongside commercial participation. Internationally, such a CNA would position Aotearoa as a global leader in Indigenous-centred biodiversity governance – few countries have developed institutions capable of integrating Indigenous rights, biodiversity governance, traditional knowledge protection, DSI governance, and benefit-sharing within a single coherent framework. Given that sector analysis and the BSI Design Workshop both identify Māori participation as the most distinctive feature of the Aotearoa opportunity in biodiscovery, a recognised Māori governance institution at the apex of the system would be a substantial competitive differentiator in international markets where ethical provenance is valued.

Risks and Implementation Challenges

The principal challenge is political rather than technical. Opposition is likely to focus on concerns regarding constitutional authority, perceived separatism, or questions about the delegation of

governmental functions. These concerns should not be dismissed, but they are often premised on the assumption that authority can only be exercised through Crown institutions. The proposed model does not require the Crown to surrender sovereignty: it requires recognition that Māori authority exists alongside Crown authority and that each may operate within defined domains. Practical challenges of representation, accountability, and funding are real but not insurmountable. The taonga trust network described elsewhere in this report – and its proposed federated structure – provides an emerging institutional foundation from which a Māori-led CNA could develop incrementally, beginning with an advisory and coordination role and evolving toward fuller statutory authority as legislative reform progresses.

Determining how kaitiaki entities are accredited, how overlapping interests between iwi and hapū are managed, and how disputes are resolved will require careful co-design with Māori. The experience of the Biodiscovery Platform planning process already demonstrates the willingness of BSI and government agencies to engage with Māori governance concepts at a structural level, suggesting that the political conditions for this conversation are more favourable

than at any previous point. Sustainable funding – potentially through the volume-based contribution mechanisms explored in the mānuka Geographical Indication financial model and through dedicated government co-investment – is essential to the model's independence and effectiveness.

The choice facing Aotearoa is ultimately a choice between different conceptions of authority. A Crown-controlled CNA preserves existing arrangements in largely unaltered form. A co-governed authority represents a meaningful improvement but remains constrained by the tensions inherent in shared governance. An independent Māori-led CNA offers a more ambitious alternative – a governance system that recognises kaitiaki not merely as participants in biodiversity governance, but as enduring authorities with responsibilities, rights, and obligations that are integral to the future stewardship of Aotearoa's biodiversity. This report recommends that the design process for any CNA explicitly consider this model, and that co-design with the taonga trusts, the WAI 262 claimants group, and other kaitiaki entities explore whether the conditions for a Māori-led authority can be established within the legislative architecture proposed by Te Puni Kōkiri.



Project Findings and Recommendations



This project strongly supports the establishment of a CNA with a clear legislative mandate. Voluntary and ad-hoc approaches have failed to provide the certainty, consistency, or protection that either kaitiaki or industry require. International comparators demonstrate that the regulatory architecture is foundational – other elements of the system cannot function effectively without it.

The project also explored whether the CNA function could sit partly outside of government – through a Māori-led entity or collaborative governance arrangement drawing on the taonga trusts and kaitiaki networks documented in this report. A hybrid model – in which government retains formal regulatory authority while delegating significant advisory, coordination, and facilitation functions to Māori-led entities – may represent the most viable near-term architecture consistent with Te Tiriti obligations.

Recommendations – Regulatory Architecture

- 01** Establish a Competent National Authority through dedicated biodiscovery legislation. The legislation must be explicitly designed to accommodate a Māori-led governance model – recognising kaitiaki authority as the basis for the CNA's legitimacy rather than ministerial appointment – with a clear mandate to administer ABS obligations, protect kaitiaki rights, and provide regulatory certainty for investment.
- 02** Commission co-design of the CNA model with the taonga trusts (KCT, NRACT, WCT, MCT), the WAI 262 claimants group, and relevant kaitiaki collectives, with the express objective of designing an independent, Māori-led CNA governed by accredited kaitiaki entities. The co-design process should explore how the emerging taonga trust network and Te Pūnaha Taonga can provide the institutional foundation from which a Māori-led CNA can develop – beginning in an advisory and coordination capacity and evolving toward full statutory authority as legislative reform progresses.
- 03** Adopt a sphere-of-authority architecture for the CNA, under which Crown and Māori exercise authority within defined and complementary domains rather than sharing a single institution. The Crown retains responsibility for legislation, international treaty obligations, and public regulation; the Māori-led CNA exercises authority over kaitiaki permissions, mātauranga governance, benefit-sharing arrangements, and cultural legitimacy determinations. Reject the hybrid advisory/delegation model as a permanent architecture, while accepting it as a viable transitional arrangement pending legislative reform.
- 04** Recognise and invest in Te Pūnaha Taonga as shared governance infrastructure for future biodiscovery and ABS systems, including its role in identifying kaitiaki interests, supporting FPIC initiation, maintaining relationship provenance, and facilitating engagement between kaitiaki, researchers, companies, regulators, and other users of taonga resources. Te Pūnaha Taonga should be developed as a public-good platform and recognised as the primary kaitiaki registry and governance infrastructure layer supporting any future Competent National Authority. During any transition to a Māori-led CNA, kaitiaki-taonga relationships can be coordinated by the kaitiaki-led entity responsible for Te Pūnaha Taonga, Treaty-related coordination functions be led by Te Puni Kōkiri and operational biodiscovery administration by MBIE and/or the MBIE-funded Biodiscovery Platform that may be transferred to the kaitiaki-led entity responsible for Te Pūnaha Taonga.
- 05** Develop a dispute resolution pathway designed for a Māori-led CNA context – one that locates primary resolution authority with kaitiaki collectives and the taonga trust network, with escalation to an independent arbitration process that does not vest final authority in Crown agencies. The pathway must address overlapping kaitiaki claims between iwi and hapū, competing governance interests between trusts, and ABS disagreements with commercial or research parties.



07. Kānuka Industry Case Studies & Lessons

The kānuka industry was the genesis and provided an important practical context for this project. It is used here as a case study to discuss some of the principles and approaches this report recommends, and builds on. Kānuka represents both a commercially significant taonga species and is a real-world case study in building a taonga-centred industry foundations from scratch – combining Māori-led commercialisation, kaitiaki governance structures, ABS arrangements, and the strategic challenges documented throughout this report. The work of Hikurangi Bioactives Limited Partnership (HBLP) and the Kānuka Charitable Trust (KCT), constitutes an interesting set of applied examples of what ethical, Māori-led biodiscovery looks like in practice.



Applied Example 1

Building the Industry Foundations – Hikurangi Bioactives and the Kānuka Kaupapa

Hikurangi Bioactives Limited Partnership (HBLP) was established in 2016 to create jobs and economic opportunities with Māori communities in the Waiapū Valley of Te Tairāwhiti. Its origins illustrate a pattern common across taonga-based biodiscovery: significant investment in science before industry foundations existed. In 2019, Dr Nichola Harcourt, then working through a MBIE Vision Mātauranga Capability Fund placement, identified that multiple Māori land entities were spending heavily on scientific testing even though no kānuka industry yet existed – the issue was not lack of data but the missing ecosystem: industry structure, market insight, strategy, branding, and infrastructure.

HBLP had already invested in a two-year research programme with Victoria University establishing the antimicrobial efficacy of kānuka oil for acne, eczema, and MRSA. Harcourt's VMCF-funded engagement produced a commercialisation strategy, science roadmap, market analysis, and commercial pathway – demonstrating the value of strategy-first thinking before science investment. That work led in 2021 to twelve months of MPI Sustainable Food and Fibre Futures (SFFF) funding to establish a Māori kānuka collective, Hā Kānuka, bringing coherence across the motu and uniting early movers. HBLP went on to complete a successful clinical trial for a kānuka oil eczema treatment and sign a global licence with a US company now taking the product to market in the United States and Aotearoa.

The barriers HBLP confronted in those early years reflect the structural weaknesses documented throughout this report. There was no unified kānuka industry – no shared testing, no collective brand, no standards. Individual land blocks were working in isolation with no shared pathway to market. Investment was being made in the wrong order: science funded before customers were identified. Kānuka operated in mānuka's shadow without a differentiated identity. And, critically, it is a taonga species. Building a Māori-led industry meant trying to honour whakapapa, protecting mātauranga, ensuring benefit-sharing, and upholding kaitiakitanga. Harcourt's experience of the mānuka honey story – where a compound-based marketing approach enabled offshore competitors to replicate the value proposition and where Indigenous leadership was absent – shaped the strategic decision to build kānuka's identity around provenance, whakapapa, and the relationship between plant, place, and people: a story no competitor can replicate.

The kānuka case illustrates the success factors that Harcourt identified as recurring across successful native-species industries globally: collective strength through a national body and shared standards; trusted quality and testing frameworks; market-first thinking; investment that follows strategy; real processing infrastructure; a compelling brand and narrative; clear regulatory navigation; long-term partnerships; and cultural integrity at the centre. The failure of the mānuka oil industry to grow at the same rate as mānuka honey – despite relating to the same taonga species – is instructive: the oil industry lacked the collective activity, shared R&D, certification, and marketing investment that the honey industry built through the UMF and MGO frameworks.

Applied Example 2

Hikurangi Bioactives – A Benefit-Sharing Model for Taonga Commercialisation

HBLP was founded on a collective vision and a distinctive benefit-sharing architecture. The partnership was established as majority community-owned, with private investors alongside community entities, and designed to distribute the majority of any profits to community and species-based activities rather than to private investors alone.

HBLP's royalty distribution model provides one of the clearest practical expressions of benefit-sharing for a taonga species in Aotearoa. Of royalties generated from the eczema product licence: 35% goes to private investors; 35% goes to fund environmental, educational, and entrepreneurial projects in and around the Waiapū Valley, with a portion earmarked for the eight Māori land blocks involved in R&D from the beginning; and 30% goes to kānuka itself – to recognise the species' right to share in any profits derived from the plant. This third stream, which directly acknowledges the taonga's own interests, flows to an entity representing the interests of the taonga.

The first year of commercial kānuka oil sales for the HBLP IP generated approximately NZ\$1 million in revenue for oil producers, providing an initial demonstration of commercial viability. Royalties from the eczema product licence are expected to follow as the product reaches market in the United States. This commercial foundation is intended to single-handedly create a sufficient economic basis for a flourishing kānuka industry in Aotearoa – demonstrating that ethical benefit-sharing and commercial success are not in tension but are mutually reinforcing. The communities of origin in Te Tairāwhiti receive a share of profits to support environmental, educational and social enterprise outcomes alongside the economic activity generated by kānuka oil sourcing from their whenua.

This model offers a practical template for standardised benefit-sharing frameworks recommended in Section 8 of this report. The HBLP structure demonstrates that it is possible to design benefit-sharing into the founding architecture of a commercial entity rather than negotiating it retrospectively – and that allocating a defined share of returns to the taonga itself, through a purpose-built governance entity, is a workable and commercially viable approach. A future Biodiscovery Act could draw directly on this model in designing mandatory ABS templates and minimum benefit-sharing standards.

Applied Example 3

The Kānuka Charitable Trust – An Entity Representing the Interests of the Taonga

The Kānuka Charitable Trust (KCT) was established in 2023 to maintain the mana and mauri of kānuka, and to ensure that Māori values are at the core of the kānuka industry. Its establishment reflected work that Manu Caddie had been doing on taonga species governance more broadly: the recognition that the kaitiaki function must be explicitly institutionalised – that an entity capable of articulating the needs of the taonga and the rights and responsibilities of kaitiaki is essential to prevent the extraction of value without benefit to species, kaitiaki, or communities. The observation of what had happened with mānuka honey – where the interests of kaitiaki and the species itself became invisible in a commercially successful but culturally compromised industry – made the structural response imperative.

KCT's purposes include preserving and enhancing the value and mana of the taonga, and preventing misappropriation of the taonga wherever it may occur. KCT has created Hā Kānuka as a brand identity to undertake commercial activities on behalf of Māori shareholders and to develop shared industry infrastructure including standards, scientific analysis, and collective resourcing. KCT has also produced a set of practical industry resources: a Kānuka Handbook and IP Guide; a Mana Kānuka Certification Trade Mark design (held in readiness for when industry scale justifies activation); a discussion paper on developing a whakapapa-based brand ecosystem; kānuka oil chemistry and bioactivity reports; CAS registration, stability data and accredited testing for kānuka oil; and an authenticity project identifying chemical markers to distinguish kānuka from other oils. These resources represent exactly the kind of shared infrastructure – technical, commercial, legal, and cultural – that the Biodiscovery Platform is being designed to provide at sector scale.

KCT and HBLP co-invested in partnership with AgResearch on a national survey of Māori landowners (January–March 2025, 179 participants) gathering perspectives on land governance, decision-making, and aspirations. The survey confirmed strong interest in low-impact, high-value land use aligned with tikanga and environmental values, with kānuka and mānuka identified as promising native species for enterprise development. A series of animated videos for landowners about kānuka industry opportunities is in production. These initiatives were designed to connect landowners to industry through culturally grounded, practical tools.

Applied Example 4

Hikurangi Bioactives LP and UEBT Membership

In 2025 Hikurangi Bioactives Limited Partnership (HBLP) became the first company from Aotearoa to achieve membership of the Union for Ethical BioTrade (UEBT). The decision reflected HBLP's long-standing commitment to sustainable sourcing, biodiversity stewardship, fair value sharing, and meaningful engagement with Māori communities associated with indigenous botanical resources.

As the company expanded into international markets, it recognised growing customer expectations around ethical sourcing, traceability, biodiversity protection, human rights, and Indigenous rights. As discussed in previous sections, Aotearoa still lacks a formal Access and Benefit-Sharing (ABS) regime despite ongoing discussions arising from the Convention on Biological Diversity, the Nagoya Protocol, and the WAI 262 claim.

UEBT membership provided a practical mechanism for demonstrating commitment to many of the principles underpinning international ABS frameworks. UEBT was originally established from the United Nations Conference on Trade and Development (UNCTAD) BioTrade Initiative and promotes “sourcing with respect” for people and biodiversity. The standard requires companies to address biodiversity conservation, sustainable use, fair remuneration, human rights, traceability, and compliance with relevant national and international frameworks. Importantly, UEBT includes explicit requirements relating to access and benefit-sharing, including due diligence regarding ABS obligations, compliance with permits and agreements where they exist, and ensuring intellectual property activities do not conflict with ABS requirements.

For HBLP, the value of UEBT membership extended beyond compliance. The framework provided international recognition that biodiversity-derived products should create benefits not only for commercial participants but also for the people and ecosystems connected to their production. UEBT's approach aligns strongly with Māori concepts of kaitiakitanga by recognising the importance of biodiversity conservation, community wellbeing, long-term relationships, fair remuneration, Indigenous rights, traceability, and stewardship responsibilities. The emerging 2025 UEBT Standard also includes specific recognition of Indigenous Peoples' rights, Free Prior and Informed Consent (FPIC), land and natural resource rights, and the role of ABS in biodiversity-based supply chains.

The experience demonstrated that voluntary standards can open a practical pathway toward implementation of ABS principles even where formal domestic legislation does not yet exist. While UEBT membership does not replace the need for a national biodiversity framework, it offers an internationally recognised model that integrates biodiversity conservation, ethical sourcing, provenance, traceability, Indigenous rights, and benefit-sharing into commercial practice. HBLP's membership subsequently represents an early example of how enterprises in Aotearoa can voluntarily use international standards to operationalise many of the objectives that government agencies and, to some degree, Māori have been considering through its biodiversity, WAI 262, and access and benefit-sharing policy discussions.

More broadly, the HBLP experience suggests that certification and assurance systems such as UEBT may provide useful foundations for future provenance, traceability, and ethical biodiversity frameworks involving taonga species in Aotearoa.

Towards a Taonga Ethical Certification and Traceability System

As international markets increasingly demand evidence of provenance, sustainability, ethical sourcing, and Indigenous rights recognition, the kākūka industry has an opportunity to develop a world-leading framework that combines internationally recognised certification systems with Māori-led governance, provenance, and benefit-sharing mechanisms. Such an approach would help distinguish kākūka-derived ingredients and products from competing natural products while ensuring that commercial activity contributes positively to Māori aspirations, biodiversity outcomes, and the long-term wellbeing of the species itself.

The Kākūka Charitable Trust's work on the proposed Hā Kākūka Certification Trade Mark, outlined in a discussion document available through the Hā Kākūka website, provides an important foundation for this discussion. However, the research undertaken through this project suggests that the greatest value of a future Hā Kākūka system lies not in creating another environmental or sustainability certification programme. Existing international schemes such as UEBT, FSC, Fairtrade, Rainforest Alliance, B Corp, and Toitū already provide credible and widely recognised mechanisms for verifying environmental sustainability, ethical production, biodiversity management, climate performance, traceability, labour standards, and responsible business practice.

Among these, UEBT is particularly significant because it incorporates many of the principles associated with access and benefit-sharing, including biodiversity conservation, ethical sourcing, Indigenous rights, traceability, and due diligence regarding traditional knowledge and access and benefit-sharing obligations. For many export markets, UEBT may already provide sufficient assurance that products have been sourced in a manner consistent with international expectations.

The strongest case for Hā Kākūka is probably not as a replacement for existing certification systems, but as a Māori-led governance and assurance framework that addresses issues those systems were not designed to resolve. While international certification systems can verify whether Indigenous rights have been considered, they generally cannot determine who the relevant kaitiaki are, how relationships should be established and maintained, whether benefit-sharing arrangements are appropriate, how mātauranga Māori should be governed, or what obligations exist to the taonga species and ecosystems themselves.

Under this proposed model, companies would continue to utilise recognised international certification systems such as UEBT where appropriate. Hā Kākūka would operate as an overlay or complementary framework focused on matters unique to taonga species. These could include recognition of kaitiaki interests, guidance on Free, Prior and Informed Consent (FPIC), access and benefit-sharing arrangements, mātauranga governance, Māori participation throughout the value chain, provenance linked to whakapapa and place, and mechanisms for ensuring benefits flow back to both people and ecosystems.

The framework could also support a digital provenance and traceability platform capable of recording harvest locations, supply chain information, kaitiaki engagement processes, benefit-sharing arrangements, certification status, and environmental outcomes. Such a platform could support transparency for consumers and commercial partners while respecting Māori data sovereignty and commercial confidentiality.

Rather than creating an additional layer of audit burden, Hā Kākūka could recognise existing certifications through equivalency or mutual recognition arrangements. A company already certified under UEBT or an equivalent scheme would not need to repeat environmental and social audits. Instead, assessment would focus on the additional dimensions unique to taonga species and Māori governance. This approach would allow the kākūka sector to leverage internationally recognised standards while developing mechanisms that give practical effect to kaitiakitanga, whakapapa, mātauranga Māori, and equitable benefit-sharing.

If successful, Hā Kākūka could serve as a prototype for a broader taonga species governance framework in Aotearoa. Rather than creating another sustainability certification, it would provide the governance infrastructure needed to complement existing international standards and help bridge the gap between global ethical sourcing expectations, Te Tiriti o Waitangi, WAI 262 aspirations, and emerging access and benefit-sharing frameworks.



Lessons for the Biodiscovery Platform and Broader Policy

The HBLP and KCT experience generates several lessons directly applicable to the Biodiscovery Platform design and the broader regulatory framework recommended in this report.

Strategy before science: investment in scientific testing without a commercial strategy, market insight, or industry infrastructure is unlikely to generate economic return. The platform's entry point in the translation zone – as confirmed by the Design Workshop – reflects exactly this lesson.

Benefit-sharing must be designed in, not retrofitted: the HBLP royalty model – with defined shares to communities of origin, to the taonga itself, and to investors – demonstrates that equitable benefit-sharing can be embedded in founding commercial architecture. A Biodiscovery Act should provide the standardised templates and minimum standards that make this approach the norm rather than the exception.

An entity representing the taonga's interests is essential: KCT's existence – as a body explicitly established to protect the mana and mauri of kānuka and prevent misappropriation – directly answers the governance vacuum identified throughout this report. The taonga trust network (KCT, NRACT, WCT, MCT) described in Section 5 scales this model across multiple species.

Commercialisation requires critical mass: individual land blocks and enterprises cannot build a national industry in isolation. The constant replication of the same activities – landowners paying consultants to generate information already freely available, groups pursuing independent science without shared standards – is a systemic failure that collective infrastructure is designed to correct. Hā Kānuka, the BSI Biodiscovery Platform, and the network of taonga trusts all represent attempts to build the collective architecture that individual actors cannot sustain alone.

Provenance and whakapapa are the unassailable competitive advantage: the strategic decision to build kānuka's identity around its relationship between plant, place, and people – rather than around a compound that competitors could target and replicate – applies across all taonga-based biodiscovery. The certification, GI, and traceability recommendations in Sections 11 and 12 give institutional form to this strategic insight.



Key Opportunities & Challenges for Kānuka

The research undertaken through this project suggests that the kānuka sector is approaching a significant inflection point. Historically, commercial activity in the sector has barely existed, based almost solely on the production and sale of small volumes essential of oils and a limited range of related natural products. However, a clinically proven product and growing international interest in ethical sourcing, Indigenous rights, biodiversity stewardship, provenance, and bioactive natural ingredients is creating new opportunities for value creation beyond what has been a cottage industry. At the same time, evolving expectations for all taonga-derived products and intellectual property around access and benefit-sharing, kaitiaki engagement, IP ownership, and traceability are exposing gaps in the current institutional and regulatory environment.

The sector therefore faces a dual challenge. It must develop the capability, governance arrangements, and market positioning necessary to capture emerging opportunities while also addressing structural barriers that in the case of mānuka honey have limited Māori participation in higher-value research, innovation, and commercialisation activities. The following opportunities and challenges highlight areas where coordinated action by kaitiaki entities, industry participants, researchers, and government agencies could help advance the long-term development of a more ethical, resilient, and internationally differentiated kānuka sector.

Key Opportunities

- Ethical sourcing and provenance positioning – kānuka products with credible kaitiaki-endorsed, ethically sourced provenance could command significant premiums in EU, Japanese, South Korean, and US export markets.
- Biodiversity restoration integration – kānuka plantings for commercial harvest can simultaneously support biodiversity restoration, creating a model that aligns commercial, ecological, and kaitiaki interests.
- Coordinated research pathways – KCT is well-placed to coordinate research priorities across the kānuka sector, ensuring that publicly funded research aligns with kaitiaki priorities and leads to shared commercial outcomes.
- Indigenous IP protection – a clear disclosure of origin requirement and robust ABS system would provide stronger protection for kaitiaki IP interests in kānuka-derived innovations.
- Geographical Indication (GI) pathway – work underway to develop a GI regime for mānuka honey offers a closely analogous model for kānuka. A GI designation for kānuka-derived products

would link product identity to geographic origin and cultural provenance, commanding significant premium positioning in EU, Japanese, and other markets. A GI approach would require a dedicated Collective Management Organisation, a specification book incorporating both bioactive standards and mātauranga Māori elements, and alignment with any new GI legislation for food products. International registration through the Lisbon System would protect the kānuka designation from appropriation in key export jurisdictions.

Regulatory and Capability Challenges

- Regulatory uncertainty – the absence of clear ABS requirements creates uncertainty for companies wanting to source kānuka ethically and for kaitiaki wanting to assert their rights.
- Capability gaps – participation in higher levels of the value chain (extraction, formulation, clinical research, regulatory compliance, IP management) requires expertise and resources that most kaitiaki entities do not currently possess.
- Fragmentation – governance interests in kānuka are distributed across many hapū and iwi, making coordination challenging without shared infrastructure such as Te Pūnaha Taonga.
- Market access – regulatory barriers for kānuka-derived ingredients in export markets require in-country expertise that the sector has not yet developed systematically.



08. Standardised ABS Processes & Compliance Mechanisms

Current Situation

Aotearoa currently lacks standardised access and benefit-sharing processes for commercial biodiscovery. For in-situ access on Crown land, permission mechanisms exist under the Conservation Act 1987, the Fisheries Act 1996, and the Resource Management Act 1991 – but these were not designed with commercial biodiscovery in mind and contain no requirements for kaitiaki consent or benefit-sharing. For access on private land and whenua Māori, there are no protocols in legislation at all. For ex-situ collections, access protocols are entirely ad hoc.

Positive examples demonstrate what is possible in the absence of formal frameworks. Hikurangi Bioactives Limited Partnership has signed a commercial deal for a clinically proven kānuka oil eczema treatment that commits most revenue to conservation and community development in Te Tairāwhiti and prioritises kānuka oil producers owned by and employing Māori (Hikurangi Bioactives, n.d.). Te Kotahi Research Institute has produced resources on approaches and guidelines to benefit-sharing and appropriate research on taonga species (University of Waikato, 2025). These remain exceptions rather than the rule.

Te Puni Kōkiri's Proposed Approach

Te Puni Kōkiri's emerging policy framework (released in part via Official Information Act requests) centres on three complementary workstreams: (1) establishing more consistent access arrangements for commercial biodiscovery, (2) developing more consistent approaches to benefit-sharing and kaitiaki participation, and (3) producing guidance to support implementation. The phased approach – beginning with taonga plants, fungi and algae and associated mātauranga Māori – reflects where officials seem to consider the greatest commercial activity currently exists while allowing broader reforms to be developed over time.

The TPK proposals outlined in advice to the Minister are significant because they confirm that, at least officials, now recognise biodiscovery requires more than ad hoc permissions, voluntary good practice, or isolated research agreements. They align closely with this report's recommendations for standardised access pathways, benefit-sharing requirements, kaitiaki recognition, guidance, and eventual legislative reform. However, overseas experience suggests that ABS systems succeed only where administrative certainty is matched by genuine Indigenous authority. Aotearoa should therefore avoid simply importing permit-based models from overseas. The opportunity is to design a system that combines legal certainty for researchers and industry with kaitiaki-led decision-making, practical consent and benefit-sharing tools, and trusted governance infrastructure such as Te Pūnaha Taonga and Tiaki Taonga.

Project Findings and Recommendations



This project strongly endorses the legislative pathway as the most effective means of providing the certainty and consistency required by both kaitiaki and industry. Non-legislative approaches have been tried informally for decades without producing consistent outcomes. The Tiaki Taonga framework developed by the WAI 262 claimants group (WAI 262 Kia Whakapūmau, 2023; Kahu Aronui, 2024) provides an existing kaitiaki-led protocol model that should be formally recognised and supported within the biodiscovery system.

Recommendations – ABS Processes and Compliance

- 06** Enact dedicated Biodiscovery legislation establishing mandatory ABS requirements for commercial biodiscovery with taonga species of plants, fungi and algae and associated mātauranga Māori, with provision to expand scope over time.

- 07** Develop standardised ABS agreement templates, FPIC protocols, benefit-sharing guidelines, and kaitiaki-led protocol templates in co-design with Māori entities including the taonga trusts and the WAI 262 claimants group.

- 08** Establish a domestic clearing-house mechanism – ideally integrated with the BSI Biodiscovery Platform – to provide accessible guidance, direct researchers and companies to kaitiaki, and support ABS compliance monitoring.

- 09** Resource and support the completion of the Tiaki Taonga work programme – including the sui generis legislation, soft law tools, and Pātaka Taonga clearing-house model – as the rights framework from which the biodiscovery system's ABS architecture should be developed. Tiaki Taonga establishes what authority kaitiaki hold over taonga and mātauranga; Te Pūnaha Taonga provides the operational infrastructure through which those rights are discovered, coordinated, and exercised in practice – particularly where multiple kaitiaki hold overlapping interests in the same taonga. The Biodiscovery Platform and any future Biodiscovery Act must be explicitly designed to accommodate and align with Tiaki Taonga once enacted, treating Te Pūnaha Taonga as its operational complement. Formal Crown recognition of Tiaki Taonga should follow – not precede – the resolution of outstanding technical questions including retrospectivity, enforcement, and the location of decision-making between hapū/iwi and national levels, in direct consultation with Te Taumata Whakapūmau.

- 10** Build ABS monitoring and compliance checkpoints into the patent application process in conjunction with IPONZ and the Patents Māori Advisory Committee.

- 11** Require that ABS engagement processes include explicit resourcing for kaitiaki participation – covering time, travel, legal and technical support, and governance costs – so that the burden of ABS compliance does not fall disproportionately on the entities whose rights the system is designed to protect.



09. Commercialisation, Investment & Funding Pathways

Current Situation

Despite Aotearoa ranking fourth internationally for biotechnology innovation potential (Biotechnology New Zealand, 2020), the pathway from research to commercialisation for taonga-based biodiscovery is expensive, uncertain, and poorly supported. The global biotechnology market was estimated at approximately NZ\$2.78 trillion in 2024 (Polaris Market Research, 2025), with a projected CAGR of 13.6%, yet Aotearoa is not capturing its share of this growth from its unique biodiscovery assets.

Key constraints include: capacity and capability challenges, particularly for kaitiaki leading projects; limited research and science funding outside government; limited foreign investment pathways; and IP settings which do not fully recognise the relationship that kaitiaki have with taonga species and associated mātauranga Māori.

Public research funds accessible to kaitiaki and other researchers include: MPI's Primary Sector Growth Fund and Māori Agribusiness Innovation Fund; MBIE's He Ara Whakahihiho Capability Fund and Strategic Science Investment Fund; NZTE co-funding services; and the Agricultural and Marketing Research and Development Trust (AGMARDT) Fund. However, there is no dedicated funding stream for kaitiaki-led commercial biodiscovery with taonga species. Some Public Research Organisations – including Plant & Food Research – have invested within their existing resources. Iwi, hapū and Māori are often leading capability development in their own time and at their own expense.

The Going for Growth plan's Pillar 3 focuses on enabling more foreign investment through Invest New Zealand (MBIE, 2025). However, the absence of a clear and standardised ABS system is itself a barrier to foreign investment – companies face uncertainty about regulatory requirements and the risk of subsequent legal challenge. Establishing the regulatory architecture described in Section 6 is a prerequisite for unlocking significant foreign investment. Positive examples include the Te Rūnanga o Ngāti Whātua and Roche Pharmaceuticals

partnership (Roche Products, 2023) and the Hikurangi Bioactives deal with a US company (Hikurangi Bioactives, n.d.).

The Patents Act 2013 and the Plant Variety Rights Act 2022 provide some protection but do not specifically address the nuances of IP generated from commercial biodiscovery with taonga species and associated mātauranga Māori. 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 (Waitangi Tribunal, 2011; Wright & Robinson, 2024). Through the Government's current SI&T reforms, there is a proposal to grant IP ownership to researchers within universities and public research institutes – a development requiring careful evaluation for its implications for kaitiaki benefit-sharing arrangements.

Valuing Taonga-Derived Products and Intellectual Property

A recurring structural gap in Aotearoa's biodiscovery policy debate is the absence of robust frameworks for measuring what taonga-derived products and associated mātauranga Māori are actually worth – in terms of both market and non-market value. Without such frameworks, policy, investment, and benefit-sharing decisions are made without an evidence base, and the case for systemic institutional reform is harder to make to decision-makers accustomed to GDP-centric analysis. The Te Au Rangahau scoping study "Understanding the economic value of Māori taonga" (Roskrug et al., 2022) provides a directly relevant framework for addressing this gap and should inform the economic analysis underpinning the Biodiscovery Platform and any future Biodiscovery Act.

Roskrug et al. (2022) identify two principal categories of economic impact from better recognising and protecting taonga: wellbeing gains and productivity gains. The wellbeing gains arise

directly from Māori being better able to exercise kaitiakitanga – managing and protecting taonga in ways consistent with Māori values, enabling kaitiaki to discharge cultural obligations that constitute a fundamental source of Māori identity and wellbeing. The productivity gains arise from making it “safer” – with less risk of appropriation, misuse, or abuse – to incorporate taonga and mātauranga Māori into commercially differentiated products and services. Critically, where productivity gains are sufficiently large, both Māori and non-Māori benefit, creating a genuine win-win rather than a zero-sum redistribution (Roskrug et al., 2022). The mānuka honey precedent is instructive: scientific validation of its medicinal properties triggered a major repricing of the product, demonstrating the latent value in a single taonga-derived bioactive – while the failure to protect that knowledge at the outset illustrates precisely what is lost without a robust ABS system, as overseas producers captured significant value without benefit to kaitiaki.

The Total Economic Value (TEV) framework is identified by Roskrug et al. (2022) as particularly suitable for taonga because it disaggregates value into direct use, indirect use, option, and non-use (existence, altruism, bequest) components. Standard GDP and profit measures capture only a fraction of TEV, systematically undercounting the contribution of taonga to Aotearoa’s total wellbeing. Four valuation tool classes are identified as relevant to taonga-derived IP specifically: non-market valuation techniques (from environmental, health, and cultural economics) for measuring demand-side wellbeing gains; productivity and efficiency analysis for supply-side gains from accessing mātauranga-founded technologies; IP commercialisation techniques for estimating returns to rights holders and licensees under benefit-sharing agreements; and organisational performance analysis for assessing the impact of governance changes on collective enterprises such as taonga trusts and kaitiaki collectives (Roskrug et al., 2022).

Any valuation framework applied to taonga must also incorporate distinctly Māori conceptualisations of value. Roskrug et al. (2022) identify six kaupapa Māori themes that should be embedded in any such analysis: intrinsic value (taonga have value in themselves, not only as instruments of human ends); whakapapa (relationships between all living things across time); whānau (intergenerational obligations to tapuna and mokopuna); te tikanga kanorau (the contextual diversity of Māori values across different groups and settings); kotahitanga (collective rather than individual wellbeing as the primary unit of analysis); and tauutuutu (the reciprocal nature of value in Māori exchange, including obligations between kaitiaki and taonga). These themes have direct structural implications: kotahitanga reframes benefit-sharing as flowing to collective kaitiaki groups rather than individuals, while tauutuutu frames

commercial relationships as ongoing reciprocal obligations rather than one-off transactions – both of which require bespoke provision in ABS agreement design.

For consent rights and benefit-sharing specifically, IP commercialisation theory offers useful analogues. Where kaitiaki hold consent rights over taonga utilisation, those rights are functionally similar to IP ownership: just as the Crown extracts royalties from mineral extraction companies that bear the capital and operational risk, kaitiaki should be able to negotiate a proportionate share of commercial returns regardless of which party makes the primary investment. Bargaining frameworks – including Shapley value approaches and Nash bargaining solutions – provide tools for modelling how returns should be shared in such arrangements (Roskrug et al., 2022). Roskrug et al. (2022) provide an indicative macroeconomic estimate: drawing on Knack and Keefer’s (1995) finding that improved institutional quality can add over 1% to annual GDP growth, and applying a conservative fraction of that effect to the taonga sector, they estimate potential annual gains of NZD 34 million to NZD 340 million, with an all-up capitalised value of approximately NZD 700 million to NZD 7 billion. This is a lower bound: it measures only GDP effects, and excludes the full range of wellbeing, cultural, and environmental values that a comprehensive TEV analysis would identify.

The project recommends that the Biodiscovery Platform commission a dedicated economic valuation programme following the Roskrug et al. (2022) three-stage design: foundational research conducting kaupapa Māori dialogue to develop and validate culturally grounded valuation methods; exploratory case studies across specific taonga sectors including kākara, mānuka, pekepeke kiore, and wairuakohu; and a follow-up stage undertaking rigorous full-spectrum TEV analysis of the Biodiscovery Act reforms. This programme would equip kaitiaki entities with the evidence base for informed benefit-sharing negotiations, and provide government with the economic case for reform.

Māori Investment and Patient Capital

Alongside the question of foreign investment, a structurally distinct challenge concerns the conditions under which Māori communities and individuals can participate as investors in biodiscovery ventures rather than only as kaitiaki, research partners, or benefit-sharing recipients. The Indigenous Biodiscovery Wānanga (March 2026) identified this as a priority theme, with participants noting the tension between value-based and profit-based participation, the accessibility barriers facing whānau without existing investment resources, and the need for

power-sharing and equity in governance structures alongside financial participation.

Several features of Māori investment in biodiscovery distinguish it from general impact investment or venture capital. The timeframes involved – particularly for clinical validation, regulatory compliance, and market development – require patient capital that most standard investment structures do not accommodate. The governance expectations are different: Māori investors typically expect participation rights and cultural accountability obligations, not merely financial returns. The entry points are often inaccessible: minimum investment thresholds, legal complexity, and the absence of track records in an emerging sector all disadvantage smaller entities and whānau without existing financial infrastructure.

The Hikurangi Bioactives model (Sections 7 & 8) demonstrates one approach – majority community ownership with structured benefit-sharing built into the founding architecture – but it required significant goodwill, shared vision, and upfront capability to negotiate that most entities do not yet possess. Investment vehicles designed for this context would need several features not present in standard Aotearoa investment frameworks: low minimum entry thresholds accessible to whānau and hapū; governance rights proportionate to cultural relationships as well as financial contribution; transparent accountability mechanisms linking financial returns to social, environmental, and cultural outcomes; and patient capital structures with investment horizons of ten to twenty years rather than three to five. The Toroa Private Credit Fund, which participated in the Indigenous Biodiscovery Wānanga, represents an emerging example of Māori-led investment infrastructure in this space. The Biodiscovery Platform's consolidated funding portal (Recommendation 42) should be designed to connect Māori investment vehicles with research and commercialisation opportunities, not only to direct entities toward government funding streams.

Non-Monetary Benefit-Sharing

Benefit-sharing frameworks in biodiscovery have historically been designed around monetary returns – royalties, licensing fees, equity stakes. Both this project and the Indigenous Biodiscovery Wānanga (Koia, 2026) identified that this framing systematically undervalues the full range of benefits that kaitiaki communities seek and that researchers can provide.

Non-monetary benefits are not a consolation prize in the absence of commercial returns; they are often the primary form of benefit that communities can access in the short term and may prove more durable than

financial flows from products that may or may not reach market.

Non-monetary benefit categories relevant to biodiscovery include: co-authorship and attribution in scientific publications, ensuring that mātauranga Māori contributions to research are recognised in the academic record; repatriation of data, samples, and knowledge to kaitiaki, including access to research outputs in accessible formats; capability-building and training embedded in research partnerships as an explicit deliverable; participation in research governance and design rather than merely as subjects or sample providers; traditional knowledge documentation and return, where research processes create records held by and accessible to kaitiaki communities; biodiversity monitoring and taiao stewardship support, where research activity contributes to the health of the species and ecosystems that kaitiaki are responsible for; and naming rights and cultural attribution in product development, ensuring that commercial products acknowledge their origins. The HBLP model's 30% allocation to the taonga itself – channelled through KCT for species protection and conservation activities – is a hybrid monetary/non-monetary mechanism that operationalises the principle of benefit flowing back to taiao.

Standardised ABS templates (Recommendation 7) should include non-monetary benefit schedules as a required component, not an optional addition. Benefit-sharing agreements that address only financial returns should not be considered compliant with the FPIC and ABS principles the platform is designed to implement.





Commercialisation, Investment and Funding

- 12** Develop a dedicated funding stream for kaitiaki-led commercial biodiscovery initiatives, aligned with the Biodiscovery Platform and available through a simplified portal that consolidates relevant government funding pathways.
- 13** Integrate ABS compliance into the Invest New Zealand investment assessment processes, so that foreign investment in biodiscovery requires demonstration of compliant ABS arrangements with relevant kaitiaki.
- 14** Ensure the SI&T reforms relating to IP ownership in public research institutions include explicit provisions protecting kaitiaki benefit-sharing rights, consistent with any future Biodiscovery Act requirements.
- 15** Support representation of kaitiaki entities in international biotechnology fora including AusBiotech and ChinaBio through NZTE and/or dedicated government resourcing.
- 16** Develop a dedicated kaitiaki commercialisation accelerator programme – potentially within the Biodiscovery Platform – providing tailored support for IP development, regulatory navigation, investment readiness, and market access.
- 17** Work with Māori investment entities, including emerging patient capital vehicles, to develop accessible biodiscovery investment structures with governance rights reflecting cultural relationships alongside financial contribution, investment horizons aligned with commercialisation realities, and entry points accessible to whānau and hapū without existing financial infrastructure.
- 18** Design the Biodiscovery Platform’s consolidated funding portal to include Māori investment vehicle connections alongside government funding streams, enabling whānau and hapū to identify and access biodiscovery investment opportunities at accessible entry points.





10. Capability & Training



The project identified capability development as a systemic need across multiple dimensions simultaneously – not a single training initiative but a multi-level, multi-disciplinary investment that the sector currently lacks. The Indigenous Biodiscovery Wānanga (Koia, 2026) dedicated a full session to this theme, with participants from research institutions, kaitiaki entities, commercial enterprises, and government identifying needs spanning cultural competency, IP literacy, commercialisation and marketing skills, regulatory navigation, scientific research capability, and governance expertise. The common thread was that Māori entrepreneurs, researchers, and community leaders are expected to operate across all of these domains, often without institutional support and at their own expense.

Several structural features of the current capability gap are worth noting. First, the need operates at every level of the system simultaneously – from rangatahi understanding that careers in biodiscovery exist, through early-career researchers needing tuakana-teina mentoring and succession pathways, to community governors needing to evaluate IP agreements and benefit-sharing arrangements they were never trained to assess. A single accelerator programme, however well designed, cannot address this range. Second, the gap is compounded by the multi-disciplinary nature of biodiscovery itself: participants at the Wānanga identified that effective participation requires teams combining expertise in Te Ao Māori, science, commerce, regulatory compliance, and sustainable land and water use – a combination that no existing educational or professional development pathway reliably produces. Third, place-based and wānanga-format learning is not peripheral but central: formal qualifications are insufficient and in some cases inaccessible; the most valued capability-building described by participants occurred through face-to-face gathering, peer learning, and doing.

A dedicated capability pathway for Māori biodiscovery – potentially structured as “Te Ara Pōtiki” or an equivalent – would provide tailored support across four interconnected streams. Scientific

and technical literacy: understanding bioactive research, reading chemistry and bioactivity reports, evaluating clinical evidence. Commercial and investment literacy: IP structuring, benefit-sharing negotiation, market analysis, investment readiness. Regulatory and legal navigation: ABS obligations, patent processes, disclosure of origin requirements, Gene Technology Bill implications. Governance and leadership: trust deed design, mandate verification, kaitiaki representation, conflict resolution. These streams should be developed in co-design with the institutions that already hold relevant expertise – Te Kotahi Research Institute, BSI, Victoria University, and the taonga trusts – rather than commissioned from external providers unfamiliar with the kaupapa.

The Biodiscovery Platform’s proposed Pillar 2 capability-building investment, is the natural funding home for this work. However, the Platform’s current framing of capability-building as sector-level coordination and infrastructure should be explicitly extended to include individual and community-level capability development. Without this, the Platform risks building excellent systems that kaitiaki entities cannot access or navigate.

The Wānanga also identified relationship-building as a funded activity in its own right, not an assumption or precondition. The face-to-face conversations – the “1000 cups of tī” – that establish trust and shared understanding between institutions, researchers, and kaitiaki must be explicitly budgeted. Participants were clear that institutions, rather than individual researchers, must be responsible for initiating and sustaining these relationships. Both the Wānanga and the BSI Design Workshops independently identified relationship-building not supported by formal structures or resources as one of the top sector challenges. The Pillar 2-investment split in Years 1–3 must therefore be understood to include the quieter, slower, non-deliverable work of establishing the trust that makes every other platform investment possible. The Platform’s governance design should specify who holds relationships with specific kaitiaki entities and how continuity is maintained through staff transitions.



Capability, Training and Relationship-Building

- 19** Develop a dedicated, multi-level capability pathway for Māori scientists, entrepreneurs, and community governors in biodiscovery – covering scientific literacy, commercial and IP skills, regulatory navigation, and governance – in co-design with Te Kotahi Research Institute, BSI, and the taonga trusts, structured as a multi-year programme rather than a one-off initiative.
- 20** Resource tuakana-teina mentoring relationships and succession planning within the biodiscovery sector, connecting early-career Māori researchers and entrepreneurs with experienced practitioners across science, commerce, and governance.
- 21** Ensure the Biodiscovery Platform's Pillar 2 capability-building investment explicitly includes individual and community-level capability development, not only sector coordination and infrastructure, and that the Pillar 2 budget includes a dedicated relationship-building allocation not contingent on research projects commencing.
- 22** Develop rangatahi engagement pathways that create visible career and enterprise routes into Indigenous biodiscovery from secondary school level, in partnership with relevant educational institutions and Māori communities.





11. Provenance, Accountability & Certification Systems

Current Situation

Aotearoa has not yet put in place a coherent provenance, traceability, or certification system enabling consumers, researchers, regulators, investors, and kaitiaki to identify whether products and innovations derived from taonga species have been developed in ways that are ethical, transparent, and consistent with ABS principles. This is a significant gap given growing consumer willingness to pay premium prices for sustainably and ethically produced products, increasing international expectations regarding disclosure and traceability, and emerging requirements associated with Indigenous rights and biodiversity governance.

The Patents Māori Advisory Committee (PMAC) was established by the New Zealand government in 2013 to advise on whether patent applications involving indigenous plants, animals, and associated mātauranga Māori are contrary to Māori values. The current voluntary disclosure mechanism is obviously limited in scope and does not provide a comprehensive provenance or accountability framework. PMAC has reviewed only a small number of applications since establishment, highlighting the limitations of the current system. While examples of Indigenous-led provenance initiatives exist, including Local Contexts labels and certification systems such as the Union for Ethical BioTrade (UEBT), these remain voluntary, have very little uptake to date – only one company has UEBT certification in Aotearoa, and while Manaaki Whenua has added biocultural labels to all entries in its databases of native species, it is almost entirely a generic notice applied to all entries with no provenance information or kaitiaki details – so these do not yet form part of an integrated national approach.

Provenance as Governance Infrastructure

For the purposes of this report, provenance is used in three related but distinct senses.

- **Product provenance** concerns the origin and supply chain of commercial products. It enables consumers and market partners to understand where products come from, how they were produced, and whether particular environmental, ethical, or cultural standards have been met. This version is often used in brand stories.
- **Genetic resource provenance** concerns the origin of biological materials and associated traditional knowledge used in research, development, intellectual property systems, and commercialisation processes. This form of provenance is particularly relevant to patent systems, ABS frameworks, and international agreements such as the WIPO GRATK Treaty. This version is often used in legal contexts.
- **Relationship provenance** concerns the visibility of relationships between taonga, kaitiaki, mātauranga Māori, researchers, datasets, intellectual property, commercial products, and benefit-sharing arrangements. It seeks to ensure that connections between resources, knowledge, rights, responsibilities, and benefits remain visible throughout the innovation lifecycle. This version has been called whakapapa brand approach (Wixon, 2022).

While certification systems and multilateral disclosure regimes primarily address product provenance and genetic resource provenance, future biodiscovery systems will also require mechanisms capable of maintaining relationship provenance. This is particularly important where multiple kaitiaki groups share interests in a taonga species, where research and commercialisation occur over long timeframes, and where biological materials, data, and knowledge move through complex national and international storage, retrieval and innovation systems.

Viewed in this way, provenance is not simply a technical matter of record keeping. It performs a broader governance function by creating accountability and transparency regarding the relationships that underpin ethical biodiscovery.

The WIPO GRATK Treaty

Accession to the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (GRATK Treaty) represents an important and relatively low-cost step toward strengthening transparency within Aotearoa's intellectual property system. It is good to see from official information disclosures (Te Puni Kōkiri, 2025a-e) that the New Zealand government seems to be working towards GRATK accession, and the New Zealand representative being chosen to Chair the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) raises the expectation globally that the New Zealand government will prioritise GRATK accession.

The Treaty establishes mandatory disclosure of origin requirements for patent applicants. While disclosure requirements do not themselves create rights, consent obligations, or benefit-sharing arrangements, they do establish a transparency mechanism capable of supporting future accountability. For Aotearoa, accession would ensure relevant patent applications are referred to PMAC, improve visibility of uses of indigenous genetic resources and associated mātauranga Māori, and reduce the risk of patents being granted without appropriate consideration of novelty or provenance.

However, disclosure requirements are only as effective as the systems available to verify them. For disclosure obligations to provide meaningful accountability, mechanisms must exist through which the origins of genetic resources and associated mātauranga can be identified, relationships understood, and relevant kaitiaki interests located and engaged. This challenge remains largely unresolved internationally and represents one of the most significant practical barriers to effective implementation of ABS systems.

Te Pūnaha Taonga and Relationship Provenance

As discussed in preceding sections of this report, Te Pūnaha Taonga has the potential to contribute to this challenge by providing practical infrastructure for relationship provenance.

In a future biodiscovery system, information maintained through Te Pūnaha Taonga could assist researchers, companies, patent applicants, regulators, and kaitiaki groups to identify appropriate engagement pathways, support ABS processes, and improve compliance with disclosure requirements. It may also assist in connecting research outputs, intellectual property, commercial products, and benefit-sharing arrangements back to the taonga, taiao and kaitiaki relationships from which they originate.



The significance of Te Pūnaha Taonga lies not just in its function as a registry, but in its potential to provide governance infrastructure capable of maintaining relationship provenance throughout the innovation lifecycle.

Local Contexts and Retrospective Provenance

While provenance can increasingly be incorporated into new research agreements, ABS arrangements, and commercialisation processes, a substantial challenge remains in relation to biological samples, publications, datasets, genomic resources, collections, and mātauranga that are already circulating through research and commercial systems.

Much of this material was generated before contemporary expectations regarding Indigenous data sovereignty, disclosure of origin, ABS, or recognition of kaitiaki interests were instituted domestically or even internationally. In some cases retrospective consent processes are possible, but in many situations, they are impossible because the information does not exist and the people involved are no longer living or available to provide the information.

This is where initiatives such as Local Contexts become particularly important. Traditional Knowledge Labels, Biocultural Labels, and related notices do not function as legal property rights or access restrictions. Rather, they provide a mechanism through which Indigenous communities can communicate continuing relationships, responsibilities, expectations, and

interests in relation to knowledge, data, biological materials, and cultural resources that may already be widely distributed.

Local Contexts therefore occupies an important middle ground between unrestricted public-domain use and fully controlled licensing arrangements. The labels act as provenance signals within research, publishing, biodiversity databases, museum collections, and digital information systems, helping maintain visibility of Indigenous relationships even where direct legal control is absent.

This role is likely to become increasingly important as Digital Sequence Information (DSI), artificial intelligence (AI) systems, machine-readable biodiversity datasets, and international research infrastructures continue to expand. While future ABS arrangements may govern new collections and future utilisation, Local Contexts provides a practical mechanism through which Indigenous interests can remain visible in relation to legacy collections and existing datasets.

Certification Marks

Certification systems provide a mechanism through which ethical sourcing, compliance, and benefit-sharing arrangements can be communicated to consumers and market partners.

Options under consideration for taonga-derived products include adaptation of existing certification systems such as FernMark, Forest Stewardship Council and UEBT, or development of a bespoke Indigenous biodiscovery certification mark



demonstrating that ABS arrangements based on FPIC and mutually agreed terms (MAT) have been implemented. The development of a dedicated Indigenous biodiscovery certification mark may also be something to be explored with Indigenous Peoples organisations and enterprises in other jurisdictions.

A credible certification system would increase consumer trust, strengthen business reputation, improve transparency and accountability, and provide market incentives for ethical practice. However, certification can only be meaningful if supported by robust governance, provenance, and traceability systems. Certification without the supporting infrastructure risks becoming a marketing exercise rather than a genuine accountability mechanism. Such systems also take significant resources to administer properly and dedicated funding streams would need to be developed, particularly from products and businesses benefitting from genetic organisms.

Geographical Indications and Cultural Provenance

The Geographical Indication (GI) regime being explored for mānuka honey provides a useful model for considering future certification systems associated with taonga-derived products.

Unlike conventional certification marks, a GI regime links product identity directly to geographic origin, production standards, and, where appropriate, cultural provenance. Work undertaken on a Mānuka GI framework identifies several elements relevant to a broader Indigenous biodiscovery certification system: collective management organisations, specification books defining standards and geographic boundaries, internal and external verification processes, and mechanisms for protecting market identity internationally.

A similar model could potentially be adapted for kākara and other taonga-derived products, with taonga governance entities acting as collective management organisations responsible for maintaining standards, administering compliance systems, and protecting cultural integrity. Such approaches may provide an important complement to future ABS certification systems, particularly where geographic origin and cultural provenance contribute significantly to commercial value.

Traceability Systems

Modern provenance and traceability systems provide the operational layer through which provenance and accountability can be maintained in practice.

Technologies such as QR codes, digital product passports, blockchain systems, biodiversity databases, and supply-chain management platforms

can provide verifiable information regarding product origins, kaitiaki relationships, ABS arrangements and utilisation pathways. These systems allow provenance information to travel with products, datasets, and biological materials as they move through research, manufacturing, distribution, and commercialisation processes.

The Mānuka GI framework identifies product traceability and tamper-proof tagging systems as essential components of a robust compliance architecture. This insight is directly applicable to biodiscovery certification systems. A tagging or identifier system linked to provenance records, ABS agreements, and audit trails would provide end-to-end accountability while also creating practical mechanisms for monitoring product flows and calculating benefit-sharing contributions.

The Biodiscovery Platform should be designed with this functionality in mind from the outset. Integration between Te Pūnaha Taonga, certification systems, biodiversity databases, Local Contexts metadata, intellectual property disclosure systems, and future traceability technologies would create a coherent accountability framework capable of supporting both ethical commercialisation and future ABS obligations.

Next Steps

Taken together, disclosure requirements under the GRATK Treaty, Te Pūnaha Taonga, Local Contexts labels, certification systems, geographical indications, and digital traceability tools should not be viewed as separate initiatives. They represent complementary components of a broader provenance and accountability infrastructure.

Their collective purpose is not simply to control access, but to ensure that relationships between taonga, kaitiaki, researchers, innovators, investors, commercial users, regulators, and consumers remain visible throughout the innovation lifecycle. In doing so, they create the conditions necessary for transparency, accountability, ethical utilisation, and meaningful benefit-sharing within a future Aotearoa biodiscovery system.

Ultimately, the purpose of provenance infrastructure is not simply to record where resources came from, but to maintain visibility of the relationships that give rise to rights, responsibilities, and obligations. If effective mechanisms can be established linking taonga, kaitiaki, researchers, innovators, datasets, intellectual property, products, and benefits, Aotearoa will be considerably better placed to support both open innovation and meaningful accountability. The integration of Te Pūnaha Taonga, Local Contexts, biodiversity data systems, certification mechanisms, and future ABS processes represents one practical pathway toward achieving that objective.



Provenance, Accountability and Certification

- 23** Accede to the WIPO GRATK Treaty as a priority early action, establishing mandatory disclosure of origin requirements for relevant patent applications and strengthening transparency regarding the utilisation of Aotearoa genetic resources and associated mātauranga Māori.
- 24** Amend the Patents Act 2013 to implement GRATK disclosure requirements, strengthen the Patents Māori Advisory Committee referral process, improve public transparency regarding disclosures, and ensure sufficient capability exists to assess applications involving taonga species and associated mātauranga Māori.
- 25** Develop a bespoke Indigenous biodiscovery certification mark, co-designed with Māori entities and aligned with future ABS requirements, to provide consumers and commercial partners with assurance regarding ethical sourcing, FPIC, benefit-sharing, and kaitiaki engagement.
- 26** Develop Te Pūnaha Taonga and the Biodiscovery Platform as interoperable provenance and accountability infrastructure capable of linking taonga species, kaitiaki interests, biodiversity occurrence data, ABS agreements, research outputs, intellectual property, certification systems, and commercial products throughout the innovation lifecycle.
- 27** Support adoption of Local Contexts labels, notices, and related metadata standards as mechanisms for recognising Indigenous interests in legacy collections, datasets, publications, and digital resources, and integrate these standards with Te Pūnaha Taonga and future provenance systems wherever practical.
- 28** Support integration between Te Pūnaha Taonga, Local Contexts metadata standards, biodiversity occurrence databases, patent disclosure systems, and future provenance and traceability infrastructure to create a coherent national accountability framework capable of supporting implementation of the GRATK Treaty and any future ABS regime.





12. Trade & International Market Opportunities

12

Current Situation

Aotearoa has significant untapped potential to leverage its international connections for the biodiscovery sector. However, channels to new markets for products derived from taonga species can be difficult to establish, and regulatory barriers for new ingredients are often significant. Kaitiaki entities are currently underrepresented within Aotearoa's industry sector representatives at international biotechnology fora including AusBiotech and ChinaBio.

Leveraging International Instruments

Key international instruments available for leverage include:

- Free Trade Agreements (FTAs) – 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. FTAs with Australia, China, EU, South Korea, Singapore and others provide market-access pathways for biodiscovery products.
- Indigenous Collaboration Arrangements (ICAs) – The first standalone bilateral arrangements of their kind in the world, formalising commitment between governments on international Indigenous policy. Existing ICAs with Australia and Canada can support Indigenous-to-Indigenous collaboration in biodiscovery.
- Indigenous Peoples Economic and Trade Cooperation Arrangement (IPETCA) – An open plurilateral arrangement designed to support greater Indigenous economic inclusion and participation in regional and domestic economies, with members New Zealand, Australia, Canada, and Chinese Taipei, and the United States as an Observer.

The ICAs in particular can enable collaboration between iwi and Māori exporters and researchers and other Indigenous communities with high export-market value in biotechnology products – for example, South Africa's Rooibos Tea Market and Australia's spinifex grass medical gel industry.

The Rooibos example is instructive beyond benefit-sharing: the South African industry's commercial strength is also substantially supported by Geographical Indication (GI) protection, which prevents producers in other countries from labelling products as "Rooibos" and thereby protects market premiums and geographic authenticity. Aotearoa's indigenous biodiscovery sectors lack an equivalent GI framework for food and botanical products. Work underway to develop a GI regime for Mānuka Honey has identified the legal and institutional pathway required: new GI legislation for food products (extending beyond the current wines and spirits coverage); a Collective Management Organisation; and international registration through the Lisbon System and Geneva Act. This architecture is directly relevant to other taonga-derived products – including kānuka, kawakawa, and hārakeke – and represents a parallel trade-strategy lever that should be integrated into Aotearoa's biodiscovery export positioning. Building alliances with EU bodies that administer GI protections, and with Indigenous communities in other countries that have successfully navigated GI regimes, would strengthen Aotearoa's capacity to secure and defend these designations internationally.



Trade and International Markets

- 29** Develop a dedicated biodiscovery trade and market access strategy, coordinated across MBIE, MFAT, NZTE and Te Puni Kōkiri, that leverages FTAs, ICAs and IPETCA to open export pathways for taonga-based products.

- 30** Ensure kaitiaki entities and taonga trusts are represented in Aotearoa industry delegations to international biotechnology fora.

- 31** Utilise the ICAs with Australia and Canada to facilitate Indigenous-to-Indigenous biodiscovery knowledge exchange, governance learning, and joint market development.

- 32** Work with NZTE to develop a dedicated 'Indigenous Biodiscovery' export-market positioning package for use by kaitiaki-endorsed businesses and product lines in priority markets.





13. Gene Technology, Digital Sequence Information, Artificial Intelligence & Emerging IP Frontiers

The Gene Technology Bill

The proposed Gene Technology Bill introduces a new regulatory regime for genetic technologies in Aotearoa and includes provisions for Māori Advisory Committees within its decision-making processes. How a Biodiscovery Act would interact with the Gene Technology Bill's Māori Advisory Committee functions is a key design question that must be resolved to avoid duplication, inconsistency, or gaps in the protection of kaitiaki rights.

The Bill is particularly significant because gene technologies increasingly intersect with taonga species and mātauranga Māori. Genetic modification, gene editing (including CRISPR-based technologies), synthetic biology, and precision fermentation all represent pathways through which biological material derived from or inspired by indigenous organisms can be transformed into commercial products. Without clear alignment between the Gene Technology Bill and any future Biodiscovery Act, there is a risk that innovations derived from mātauranga Māori or taonga species escape effective kaitiaki oversight by falling within the gene technology regulatory pathway rather than the biodiscovery pathway.

The project recommends that Te Puni Kōkiri, MBIE, and the Ministry of Health (which leads the Gene Technology Bill) engage proactively during the Bill's development to ensure alignment. In particular, the ABS provisions of any Biodiscovery Act should apply where gene technology activities derive from or utilise taonga species or associated mātauranga Māori, regardless of which regulatory pathway the resulting product is ultimately regulated under.

Digital Sequence Information – The Cali Fund and Beyond

Digital Sequence Information (DSI) – digitised data derived from genetic resources, including genomic sequences – represents one of the most

pressing emerging challenges and opportunities in biodiscovery governance. At CBD COP16 in Cali, Colombia in October 2024, parties agreed to a multilateral benefit-sharing mechanism for DSI, creating the Cali Fund (CBD, 2024). The mechanism, though non-binding in several respects, requires companies using DSI derived from genetic resources to contribute a portion of their profits or revenue into a global fund for biodiversity restoration and protection, some of which may be led by Indigenous Peoples and local communities.

For Aotearoa, DSI raises questions that go beyond the immediate financial benefit-sharing question. Māori genomic data – including data derived from taonga species – is increasingly being generated, stored, and accessed through international databases such as NCBI GenBank, GBIF, and commercial genomic platforms. Once data enters these systems, controlling its use and ensuring benefit-sharing becomes extraordinarily difficult.

The CARE Principles for Indigenous Data Governance provide a framework for addressing data sovereignty, but their application to genomic data derived from taonga species requires specific operationalisation within Aotearoa's biodiscovery system. Te Pūnaha Taonga (described in Section 5) represents one possible mechanism for registering and governing kaitiaki interests in taonga-derived genomic data before it enters international databases – creating a record of kaitiaki relationships at the point of research, before data is submitted to international systems.

The project notes that many operational details of the Cali Fund remain under negotiation. Aotearoa's engagement with these negotiations – including through Te Puni Kōkiri's participation in CBD COP processes – will be critical in ensuring that the eventual mechanism reflects Māori data sovereignty interests and provides meaningful pathways for benefits to flow to kaitiaki whose taonga have contributed to globally accessed genomic datasets.

The WIPO GRATK Treaty and DSI

The WIPO GRATK Treaty (WIPO, 2024) addresses disclosure of origin for genetic resources used in patent applications. While the Treaty does not directly address DSI – which sits outside the conventional patent system – deeper elements of the IP system could be introduced over time. The patent application process could in future become a checkpoint for evidence of compliance with ABS mechanisms, or could consider applications involving digital sequence information derived from genetic resources. This evolution is not possible until a biodiscovery system is established and functional – but it needs to be designed for from the outset.

Implications for the Biodiscovery Platform

The Biodiscovery Platform being developed by BSI must address DSI governance as a core functional requirement, not an afterthought. Specifically, the Platform should: provide mechanisms for registering kaitiaki interests in taonga species at the point before research begins (thereby creating a record that can be used to assert interests in any DSI subsequently generated); create data-sharing agreements that explicitly govern the terms on which DSI derived from taonga can be accessed and used by third parties; align with the CARE Principles and Aotearoa's obligations under the Cali Fund mechanism; and provide a pathway for kaitiaki to receive notification when DSI derived from registered taonga is accessed or used by researchers or companies.

Artificial Intelligence and Biodiscovery

Artificial Intelligence (AI) is rapidly transforming biodiscovery, biotechnology, pharmaceuticals, agriculture, and environmental management. Machine learning systems are increasingly capable of analysing vast genomic, metabolomic, chemical, ecological, and traditional knowledge datasets to identify commercially valuable compounds, predict biological functions, design novel molecules, optimise bioprocesses, and accelerate drug discovery. Some commentators have described AI as creating a fourth major phase of biodiscovery: following field collection, laboratory analysis, and genomic sequencing, AI now enables the extraction of value from large integrated datasets at unprecedented speed and scale.

For Māori, AI presents both significant opportunities and substantial risks. On one hand, AI could greatly increase the value that can be derived from taonga species and associated mātauranga. AI-assisted analysis of genomic and metabolomic datasets

may accelerate the discovery of novel therapeutics, biomaterials, nutraceuticals, cosmetics, agricultural products, and environmental applications derived from indigenous organisms. AI tools may also strengthen kaitiaki decision-making by helping identify species under threat, model ecological restoration scenarios, optimise sustainable harvesting practices, and manage increasingly complex biodiversity datasets.

At the same time, AI amplifies many of the challenges already associated with Digital Sequence Information (DSI). Once genomic, ecological, chemical, or traditional knowledge data enters international databases, it may be incorporated into AI training datasets with little visibility regarding how it is subsequently used. This exposes a significant limitation in conventional access and benefit-sharing (ABS) frameworks, which were largely designed around identifiable transactions involving physical genetic resources. Increasingly, however, commercial value can be generated through computational analysis alone. A pharmaceutical company may never access a taonga species directly yet still derive substantial commercial advantage from AI analysis of genomic, chemical, ecological, or traditional knowledge datasets originating from that species.

The emergence of AI therefore raises important questions about how existing ABS systems can remain effective in a data-driven bioeconomy. As AI systems increasingly rely on large aggregated datasets containing information from thousands or millions of biological samples, negotiating individual benefit-sharing agreements for every contribution may become impractical. Similar challenges are already being debated internationally in relation to DSI governance, the Cali Fund, and the future evolution of intellectual property systems.

The CARE Principles provide an important foundation for addressing these issues. In particular, the principles of Authority to Control, Collective Benefit, Responsibility, and Ethics suggest that Indigenous interests should continue to apply even when data is transformed into digital or AI-enabled forms. However, practical mechanisms for implementing CARE within AI systems remain underdeveloped internationally.

For Aotearoa, this suggests that AI governance should be considered a core component of any future biodiscovery system. Provenance systems, data governance arrangements, and kaitiaki registries should be designed not only to record access to physical resources but also to maintain connections between taonga species, associated data, and downstream AI applications. The Biodiscovery Platform and Te Pūnaha Taonga could play an important role in creating persistent records of kaitiaki interests that remain attached to genomic, metabolomic, ecological, and traditional knowledge datasets throughout their lifecycle.

AI also requires a rethinking of how benefit-sharing systems operate. Future biodiscovery systems may need to function at multiple levels simultaneously. Direct FPIC, kaitiaki engagement, and negotiated benefit-sharing arrangements will remain appropriate where identifiable taonga species, mātauranga Māori, and kaitiaki relationships are involved. At the same time, sector-wide or species-wide benefit-sharing mechanisms may be required where attribution remains possible but individual negotiations become impractical. Finally, multilateral mechanisms such as the Cali Fund may become increasingly important where AI systems utilise highly aggregated datasets and attribution to individual species, ecosystems, or communities is no longer feasible. The challenge for policy makers will be to ensure that these broader mechanisms complement rather than replace the exercise of rangatiratanga and kaitiakitanga at the species and community level.

AI should not be treated as a separate issue from biodiscovery. Rather, it represents the next stage in the utilisation of biodiversity and associated knowledge. The central policy challenge is therefore not whether AI should be governed, but how concepts such as kaitiakitanga, access and benefit-sharing, provenance, tino rangatiratanga, and Māori data sovereignty can evolve to remain effective within an increasingly data-driven and AI-enabled bioeconomy.



Recommendations



Gene Technology, DSI , AI and Emerging IP Frontiers

- 33** Ensure proactive alignment between the Gene Technology Bill and any future Biodiscovery Act, so that ABS obligations apply to innovations derived from taonga species regardless of which regulatory pathway the resulting product is regulated under.
- 34** Engage actively in Cali Fund negotiations to ensure the eventual DSI benefit-sharing mechanism reflects Māori data sovereignty interests and creates meaningful pathways for benefits to flow to kaitiaki.
- 35** Design the Biodiscovery Platform and Te Pūnaha Taonga with core technical capabilities for provenance tracking, data stewardship, CARE Principles implementation, metadata management, and downstream use notification where practicable, ensuring the platform can support future DSI, AI, and ABS governance requirements.
- 36** Commission a dedicated analysis of how the WIPO GRATK Treaty could be deepened over time to address DSI applications once a domestic biodiscovery system is established.
- 37** Commission a strategic review of ABS models for AI-enabled biodiscovery, assessing the roles of bilateral, species-level, national and multilateral benefit-sharing mechanisms in relation to DSI, AI, synthetic biology, and Māori data sovereignty, and identifying a preferred hybrid model for Aotearoa.



14. The Biodiscovery Platform

Background and Investment

During the second year of this project, the Government committed approximately NZ\$42.8 million through MBIE's Strategic Science Investment Fund toward the establishment of a Biodiscovery Platform led by the new Bioeconomy Science Institute (BSI).

Platform Design and Objectives

Based on engagement through this project with BSI planning discussions, the Biodiscovery Platform is intended to: gather insights from a platform prototype to streamline commercial pathways and test ABS processes operationally; focus initially on taonga species of plants, fungi and algae and associated mātauranga Māori; enable collaboration between Māori entities, Government, and private organisations; provide mechanisms to recognise Māori interests including outreach, dispute resolution, and biotechnology collaboration facilitation; enable the Government to act in a facilitation role; and improve connections between existing and new science and research funding to stimulate funding towards kaitiaki-led research projects.

The Platform's sector enablement role includes a communication function that is currently absent from its stated objectives. The kānuka case studies in Sections 7 & 8 demonstrate that connecting landowners to industry opportunities requires accessible, jargon-free tools in Te Reo Māori and English: the Kānuka Charitable Trust landowner survey and animated video series for Māori landowners are practical examples of what this looks like. More broadly, the diversity of audiences the Platform must communicate with – whānau making land use decisions, rangatahi considering careers in biodiscovery, researchers navigating ABS obligations, investors assessing commercial opportunities, and international market partners verifying provenance – requires communication strategies tailored to

each. A single website and social media presence, however well designed, is insufficient. The Platform should commission a communication strategy as an early deliverable, developed in consultation with the communities it serves, specifying distinct channels, formats, and languages for each audience group.

Māori Participation and Governance

The Biodiscovery Platform must be designed from the outset to ensure meaningful Māori participation, leadership, and co-governance – not as an afterthought but as a structural feature. Specific design elements to incorporate include: a formal Māori governance role within BSI's biodiscovery programme; integration with the taonga governance entities documented in Section 5 as recognised kaitiaki nodes; a built-in kaitiaki registry and FPIC initiation function; a clearing-house function providing accessible ABS guidance; integration with Te Pūnaha Taonga as the dedicated Indigenous governance infrastructure layer; and provenance, traceability, and DSI governance functionality.

Connection to Policy Framework

The Biodiscovery Platform and Te Puni Kōkiri's emerging ABS policy framework are complementary rather than competing initiatives. A key risk identified through this project is that the Platform could inadvertently create a path dependency embedding informal and potentially inadequate ABS processes before legislation is enacted. It is therefore important that Platform design explicitly anticipates and is consistent with the legislative architecture options that Te Puni Kōkiri has been developing.

Sector Engagement and Priorities

During May 2026, the Biodiscovery Platform development process included sector engagement hui held in Hamilton and Palmerston North involving more than one hundred participants from across the biodiscovery ecosystem, including researchers, Māori organisations, rongoā practitioners, industry participants, investors, government agencies, and supporting institutions. The engagement process identified a series of recurring themes relating to the future design of biodiscovery infrastructure in Aotearoa and offers a useful indication of where broad areas of consensus may be emerging across the sector.

A dominant theme was the highly fragmented nature of the current biodiscovery landscape. Participants consistently identified the absence of effective mechanisms to connect researchers, Māori organisations, commercial partners, investors, infrastructure providers, and government agencies into a coherent system. There was strong support for improved coordination, greater visibility of existing capability and infrastructure, and clearer pathways connecting discovery, development,

commercialisation, and investment. The need for a more integrated national biodiscovery ecosystem emerged as one of the strongest signals across both workshops.

Participants also highlighted the importance of long-term relationship building and governance arrangements that move beyond transactional project-by-project engagement. Themes relating to trust, partnership, collaboration, collective decision-making, and relational approaches to governance featured prominently. Many participants identified the need for structures capable of supporting enduring relationships between researchers, iwi, hapū, industry, investors, and government agencies, rather than relying on ad hoc engagement processes. These themes align closely with wider discussions concerning kaitiakitanga, access and benefit-sharing, and Te Tiriti-based approaches to biodiscovery governance.

A third recurring theme concerned Māori participation, leadership, and authority within the biodiscovery system. Workshop participants identified structural barriers limiting Māori participation across research, commercialisation, investment, and governance activities.

There was broad recognition of the need to better



embed Te Ao Māori values within system design, strengthen mechanisms for protecting mātauranga Māori and taonga species, improve benefit-sharing arrangements, and support Māori data sovereignty. Participants also highlighted the importance of ensuring Māori are not merely participants within the system but are able to exercise leadership and influence over its future direction.

Capability development emerged as another major priority. Participants identified significant gaps in commercialisation expertise, regulatory knowledge, investment readiness, market access capability, and translational science. Concerns were also raised regarding the loss of skilled people from the sector and the absence of clear pathways for developing future capability. Strong support was expressed for coordinated approaches to training, workforce development, secondments, mentoring, and knowledge sharing across the biodiscovery ecosystem.

The workshops also highlighted recurring concerns relating to intellectual property, benefit-sharing, data governance, and protection of mātauranga Māori.

Participants noted the absence of widely accepted frameworks for ownership, benefit-sharing, and Indigenous data governance, and identified these as foundational issues requiring attention if the sector is to develop in structure and practice that is consistent with Te Tiriti o Waitangi and international expectations relating to Indigenous rights.

Taken together, the themes emerging from the sector engagement process align closely with many of the issues explored throughout this report. In particular, they reinforce the importance of system coordination, relational governance, Māori leadership, capability development, benefit-sharing, data sovereignty, and practical governance infrastructure.

While the final design of the Biodiscovery Platform remains under development, the engagement process suggests a growing recognition across the sector that future biodiscovery success will depend not only on scientific excellence, but also on the strength of the relationships, governance systems, and institutional infrastructure that connect biodiversity, mātauranga Māori, innovation, and commercialisation.

Recommendations



The Biodiscovery Platform

- 38** Ensure the Biodiscovery Platform's governance architecture includes formal Māori co-governance at decision-making level, not merely advisory roles, with authority over matters affecting kaitiaki rights.
- 39** Integrate the taonga governance entities (KCT, NRACT, WCT, MCT) into the Platform's governance architecture as recognised kaitiaki nodes with defined roles and responsibilities.
- 40** Build a kaitiaki registry and FPIC initiation function into the Platform as a foundational feature, enabling researchers and companies to identify relevant kaitiaki interests and commence compliant engagement processes.
- 41** Design the Platform's ABS processes explicitly to be consistent with and anticipatory of the legislative framework Te Puni Kōkiri is developing, to avoid incompatible path dependencies.
- 42** Include a consolidated funding portal within the Platform aggregating all relevant government funding streams for taonga-based research, with simplified application pathways for kaitiaki entities.
- 43** Build provenance, traceability, DSI governance, and certification infrastructure into the Platform from the outset.



15. Strategic Risks & Opportunities

The international landscape surrounding biodiversity, genetic resources, traditional knowledge, intellectual property, and Indigenous rights is undergoing rapid transformation. New international agreements, evolving ABS frameworks, increasing demand for ethical sourcing and traceability, advances in commercial applications for genomics and DSI, and growing recognition of true sustainability are reshaping the conditions under which taonga-derived products, technologies, and knowledge are researched, developed, and commercialised.

For Māori, these developments create both significant opportunities and substantial risks. On the one hand, growing international demand for products and innovations grounded in biodiversity, provenance, sustainability, and Indigenous values creates new pathways for economic development, cultural revitalisation, biodiversity stewardship, and Māori-

led innovation. On the other hand, the absence of coherent governance systems, access and benefit-sharing mechanisms, provenance frameworks, and investment in kaitiaki capability creates the risk that benefits arising from taonga species and associated mātauranga Māori will continue to be captured disproportionately by external actors.

The emergence of the Biodiscovery Platform, ongoing policy development relating to biodiscovery and genetic resources, and increasing international attention to Indigenous participation in innovation systems create a rare window of opportunity to shape the future architecture of biodiscovery in Aotearoa. The following strategic risks and opportunities highlight factors likely to influence whether Māori are positioned as beneficiaries and leaders of this emerging bioeconomy, or remain largely participants in systems designed and controlled by others.



Strategic Risk

STRATEGIC RISK	LIKELIHOOD	SIGNIFICANCE	INCREASING	POTENTIAL MITIGATION
IP Loss Continued growth in overseas patenting of inventions derived from Aotearoa indigenous species and associated knowledge.	High	High	Increasing	Introduce disclosure of origin requirements within patent legislation; establish an ABS framework; support defensive publication strategies; strengthen provenance and traceability systems; enable kaitiaki participation in IP governance.
Selective Engagement Researchers or companies engage only with the most accessible governance entity, potentially bypassing wider kaitiaki interests.	High	High	Stable but Emerging	Develop recognised kaitiaki engagement protocols; establish a recognised kaitiaki coordination infrastructure; create guidance on FPIC and ABS processes; support collective governance mechanisms where appropriate.
Regulatory Fragmentation Biodiscovery Platform and government policy processes develop incompatible approaches to ABS, provenance, and governance.	Medium	High	Increasing	Ensure ongoing coordination between Te Puni Kōkiri, the Biodiscovery Platform, Māori governance entities, and relevant agencies; align operational systems with emerging policy settings; adopt common standards and terminology.
Capability Attrition Insufficient investment in Māori research, governance, commercialisation, and regulatory capability limits participation in higher-value activities.	High	High	Increasing	Establish dedicated capability development funding; fund Māori-led research and commercialisation programmes; invest in governance, IP, regulatory, and market-access expertise; develop succession pathways for emerging leaders.
International Credibility Aotearoa becomes increasingly isolated from emerging international ABS and ethical sourcing frameworks.	Medium	Medium High	Rapidly Increasing	Progress biodiscovery system reforms; consider accession to relevant international agreements; align domestic systems with international best practice; participate actively in ABS, DSI, and Indigenous rights forums.
DSI and Genomic Data Loss Benefits arising from genomic sequencing and Digital Sequence Information flow primarily to offshore actors without recognition of kaitiaki interests.	Medium	Medium High	Rapidly Increasing	Develop DSI governance frameworks; embed CARE Principles and Māori data sovereignty approaches into research systems; establish provenance and benefit-sharing mechanisms for genomic data; participate in international DSI negotiations.

Strategic Opportunities

OPPORTUNITY	SIGNIFICANCE	PROPOSAL
The convergence between Indigenous rights frameworks, biodiversity governance, ethical sourcing expectations, and premium natural-product markets creates a genuinely distinctive opportunity for Māori-led biodiscovery systems that are internationally differentiated, ethically grounded, and commercially competitive.	High	Develop a Māori-led provenance, governance, and benefit-sharing framework for taonga-derived products that complements internationally recognised standards such as UEBT. Establish a coordinated export positioning strategy that promotes Aotearoa as a source of ethically governed, Indigenous-centred biodiscovery and natural products.
The NZ\$42.8 million Biodiscovery Platform investment, combined with a revitalised ABS policy process, creates a unique window to establish coherent infrastructure that could position Aotearoa as a global leader in Treaty-consistent, ethically governed biodiscovery.	High	Align development of the Biodiscovery Platform with emerging biodiscovery policy settings and any future ABS framework. Prioritise foundational infrastructure including provenance and traceability systems, kaitiaki registries, FPIC and ABS guidance, DSI governance mechanisms, and Māori governance participation from the outset.
The taonga governance entities that have emerged through market and community processes represent an innovative institutional model for Indigenous biodiscovery governance that is attracting international interest.	High	Formally recognise taonga governance entities as key partners within the Biodiscovery Platform and future biodiscovery system architecture. Support development of a kaitiaki coordination mechanism – such as Te Pūnaha Taonga – to facilitate collaboration, capability-building, collective learning, and engagement between kaitiaki collectives and across multiple taonga species and governance entities.
The IPETCA framework provides an unprecedented mechanism for Indigenous-to-Indigenous biodiscovery collaboration, IP development, and market access across four countries.	Medium	Establish an Indigenous Biodiscovery Network involving Māori, First Nations peoples of Australia and Canada, and Indigenous Peoples of Taiwan to support joint research, IP development, provenance frameworks, ethical sourcing initiatives, and market access opportunities. Use IPETCA as a platform for developing Indigenous-led approaches to ABS, DSI governance, and commercialisation of biodiversity-based innovation.
The systematic undervaluation of taonga-derived products and IP represents both a risk and a reversible opportunity. Roskrug et al. (2022) demonstrate that standard GDP measures capture only a fraction of the Total Economic Value of taonga, and that institutional reforms improving property right security for kaitiaki could generate annual GDP gains of NZD 34 million to NZD 340 million – with an all-up capitalised value of NZD 700 million to NZD 7 billion – even before non-market wellbeing, cultural, and environmental values are counted.	Medium	Commissioning a dedicated economic valuation programme, drawing on the kaupapa Māori valuation framework developed by Roskrug et al. (2022), would provide the evidence base needed to make the full economic case for biodiscovery system reform and to strengthen kaitiaki positioning in benefit-sharing negotiations.



16. Monitoring, Evaluation & Review

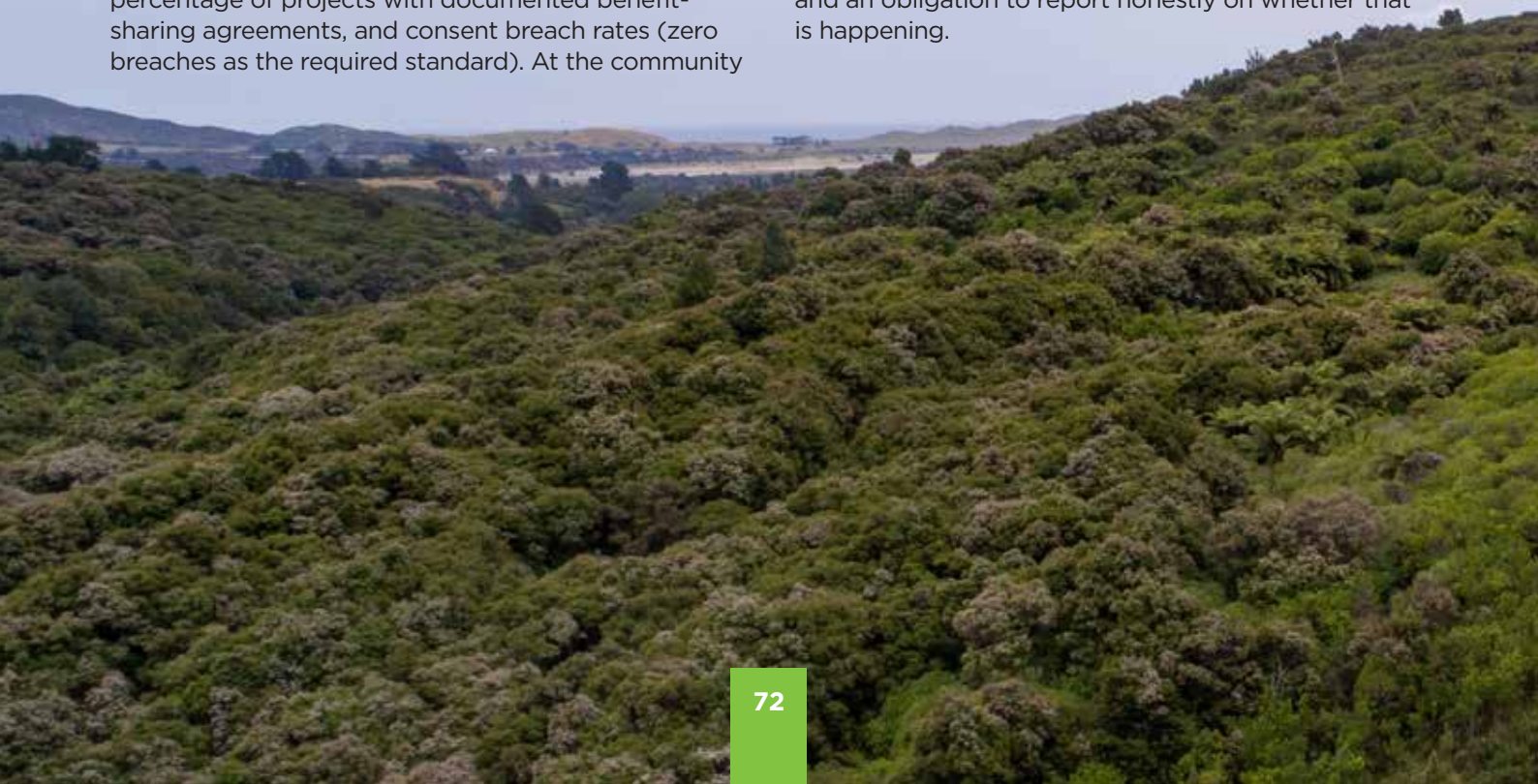
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The recommendations in this report address interconnected and long-horizon challenges. Without an explicit framework for monitoring implementation and evaluating outcomes, they risk becoming a list of aspirations rather than a programme of accountable action. The Indigenous Biodiscovery Wānanga (Koia, 2026) identified monitoring and evaluation as a distinct priority, noting the need to track progress, identify barriers, and adapt strategies based on real-world learning across communities, species, and ecosystems.

A monitoring and evaluation framework for biodiscovery system reform should operate at three levels. At the system level, indicators would track the legislative and regulatory architecture: whether a Biodiscovery Act has been enacted, whether a CNA has been established, whether ABS compliance rates are measurable, and whether the large increase in overseas patent applications for Aotearoa indigenous plants has stabilised or reversed. At the platform level, the BSI Design Workshop's proposed KPIs provide a starting point: percentage of decisions with Māori sign-off, percentage of platform funding to Māori-led initiatives, number of Māori ventures scaled, percentage of projects with documented benefit-sharing agreements, and consent breach rates (zero breaches as the required standard). At the community

and species level, indicators should track outcomes for kaitiaki entities and taonga: whether governance capacity in the taonga trust network has grown, whether kaitiaki are participating in higher-value parts of the innovation ecosystem, whether taonga species and their habitats are in better or worse condition as a result of commercialisation activity, and whether non-monetary benefits are flowing to communities in documented and traceable ways.

The Indigenous Biodiscovery Wānanga's proposal that it become an annual fixture – supported by the Biodiscovery Platform – provides a practical accountability mechanism: an annual public gathering at which progress or regression against agreed indicators is assessed by the sector itself, not only by government agencies. Participatory accountability grounded in the communities most affected is more likely to generate genuine course correction than internal government reporting alone. The Wānanga's conclusion was direct: given the regulatory vacuum and the urgency of getting frameworks in place, there is a responsibility on those with influence in government, industry, and research organisations to do what they can to progress the recommendations, and an obligation to report honestly on whether that is happening.



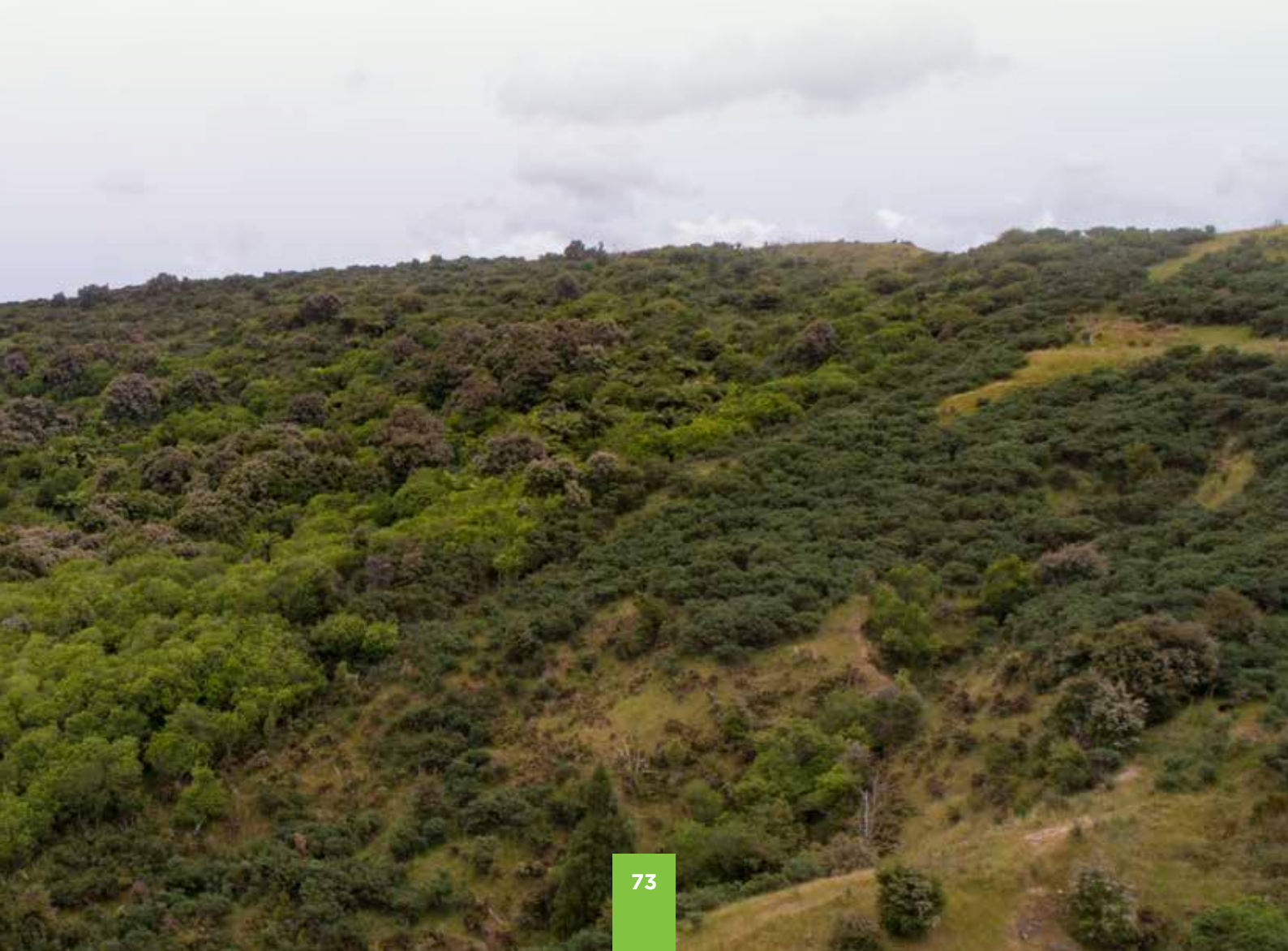


Monitoring, Evaluation and Review

- 44** Develop a monitoring and evaluation framework for biodiscovery system reform operating at system, platform, and community/species levels, with indicators drawn from the BSI Design Workshop KPIs and agreed in co-design with the taonga trust network and WAI 262 claimants group.

- 45** Support the Indigenous Biodiscovery Wānanga as an annual review and accountability gathering, hosted with Biodiscovery Platform support, at which sector-wide progress against agreed indicators is assessed by participants from kaitiaki collectives, research institutions, government, and industry.

- 46** Commission a communication strategy for the Biodiscovery Platform as an early deliverable, specifying accessible, audience-specific channels and formats in Te Reo Māori and English for whānau, landowners, researchers, investors, and international market partners.





17. Recommendations

The following consolidated recommendations are drawn from the analysis in preceding sections. They are organised by theme.

Regulatory Architecture

1. Enact dedicated Biodiscovery legislation establishing a Competent National Authority and mandatory Access and Benefit-Sharing requirements, designed to accommodate a Māori-led taonga governance model.
2. Commission co-design of the CNA model with the taonga trusts (KCT, NRACT, WCT, MCT), the WAI 262 claimants group, and relevant kaitiaki collectives, with the express objective of designing an independent, Māori-led CNA governed by accredited kaitiaki entities.
3. Adopt a sphere-of-authority architecture for the CNA, under which Crown and Māori exercise authority within defined and complementary domains rather than sharing a single institution.
4. Recognise and invest in Te Pūnaha Taonga as shared governance infrastructure for future biodiscovery and ABS systems, serving as the primary kaitiaki registry, supporting FPIC processes, relationship provenance, and engagement between kaitiaki, researchers, companies, regulators, and a future Competent National Authority.
5. Develop a dispute resolution pathway designed for a Māori-led CNA context.
9. Resource and support the Tiaki Taonga work programme as the rights framework from which the biodiscovery system's ABS architecture should be developed. Tiaki Taonga establishes what authority kaitiaki hold; Te Pūnaha Taonga provides the operational infrastructure for discovering and exercising those rights where multiple kaitiaki have overlapping interests in the same taonga. Formal Crown recognition should follow resolution of outstanding technical questions in consultation with Te Taumata Whakapūmau.
10. Build ABS monitoring and compliance checkpoints into the patent application process.
11. Require that ABS engagement processes include explicit resourcing for kaitiaki participation – covering time, travel, legal and technical support, and governance costs – so that the burden of ABS compliance does not fall disproportionately on the entities whose rights the system is designed to protect.

ABS Processes and Compliance

6. Enact dedicated Biodiscovery legislation establishing mandatory ABS requirements for commercial biodiscovery with taonga species of plants, fungi and algae and associated mātauranga Māori, with provision to expand scope over time.
7. Develop standardised ABS templates, FPIC protocols, and benefit-sharing guidelines in co-design with Māori entities.
8. Establish a domestic clearing-house mechanism integrated with the Biodiscovery Platform.

Commercialisation, Investment and Funding

12. Develop a dedicated funding stream for kaitiaki-led commercial biodiscovery initiatives.
13. Integrate ABS compliance into Invest New Zealand investment assessment processes.
14. Ensure SI&T reforms include explicit provisions protecting kaitiaki benefit-sharing rights.
15. Ensure kaitiaki entities are represented in international biotechnology, biodiversity, IP, and trade fora through NZTE and relevant Aotearoa delegations.
16. Develop a dedicated kaitiaki commercialisation accelerator programme within the Biodiscovery Platform.

Māori Investment and Patient Capital

17. Work with Māori investment entities to develop accessible patient capital vehicles for biodiscovery ventures, with governance rights reflecting cultural relationships alongside financial contribution and investment horizons aligned with commercialisation realities.
18. Design the Biodiscovery Platform's consolidated funding portal to include Māori investment vehicle connections alongside government funding streams, enabling whānau and hapū to identify biodiscovery investment opportunities at accessible entry points.

Capability, Training and Relationship-Building

19. Develop a dedicated, multi-level capability pathway for Māori scientists, entrepreneurs, and community governors in biodiscovery, in co-design with Te Kotahi Research Institute, BSI, and the taonga trusts, structured as a multi-year programme.
20. Resource tuakana-teina mentoring and succession planning, connecting early-career Māori researchers and entrepreneurs with experienced practitioners across science, commerce, and governance.
21. Extend Pillar 2 Platform investment to explicitly include individual and community-level capability development and a dedicated relationship-building allocation not contingent on research projects commencing.
22. Develop rangatahi engagement pathways into Indigenous biodiscovery from secondary school level, in partnership with educational institutions and Māori communities.

Provenance, Accountability and Certification

23. Accede to the WIPO GRATK Treaty as a priority early action, establishing mandatory disclosure of origin requirements for relevant patent applications and strengthening transparency regarding the utilisation of Aotearoa genetic resources and associated mātauranga Māori.
24. Amend the Patents Act 2013 to implement GRATK disclosure requirements, strengthen the Patents Māori Advisory Committee referral process, improve public transparency regarding disclosures, and ensure sufficient capability exists to assess applications involving taonga species and associated mātauranga Māori.
25. Develop a bespoke Indigenous biodiscovery certification mark, co-designed with Māori entities and aligned with future ABS requirements, to provide consumers and

commercial partners with assurance regarding ethical sourcing, FPIC, benefit-sharing, and kaitiaki engagement.

26. Support adoption of Local Contexts labels, notices, and related metadata standards as mechanisms for recognising Indigenous interests in legacy collections, datasets, publications, and digital resources, and integrate these standards with Te Pūnaha Taonga and future provenance systems wherever practical.
27. Support integration between Te Pūnaha Taonga, Local Contexts metadata standards, biodiversity occurrence databases, patent disclosure systems, and future provenance and traceability infrastructure to create a coherent national accountability framework capable of supporting implementation of the GRATK Treaty and any future ABS regime.

Trade and International Markets

28. Develop a dedicated biodiscovery trade and market access strategy leveraging FTAs, ICAs and IPETCA.
29. Ensure kaitiaki entities and taonga trusts are represented in Aotearoa industry delegations to international biotechnology fora.
30. Utilise ICAs with Australia and Canada, and the broader IPETCA framework, to establish an Indigenous Biodiscovery Network supporting joint research, ABS innovation, provenance systems, IP development and market access.
31. Develop a dedicated 'Indigenous Biodiscovery' export-market positioning package through NZTE.

Gene Technology, DSI, AI and Emerging IP Frontiers

32. Ensure alignment between the Gene Technology Bill and any future Biodiscovery Act.
33. Engage actively in Cali Fund negotiations to ensure the mechanism reflects Māori data sovereignty interests.
34. Design the Biodiscovery Platform and Te Pūnaha Taonga with core technical capabilities for provenance tracking, data stewardship, CARE Principles implementation, metadata management, and downstream use notification where practicable, ensuring the platform can support future DSI, AI, and ABS governance requirements.
35. Commission a dedicated analysis of how the WIPO GRATK Treaty could be deepened to address DSI applications.
36. Commission a strategic review of ABS models for AI-enabled biodiscovery, assessing the roles of bilateral, species-level, national and multilateral benefit-sharing mechanisms in relation to DSI,

AI, synthetic biology, and Māori data sovereignty, and identifying a preferred hybrid model for Aotearoa.

The Biodiscovery Platform

37. Ensure the Biodiscovery Platform includes formal Māori governance at decision-making level, including representation of recognised taonga governance entities as kaitiaki nodes.
38. Design Platform ABS processes to be consistent with and anticipatory of future legislation.
39. Include a consolidated funding portal aggregating relevant government funding streams.
40. Build DSI and AI governance capabilities into the Biodiscovery Platform as core functional requirements, including data stewardship, CARE Principles implementation, metadata management, and notification of downstream use where practicable.
41. Build provenance, traceability, certification, and accountability infrastructure into the Biodiscovery Platform and associated systems, including interoperability with Te Pūnaha Taonga, Local Contexts, biodiversity databases, intellectual property disclosure systems, and future ABS processes.
42. Commission a national economic valuation programme for taonga species, mātauranga Māori and biodiscovery opportunities, building on kaupapa Māori valuation methodologies to inform policy, investment decisions, and benefit-sharing negotiations.

43. Establish a long-term kaitiaki capability development programme covering governance, science, IP, regulatory affairs, market access, data governance and leadership succession.
44. Develop a national framework for the governance of AI applications involving taonga-derived genomic, ecological, chemical, and mātauranga-related data, ensuring alignment with CARE Principles, Māori data sovereignty, and future ABS requirements.

Monitoring, Evaluation and Review

45. Develop a monitoring and evaluation framework for biodiscovery system reform operating at system, platform, and community/species levels, with indicators agreed in co-design with the taonga trust network and WAI 262 claimants group.
46. Support the Indigenous Biodiscovery Wānanga as an annual review and accountability gathering with Biodiscovery Platform support, at which sector-wide progress is assessed by kaitiaki collectives, research institutions, government, and industry.
47. Commission a biodiscovery sector communication strategy as an early Platform deliverable, specifying accessible, audience-specific channels and formats in Te Reo Māori and English for whānau, landowners, researchers, investors, and international market partners.





18. Conclusion

This report identifies two interrelated challenges at the heart of biodiscovery in Aotearoa New Zealand.

The first is the absence of practical mechanisms through which multiple kaitiaki groups can exercise shared rights and responsibilities in relation to taonga species. While considerable attention has been given to Māori participation and Crown-Māori relationships, far less has been devoted to how overlapping kaitiaki interests can be coordinated in ways that are legitimate, transparent, and scalable. The emerging taonga trust network and Te Pūnaha Taonga provide a promising foundation for addressing this challenge.

The second is the absence of enduring institutions capable of representing the interests of taonga within research, commercialisation, investment, and innovation systems. The examples explored in this report suggest that taonga governance entities can provide such a mechanism by participating in decision-making, receiving and deploying benefits, and remaining involved throughout the biodiscovery lifecycle. The Kānuka Charitable Trust and other emerging taonga entities provide early examples of this approach.

Together, these developments point toward a biodiscovery system that moves beyond compliance with Te Tiriti, Wai 262, and international ABS frameworks. Instead, they begin to establish the institutional infrastructure through which shared kaitiaki responsibilities can be exercised and the interests of taonga represented alongside those of researchers, investors, regulators, and communities.

Legislative reform, a Biodiscovery Act, a Competent National Authority, standardised ABS arrangements and the Biodiscovery Platform remain critically important. However, their long-term success may ultimately depend less on the formal regulatory architecture than on whether they recognise, support and strengthen these emerging institutions and mechanisms.

The opportunity for Aotearoa is therefore larger than the creation of a new regulatory regime. It is the opportunity to build a system in which kaitiaki can effectively exercise shared responsibilities,

where taonga have enduring representation within innovation systems, and where biodiversity, mātauranga Māori, research excellence and commercial success reinforce rather than undermine each another.

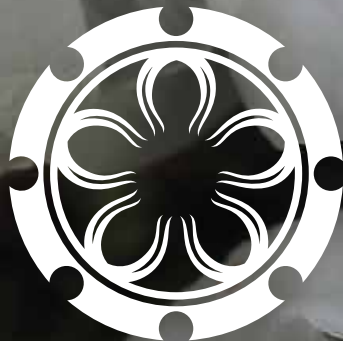
The Indigenous Biodiscovery Wānanga in March 2026 closed with a pressing statement: there is an urgency to get frameworks in place given the regulatory vacuum, and those with influence in government, industry, and research organisations need to act. This report's recommendations provide a detailed response to that call. The capability investments, the patient capital vehicles, the annual accountability Wānanga, the non-monetary benefit schedules, a robust monitoring framework, innovative commercial models that include governance by taonga entities and a mechanism for the exercise of shared kaitiaki interests, can be the difference between a system designed to work for all taonga, kaitiaki and potential collaborators, and one that may or may not work, even for those already equipped to navigate complexity.

We are at an exciting convergence. The investment has been made. The governance entities are emerging. The institutional knowledge and commitment exists. The international frameworks are moving in the right direction. A number of commercialisation partners are willing and able. What is required is the will from kaitiaki, politicians, entrepreneurs, investors, researchers and regulators to build an enduring ethical system with the rigour, care, and genuine respect for the exercise of shared kaitiaki responsibilities and the interests of Te Taiao at the centre that the opportunity demands.

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