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STOLEN TREASURE: PROTECTING TRADITIONAL KNOWLEDGE FROM PATENT-BASED BIOPIRACY IN THE INTERNATIONAL SPHERE

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Abstract

Traditional Knowledge (TK) is a crucial tool for biotechnological developments. When utilised by bioprospectors in their search for biological materials that can be used commercial gains, biotech companies successfully save their time, money and resources. However, TK can also be exploited through instances of biopiracy; where the indigenous holders of this knowledge do not authorise or are excluded from the benefits arising from their TK use. This paper analyses the current international framework that govern TK protection in this space. It concludes that as it currently stands, international law provides inadequate protections for TK holders against biopiracy. It discusses the potential movement towards a new TK protective instrument by the World Intellectual Property Organisation (WIPO), and acknowledges the challenges ahead that may prevent any resulting instrument from meaningfully transform this area of international law. Finally, it looks to the inadequate levels of indigenous participation within international negotiations on TK protection as the ultimate failure of the international sphere in this space. It encourages states to take steps to elevate indigenous voices in future TK protection instrument, as, it is only through taking greater account the needs of indigenous peoples within these instruments that international protections will be successful in preventing the adverse risks associated with TK misappropriation.

Key words: *"Biopiracy" "Traditional Knowledge" "Intellectual Property" "International Law"*

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I Introduction

Over the past two decades, interest in the possibilities of biotechnological developments has skyrocketed globally. In New Zealand alone, the number of biotech companies operating increased by over 300 per cent between 2005 and 2009.[1] Bio-prospectors are increasingly searching, extracting and examining biological material and its biochemical or molecular components to ascertain its potential to yield commercial products."[2] With estimates that less than 0.1 per cent of all plants have been assessed for their potential benefit,[3] there is plenty of room for development in this field.

Traditional knowledge (TK) is useful for biotech development. Held by indigenous and local communities (ILCs) that have cultivated and utilised ecological resources for thousands of years, TK contains a wealth of comprehensive and robust information about the biological characteristics of species.[4] Access to this knowledge significantly lowers the cost of bioprospecting by reducing the randomness associated with the unaided search for useful biological material.[5] Research has indicated that screening plants for medicinal properties may be 400 per cent more efficient where TK is used in the process.[6] However,

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1 Waitangi Tribunal *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity, Te Taumata Tuarua* (Wai 262, 2011) at 2.4.1.

2 At 2.4.1.

3 Grant Isaac and William Kerr "Bioprospecting or Biopiracy: Intellectual Property and Traditional Knowledge in Biotechnology Innovation" (2004) 7 JWIP 35 at 47.

4 Jennifer Amiott "Investigating the Convention on Biological Diversity's Protections for Traditional Knowledge" (2003) 11 Mo Envtl L & Poly Rev 3 at 16.

5 Waitangi Tribunal, above n 1, at 2.4.2; Oluwatobiloba Moody "Trade-Related Aspects of Traditional Knowledge Protection" in John Borrows (ed) *Indigenous Peoples and International Trade: Building Equitable and Inclusive International Trade and Investment Agreements* (Cambridge University Press, Cambridge, 2020) 164 at 173; and Surinder Kaur "Protecting Traditional Knowledge: Is a Sui Generis System an Answer?" (2004) 7 JWIP 765 at 768.

6 Shannon Smith "All Hands On Deck: Biopiracy & Available Protections for Traditional Knowledge" (2014) 10 J Animal & Nat Resource L 273 at 274; and Gurdial Singh Nijar "Incorporating Traditional Knowledge in an International Regime on Access to Genetic Resources and Benefit Sharing: Problems and Prospects" (2010) 21 EJIL 457 at 457.

this leaves ILC's vulnerable to patent-based biopiracy; the misappropriation of their TK by bio prospectors.[7]

This is of particular relevance to New Zealand. As one of 36 recognised biodiversity hotspots worldwide,[8] New Zealand is full of biotechnological potential. Due to its long history of geographic isolation, New Zealand hosts an estimated 80,000 indigenous species, with most not found anywhere else in the world.[9] The potential for novel bioactive material to be found in New Zealand has been deemed high, particularly amongst marine invertebrates and terrestrial plants.[10] Māori, as the indigenous people of New Zealand, have developed a particularly close relationship with New Zealand's natural resources, described by the Waitangi Tribunal as having "extensive traditions about, and close cultural relationships" with much of New Zealand's indigenous flora and fauna.[11] Mātauranga Māori (māori knowledge) will be of immense importance to any biotech companies seeking to utilise New Zealand's unique pool of resources, potentially leaving Māori susceptible to instances of biopiracy without sufficient protection.

This paper purports to assess the adequacy of current international frameworks in protecting TK from instances of biopiracy. First, it explores the risks of TK misappropriation and the wider implications this poses. Secondly, it examines the need for a strong international framework, using the failures of New Zealand's domestic legislation to sufficiently protect mātauranga Māori to demonstrate this point. This paper then goes on to explore the TK protections that currently exists in international law and evaluate the progress being made by the World Intellectual Property Organisation (WIPO) in creating the Draft Articles on the Protection of TK. Ultimately, it concludes the protections provided

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7 Isaac and Kerr, above n 3, at 37; Adam Andrzejewski "Traditional Knowledge and Patent Protection: Conflicting Views on International Patent Standards" (2010) 13 Potchefstroom Electronic Law Journal 93 at 97; and Marcia De Geer "Biopiracy: The Appropriation of Indigenous Peoples Cultural Knowledge" (2003) New Eng J Intl & Comp L 179 at 180.

8 Critical Ecosystem Partnership Fund "New Zealand" <www.cepf.net>.

9 Waitangi Tribunal, above n 1, at 2.1.

10 Ministry of Economic Development *Bioprospecting: Harnessing Benefits for New Zealand: A Policy Framework Discussion* (October 2007) at 8.

11 Waitangi Tribunal, above n 1, at 2.1.

to TK at an international level is unsatisfactory, with many key challenges also standing in the way of any international legal instrument resulting from WIPO negotiations meaningfully contributing to TK protection. It suggests that these inadequacies could be mitigated by the greater involvement of indigenous peoples in the creation of TK protection, as to also give effect to the United Nations' Declaration on the Rights of Indigenous Peoples.[12]

II Traditional Knowledge and Biopiracy

A Defining Traditional Knowledge

Although bearing no universal definition,[13] TK broadly refers to "the knowledge, innovations and practices of indigenous and local communities."[14] It is a living body of knowledge that is developed, sustained and passed on from generation to generation within a community.[15] TK is viewed by indigenous peoples as a holistic concept, inseparable from their culture, spirituality, history, livelihood, identities and the environment.[16]

Traditional knowledge is neither static nor archaic. It is a developed, organized and living body of knowledge held by indigenous and local communities.[17] The use of the term "traditional" reflects the fact that such knowledge is created and disseminated in ways that

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12 *United Nations Declaration on the Rights of Indigenous Peoples* GA Res 61/295 (2007).

13 Kuei-Jung Ni "Traditional Knowledge and Global Lawmaking" (2011) 10 NWUJINTL Hum Rts 85 at 85; Peter Drahos and Susy Frankel "Indigenous Peoples' Innovation and Intellectual Property: The Issues" in *Indigenous Peoples' Innovation: Intellectual Property Pathways to Development* (Australian National University E Press, Canberra, 2012) 1 at 11; and Margo Bagley "The Fallacy of Defensive Protection for Traditional Knowledge" (2019) 58 Washburn LJ 323 at 327.

14 Convention on Biological Diversity "Traditional Knowledge and the Convention on Biological Diversity" <www.cbd.int>.

15 World Intellectual Property Organisation (WIPO) *Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions: An Overview* (October 2012) at 8.

16 Moody, above n 5, at 170.

17 Evanson C Kamau "Protecting TK Amid Disseminated Knowledge – a New Task for ABS Regimes? A Kenyan Legal View" in Evanson C Kamau and Gerd Winter (eds) *Genetic Resources, Traditional Knowledge and the Law* (Earthscan, London, 2009) 143 at 145.

reflect the traditions of the community that hold it.[18] From a Māori perspective, Aroha Mead[19] notes:[20]

> Most Māori would agree that mātauranga Māori is based on a set of cultural intergenerational values, is enriched and modified by successive generations to guide and adapt to socio-cultural-environmental issues of the day, is integral to the identity and wellbeing of current and future generations of Māori and has value and application when proper protocols are observed.

The evolutionary nature and inherent value of TK has been recognised internationally. As stated in the Draft Articles on the Protection on Traditional Knowledge currently being developed by WIPO:[21]

> [T]raditional knowledge systems are frameworks of ongoing innovation and distinctive intellectual and creative life that are [intrinsically] important for indigenous [peoples] and local communities.

B Biopiracy

The term biopiracy broadly refers to the appropriation of TK or genetic resources of indigenous communities by individuals and institutions seeking exclusive commercial control over such.[22] For the purposes of this paper, biopiracy is discussed solely in relation to the misappropriation of TK.

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18 Kamau, above n 17, at 145; Janet Blake "Cultural Heritage and Intellectual Property Law" in *International Cultural Heritage Law* (Oxford University Press, Oxford, 2015) 230 at 265; Isabel Daum "Legal Conflicts in the Protection of Traditional Knowledge and Intellectual Property in International Law" (2014) 57 German YB Intl L 411 at 423; and Bagley, above n 13, at 328.

19 Aroha Mead has been invited to present at IGC sessions and has run expert workshops for various UN bodies on indigenous IP and biocultural heritage issues.

20 Aroha Te Pareake Mead *International Workshop on Traditional Knowledge: Emerging Issues in Māori Traditional Knowledge, can these be addressed by UN agencies?* PFII/2005/WS.TK/14 (23 September 2005) at 9.

21 Intergovernmental Committee on Intellectual Property and Genetic Resources Traditional Knowledge and Folklore (IGC) *The Protection of Traditional Knowledge: Draft Articles, Facilitators Review [Draft Articles]* WIPO/GRTKR/IC/40 (19 June 2019), Preamble.

22 Gavin Stenton "Biopiracy within the Pharmaceutical Industry: A Stark Illustration of how Abusive, Manipulative and Perverse the Patenting Process can be towards Countries of the South" (2004) EIPR

Patent-based biopiracy has been regarded as the most prevalent and damaging type of biopiracy, leading to the creation and use of the term in the first place.[23] There are two key ways in which TK can be misappropriated by patents. First, a patent may be erroneously granted to an innovator that has solely relied on traditional knowledge in their invention without taking a further innovative step of their own.[24] In instances where a further innovative step has been taken, biopiracy can also occur where TK is extracted and used as the foundation for a legitimately patented invention without the authorisation or compensation of the ILC's responsible for that knowledge.[25] Through these means, biopiracy has been deemed a "new form of colonialism."[26] By disingenuously repackaging innovations associated with TK as the bio-pirate's own, the actual contributions of TK are erased from biotechnological discourse. Meanwhile, the companies that utilise this knowledge receive the great commercial and monetary benefits associated with protectable intellectual property (IP) rights, in the form of a patent, themselves.[27]

The Neem tree provides the most famous example of biopiracy worldwide.[28] This tree has been known and used for its insecticidal qualities by local farmers in India for over 2,000 years. In 1995, American chemical company, WR Grace & Co, found a way to extract the active ingredient in the neem seed for use as an insecticide. They received patents from the

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17 at 17. See also Ikechi Mgbejoi "Patents, Indigenous and Traditional Knowledge, and Biopiracy" in *Global Biopiracy: Patents, Plants and Indigenous Knowledge* (UBC Press, Vancouver, 2005) 9 at 15; and Brendan Tobin "Setting Protection of TK to Rights – Placing Human Rights and Customary Law at the Heart of TK Governance" in Evanson Kamau and Gerd Winter (eds) *Genetic Resources, Traditional Knowledge and the Law* (Earthscan, London, 2009) 101 at 170.

23 Daniel Robinson "Biopiracy and the Innovations of Indigenous peoples and Local Communities" in Peter Drahos and Susy Frankel (eds) *Indigenous Peoples' Innovation: Intellectual Property Pathways to Development* (Australian National University Press, Canberra, 2012) 77 at 77.

24 Ministry of Business, Innovation and Employment (MBIE) *Disclosure of origin of genetic resources and traditional knowledge in the Patents regime* (Discussion Paper, September 2018) at [56].

25 Robinson, above n 23, at 80.

26 De Geer, above n 7, at 180. For general discussion on this matter, see Debra Harry "Biocolonialism and Indigenous Knowledge in United Nations Discourse" (2011) 20 Griffith Law Review 702.

27 Andrzejewski, above n 7, at 97; Stenton, above n 22, at 17*;* Isaac and Kerr, above n 3, at 37; and Moody, above n 5, at 175.

28 See Urmika Vinay Tripathi "Biopiracy: Myth or Reality" (2014) 2 ELSJ 21; Lorna Dwyer "Biopiracy, Trade and Sustainable Development" (2008) 19 Colo J Intl Envtl L & Poly 219; Insoon Song "Old Knowledge into New Patent Law: The Impact of United States Patent Law on Less Developed Countries" (2005) 16 Ind Intl & Comp L Rev 261; Daum, above n 18; and De Geer, above n 7.

European Patents Office over both the active ingredient in the neem seed and the method used to stabilise this ingredient. However, the local communities received no compensation or acknowledgement for their part in this invention.[29] Although ultimately the Indian government took legal action in this instance, with these patents overturned in 2005 for lack of an inventive step,[30] this remains a poignant example of the threat of TK misappropriation; a threat that will only intensify as the biotech industry grows.

It is difficult to estimate the extent to which biopiracy is occurring in any particular country, as, in many instances, the illegitimate use of TK may go unnoticed by TK holders.[31] In New Zealand, there have not yet been any widely reported instances of biopiracy. However, research released in 2018 has demonstrated that New Zealand is not immune to this threat. This study identified that, of 77 patent families[32] using plant species connected to mātauranga Māori, over half have a degree of similarity to, or appear to have been derived from TK associated with that species.[33] These findings do not conclusively prove misappropriation has occurred in each instance, with a comprehenesive analysis of patent specifications and claims falling outside of the scope of the study.[34] Nevertheless, this research provides a good indication of the extent to which mātauranga Māori is currently being used in innovations and the associated risk that this is occurring without the authorisation or compensation of Māori knowledge holders. As New Zealand's endemic biodiversity continues to catch the attention of bioprospectors globally, one can only image the extent to which this risk may increase.

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29 Daum, above n 18, at 413; and De Geer, above n 7, at 198.

30 Dwyer, above n 28, at 227.

31 Jay Erstling "Using Patent to Protect Traditional Knowledge" (2009) 15 Tex Wesleyan L Rev 295 at 300.

32 The term patent family refers to patent applications for the same invention made in several jurisdictions.

33 Jessica Lai, Daniel Robinson, Tim Stirrup, Hai-Yuean Tualima "Māori knowledge under the microscope: Appropriating and patenting of mātauranga Māori and related resources" (2019) 22 JWIP 205 at 214.

34 At 205.

C The Patent System

It is important to recognise that the risk of patent-based biopiracy is inherently woven into IP regimes. Patents are a key mode of protection for inventions, including products created by biotech companies from ecological resources. The global minimum requirements for patentability are laid out in the World Trade Organization (WTO)'s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement):[35]

> Patents should be available for any inventions whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.

Where biotechnology companies create a product from ecological genetic resources, they will likely be able to satisfy the criteria of novelty, innovation and usefulness in order to be successfully patented. This provides the patent-holder with exclusive rights over their invention for a specific time-period, during which those who wish to use such innovation must pay license fees.[36]

TK on the other hand, is often unpatentable. As it is mostly knowledge passed down from generation to generation, TK is generally too old to satisfy the originality requirement for patenting.[37] TK is also collectively generated, processed and preserved.[38] This communal (rather than individual) nature makes it difficult to identify an inventor, or where an inventive step took place.[39] Patent law also distinguishes between innovation and mere discovery.[40] Therefore, where TK concerns the discovery of a naturally occurring

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35 TRIPS Agreement (signed 15 April 1994, entered into force 1 January 1995) 1869 UNTS 299, art 27.1.

36 Waitangi Tribunal, above n 1, at 2.3.2.

37 Rhys Manely "Developmental Perspectives on the TRIPS and Traditional Knowledge Debate" (2006) 3 Macquarie J Intl Comp Envtl L 113 at 114.

38 Ni, above n 13, at 86.

39 Anthony Taubman and Matthias Leistmer "Traditional Knowledge" in Silke Von Lewinski (ed) *Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge and Folklore* (2nd ed, Kluwer Law International, Alphen aan den Rijn, 2008) 95 at 95–96.

40 Waitangi Tribunal, above n 1, at 2.7.1(1).

biological characteristic without further modification by ILC's, it cannot be afforded IP protection.[41] Finally, much TK has also been disseminated into the public domain,[42] over which no IP protection will be bestowed.[43] Thus, as Gervais states:[44]

> TK holders may find themselves not considered inventors for the purpose of (Western) patent law, but are, in fairness the originators of the experience and data that allowed a patentable invention or product to be developed.

This is not to say that TK will always be unpatentable. Despite what may be suggested by the term "traditional," TK is capable of evolving into new innovations that may satisfy the minimum patentability requirements. In fact, the principle of non-discrimination in TRIPS creates a positive obligation for patent examiners to set aside any assumptions about the lack of innovation of ILC's when assessing patentability.[45] However, even where some TK is able to be patented, there are many cultural and structural barriers that may prevent ILC's from pursuing such protection. The patent system is seen in many ways as antithetical to indigenous values. The provision of individualistic, exclusionary and private rights is contrary to the communal nature through which TK is held.[46] In New Zealand, it has been highlighted that mātauranga Māori is fundamentally averse to IP from a cultural perspective. Viewing biological resources entirely as a means for commodification and exploitation with no acknowledgement of the spiritual dimension of the universe and the mauri (central life force) of living things is "profoundly at odds with a guardianship

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41 Thomas Cottier and Marion Panizon "Legal Perspectives on Traditional Knowledge: The Case for Intellectual Property Protection" (2004) 7 JIEL 371 at 371–372.

42 Moody, above n 5, at 174; and Mohan D Nair "TRIPS, WTO and IPR: Protection of Bioresources and Traditional Knowledge" (2011) 16 JIPR 35 at 36. See generally Ruth L Okediji *Traditional Knowledge and the Public Domain* (Centre for International Governance Innovation, Paper 176, June 2018).

43 TRIPS Agreement, above n 35, art 70.3.

44 Daniel Gervais "Traditional Knowledge and Intellectual Property: A TRIPS-Compatible Approach" (2005) Mich St L Rev 135 at 155.

45 Taubman and Leistner, above n 39, at 95–96.

46 Emily Ricciardi "How New Zealand's Adoption of the Nagoya Protocol Would Enhance Protection of Māori Traditional Knowledge" (2019) 28 Minnesota Journal of International Law 281 at 290; and Ni, above n 13, at 86.

ethos".[47] and offensive to Māori culture.[48] Patents are also time-limited (with the international standard length of protection typically 20 years), before becoming accessible for whole public use. ILC's may view this as inappropriate.[49]

In the case that a patent is desired by a TK holder, the patent system remains largely inaccessible to ILC's.[50] Dutfield posits two key reasons that this is the case. First, the need for patent specifications to be written in technical language typically derived from Western scientific practices excludes TK holders from the application process. For example, although a useful characteristic of a plant may be well known and utilised by an indigenous community, without access to the language required to express this in patent terms, these TK holders are left at a disadvantage.[51] Secondly, the significant costs of applying for a patent and ensuring it is enforced, particularly when considering the unequal power imbalance between ILC's and the corporate world, may deter ILC's from pursuing this protection.[52]

Thus, unsurprisingly, we are left with a Western IP system, designed to protect Western scientific interests that is inherently unsuitable at protecting TK from misappropriation.[53] The inherent difficulty of protecting TK within IP regimes has left indigenous peoples critical of such systems as a tool for biopiracy in the first instance.[54] As stated by Isaac and Kerr:[55]

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47 Seamus Woods "Patents, PVRs and Pragmatism: Giving Effect to the WAI 262" (2013) 19 Canterbury L Rev 97 at 101.

48 Jessica Lai " Māori Traditional Knowledge and New Zealand Patent Law: The 2013 Act and the Dawn of a New Era?" (2014) 17 JWIP 34 at 35; and Ricciardi, above n 46 at 295–296.

49 De Geer, above n 7, at 196.

50 Graham Dutfield "TRIPS-Related Aspects of Traditional Knowledge" (2001) 33 Case W Res J Intl L 233 at 255; and Andrzejewski, above n 7, at 109.

51 Dutfield, above n 50, at 255.

52 At 255–256. See also De Geer, above n 7, at 181.

53 Lida Ayoubi "Intellectual Property Commercialisation and Protection of Mātauranga Māori in New Zealand Universities" (2019) 28 NZULR 521 at 521. See also Freedom Kai Phillips "Intellectual Property Rights in Traditional Knowledge: Enabler of Sustainable Development" (2016) 32 Utrecht Journal of International and European Law 1 at 4.

54 Tobin, above n 22, at 107. Debra Harry regards patents as part of the "colonial arsenal of instruments of conquest": Harry, above n 26, at 718.

55 Isaac and Kerr, above n 3, at 37.

> The fact that the potential returns from investing in modern biotechnology accrue only to those who hold IP rights biased in favour of modern biotech and against TK raises significant equity concerns.

D Implications

Patent-based biopiracy and the resulting failure to pay proper regard contributions TK holders make to biotech developments has significant cultural and biodiversity implications.

Biopiracy is a barrier to the self-determination of indigenous peoples over their economic and cultural development.[56] Patents, when granted, provide innovators with exclusive economic control over their invention. Thus, in instances of patent-based biopiracy, indigenous peoples are essentially locked out of further decision making related to their TK appropriated by an invention, and their potential to use that TK for economic benefit themselves.[57] Excluding indigenous peoples from the decision-making processes over the commercialization and use of their knowledge may also lead to the erosion of TK. Where due credit is not given to TK at the heart of an innovation, the agency of TK holders over their knowledge is removed. Frequent exploitation in this manner may discourage ILC's from developing and sustaining their TK, leading to its demise.[58] The vulnerability of TK to erosion in this way is heightened by its reliance on oral transmission from generation to generation in order to be preserved.[59] When considering the integral link between TK and indigenous identities, this may also cause significant cultural erosion.[60] As stated by Aroha Mead, the whole function of TK "is survival and the development of a culture, of a

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56 This right has been internationally recognised, enshrined in art 3 of UNDRIP.

57 Moody, above n 5, at 175.

58 Kamau, above n 17, at 155; Moody, above n 5, at 175; and Nair, above n 42, at 35.

59 Ni, above n 13, at 86; and Stephen Tulley "The Bonn Guidelines on Access to Genetic Resources and Benefit Sharing" (2003) 12 RECIEL 84 at 93.

60 Anja Meyer "International Environmental Law and Human Rights: Towards the Explicit Recognition of Traditional Knowledge" (2001) 10 RECIEL 37 at 43.

people."[61] Allowing for the erosion of TK is thus contrary to the fundamental rights of indigenous peoples to maintain, protect and develop their culture.[62]

TK erosion also poses significant biodiversity implications. It is widely recognised that we are experiencing a global biodiversity crisis. The 2019 Global Assessment Report on Biodiversity and Ecosystem Services estimates that species are becoming extinct at a rate tens to hundreds times higher than baseline extinction levels and is accelerating, with one million plant and animal species now facing extinction.[63] Thus, there is a real tension between the potential benefits associated with biotechnological developments and the accelerating rates of biodiversity decline worldwide.[64] For a country such as New Zealand, formally recognised as a biodiversity hotspot due to both its abundance of endemic diversity and its drastic decline in natural habitat,[65] this is a particularly pertinent issue.

As ILC's have cultivated and used biological resources sustainably for thousands of years, TK holds crucial insights about the sustainable management of complex ecological systems.[66] This has been recognised many times within the international sphere, enshrined in principle 22 of the 1992 Rio Declaration on Environment and Development.[67] Furthermore, the greatest concentrations of biodiversity are found in the most culturally

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61 Mead, above n 20, at 9.

62 UNDRIP, above n 12, art 11.

63 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services *Summary for Policymakers of the IPBES Global Assessment Report on Biodiversity and Ecosystem Services* (2019) at 12, reported in Department of Conservation *Biodiversity in Aotearoa: An overview of state, trends and pressures 2020* (Department of Conservation, August 2020) at 16.

64 See Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) "Nature's Dangerous Decline 'Unprecedented' – Species Extinction Rates Accelerating"(press release, 7 May 2019).

65 Critical Ecosystem Partnership Fund, above n 8.

66 Amiott, above n 4, at 16; and Tesh Dagne "Protecting Traditional Knowledge in International Intellectual Property Law: Imperatives for Protection and Choice of Modalities" (2014) 14 J Marshall Rev Intell Prop L 25 at 31.

67 UN General Assembly *Rio Declaration on Environment and Development* UN Doc A/CONF.151/26 (12 August 1992). See also the preamble of UNDRIP, above n 12; and UN Secretary-General *Development and International Cooperation: Environment: Report of the Secretary General, Annex* UN Doc A/42/427 (4 August 1987) at 74.

diverse locations with large numbers of ILC's present.[68] The World Bank has reported that traditional indigenous territories hold 80 per cent of global biodiversity.[69] Thus, the protection of TK is integrally linked to the protection of ecosystems themselves.[70] Without supporting and rewarding TK holders for their role in innovation, society risks losing a wealth of information critical for preserving biodiversity into the future.[71]

III The Case for a Strong International Framework

The need for strong international TK protection has been recognised and advocated for by both ILC's and international institutions themselves.[72] Pat Mooney, the original proponent of the term biopiracy, has explained that without adequate international laws, standards and monitoring mechanisms, the theft of TK will "be celebrated for years to come".[73] Very few states have enacted national or regional laws to protect TK. There is thus a failure at domestic levels to satisfactorily prevent biopiracy from occurring. A strong international regime would establish a minimum standard of agreed protection that states could then ratify and enact through consistent domestic regimes at a national level.[74] Biotechnology and associated bioprospecting are also transnational activities.[75] An internationally sanctioned protection regime for TK is, therefore, a necessary corollary to domestic protections in order to ensure effective enforcement exists where acts of biopiracy are committed by foreign based entities.[76]

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68 Elisa Morgera, Elsa Tsioumani and Matthias Buck *Unravelling the Nagoya Protocol: A Commentary on the Nagoya Protocol on Access and Benefit-sharing to the Convention on Biological Diversity* (Brill, Boston, 2015) at 26.

69 World Bank *The Role of Indigenous peoples in Biodiversity Conservation: The Natural but Often Forgotten Partners* (May 2008) at 5.

70 Dagne, above n 66, at 31.

71 Amiott, above n 4, at 16.

72 See Marisella Ouma "Traditional knowledge: the challenges facing international lawmakers" *WIPO Magazine* (online ed, February 2017); and Waitangi Tribunal, above n 1, at 2.1.

73 Daniel Robinson "Biopiracy and the Innovations of Indigenous peoples and Local Communities" in Peter Drahos and Susy Frankel (eds) *Indigenous Peoples' Innovation: Intellectual Property Pathways to Development* (Australian National University E Press, Canberra, 2012) 77 at 77.

74 Ouma, above n 72.

75 Ni, above n 13, at 87; and Morgera, Tsioumani and Buck, above n 68, at 4.

76 Waitangi Tribunal, above n 1, at 2.1.

New Zealand provides a clear example of domestic failures to adequately protect TK (mātauranga Māori) from instances of patent-based biopiracy. Despite formally recognising the need for comprehensive regulation of bioprospecting activities since 2000,[77] New Zealand is yet to enact any legislation of the sort.[78] This is particularly problematic as bioprospecting represents the first step in many new biotech developments. Absent clear guidelines in relation to mātauranga Māori, TK is left open to be used by bioprospectors potentially without obtaining consent or undertaking adequate negotiations with Māori as to the terms of its use. From this, it naturally flows that any resulting developments uncovered from bioprospecting activities will also be exclusionary of Māori interests.[79]

The establishment of the Patents Māori Advisory Committee (the Committee) under the Patents Act 2013 has provided some protection of mātauranga Māori against instances of patent-based biopiracy. The Patents Act allows for the Commissioner of Patents to request advice from the Committee as to whether a patent applicant's invention is derived from mātauranga Māori, and if its commercial exploitation will likely be contrary to Māori values.[80] However, this is only a weak protection, described as merely a "small inroad" into an area of law "previously untrammelled by tikanga Māori."[81] The Committee is merely reactive, with the Patents Act unsatisfactorily placing the onus on the Commissioner of Patents to identify the instances in which mātauranga Māori may be involved before requesting the Committee's advice.[82] By assigning a Commissioner ill-versed in Te Ao Māori the critical role of identifying the connection of patent applications to mātauranga Māori, there is a significant risk relevant inventions will not be referred to the Committee.[83] In fact, in 2018, it was reported that no application had been sent to the

77 See Department of Conservation *New Zealand Biodiversity Strategy* (February 2000), objective 4.3.

78 Ministry of Economic Development, above n 10, at 13; Waitangi Tribunal, above n 1, at 2.5.3.

79 Ministry of Economic Development, above n 10, at 15.

80 Patents Act 2013, s 226.

81 Joseph Williams "Lx Aotearoa: A Heroic Attempt to Map the Māori Dimension in Modern New Zealand Law" (2013) 21 Waikato L Rev 1 at 30—31.

82 Waitangi Tribunal, above n 1, at 2.9.3(1).

83 Jessica Lai *Indigenous Cultural Heritage and Intellectual Property Rights: Learning from New Zealand Experience?* (Springer Nature, London, 2013) at 136. This risk has also been recognised at government level: see MBIE, above n 24, at vi.

Committee in the four years it had been operational,[84] despite findings that mātauranga Māori has clearly been utilised in patents during this time.[85]

The Committee is also limited in terms of capacity. It is a part time body, consisting of only three members, with no investigative powers.[86] Although Committee members are deemed to have a "deep understanding of mātauranga Māori and tikanga Māori,"[87] the expectation that a small number of representatives can adequately represent the knowledge and values of *all* Māori is misguided.[88] Finally, the Committee's findings do not invoke a particular response from the Commissioner.[89] Where the Committee discovers an invention does not add an element of innovation to existing mātauranga Māori, the Commissioner will decline the patent on the basis that the novelty or inventive step prerequisites have not been met.[90] However, there is no mandated response required of the Commissioner where TK has been subject to been subject to unauthorised and uncompensated use within a legitimate patent application.

The inadequacy of New Zealand's domestic framework has been recognised by the Waitangi Tribunal in their 2011 Wai 262 report. In this report, the Waitangi Tribunal addressed many of these discussed shortcomings of the Patents Act 2013[91] before its passage into law[92]; however, no amendments were made in response to this critique.[93] The Waitangi Tribunal ultimately suggested the introduction of two new mechanisms to promote the protection of mātauranga Māori within New Zealand's patent law. First, the Tribunal recommended the creation of a register where Māori can record their kaitiaki

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84 Lai, Robinson, Stirrup and Tualima, above n 33, at 220.

85 See Part II, B.

86 Waitangi Tribunal, above n 1, at 2.9.3(1).

87 New Zealand Intellectual Property Office "Māori Advisory Committees" <www.iponz.govt.nz>.

88 Lai, above n 83, at 138.

89 Patents Act 2013, s 227.

90 The novelty requirement under the TRIPs Agreement is replicated under s 14 of the Patents Act 2013.

91 Waitangi Tribunal, above n 1, at 2.9.3.

92 The Patents Bill had not yet undergone its second reading at the time the Waitangi Tribunal Report was released.

93 No substantive changes were made between Patents Bill 2008 (235–1), cls 275–278 and the Patents Act 2013, ss 225–228.

(guardian) interest and mātauranga Māori over taonga species. Where patent applicants use biological material over which mātauranga Māori exists, they would be notified of this registered kaitiaki interest. If Māori desire to summarise their mātauranga within the register, this would also become available to patent officers when assessing whether a patent applicant has met the novelty and innovation requirements.[94] Secondly, the Tribunal proposed the introduction of a mandatory disclosure obligation, requiring patent applicants to divulge within their application any mātauranga Māori used throughout their research process, including that which was not integral to the final invention.[95] This aims to increase Māori control over their knowledge in the biotech research space, as well as potentially triggering a requirement for applicants to share patent benefits with kaitiaki.[96] Although the report was released almost a decade ago, the Government has been slow to act on these recommendations,[97] with the Ministry of Business, Innovation and Employment only consulting on the possible introduction a disclosure obligation in 2018.[98]

It is clear that, absent both bioprospecting regulations and legislation that properly incorporates mātauranga Māori considerations into patent assessments, New Zealand's domestic framework leaves Māori vulnerable to biopiracy. However, that these shortcomings are yet to be addressed after years of discussions is particularly disconcerting due New Zealand's recognition as a "world leader" in this area.[99] If this is the standard of global leadership for TK protection, this case study clearly demonstrates the need for both strong and defined guidance at international level.

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94 Waitangi Tribunal, above n 1, at 2.9.3(3).

95 At 2.9.3(4).

96 At 2.9.3(4).

97 Lai, Robinson, Stirrup and Tualima, above n 33, at 209.

98 MBIE "Disclosure of origin requirements in the patents regime" <www.mbie.govt.nz>.

99 MBIE, above n 98.

IV The Current International Framework

The international framework governing TK protection is multi-dimensional, spanning across both human rights and environmental protection instruments. Over the years, an increase in international law governing this area has demonstrated a shift in international attention towards the need for satisfactory protection against instances of biopiracy.[100] However, as it currently stands, this framework contains several shortcomings, to which attention must be drawn.

A UNDRIP

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) has been regarded "the most significant instrument anchoring the international framework for the traditional knowledge of Indigenous peoples."[101] Adopted by the UN General Assembly in 2007 after 25 years of negotiations, it is a comprehensive instrument that addresses the application of human rights standards to the unique position indigenous peoples hold worldwide.[102] Importantly, it explicitly acknowledges that the protection and control of TK is a fundamental right for indigenous peoples.

Article 31(1) of UNDRIP provides that:[103]

> Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge … as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora…

UNDRIP provides both positive and defensive protection of this right.[104] It demands that states, in partnership with indigenous peoples, take effective measures to recognise and

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100 Ni, above n 13, at 323.
101 Moody, above n 5, at 177.
102 Felipe Gomez Isa "UNDRIP: An Increasingly Robust Legal Parameter" (2019) 23 IJHR 7 at 13.
103 UNDRIP, above n 12, art 31(1).
104 Hans Morten Haugen "Draft Trans-Pacific Partnership Agreement and TK" (2014) 17 JWIP 81 at 85.

protect the ability for indigenous peoples to maintain, control, protect and develop their TK.[105] However, if TK is misappropriated, the indigenous holders of this knowledge must be provided the right to redress.[106]

More broadly, UNDRIP also recognises the rights of indigenous peoples to freely pursue economic, social and cultural development,[107] not be subjected to the destruction of their culture,[108] as well as to maintain, protect and develop manifestations of their culture.[109] Due to the inextricable links between indigenous cultures and TK, the recognition of these rights adds wider substance to the rights of indigenous peoples to TK protection.

As a Declaration, UNDRIP is not a legally binding instrument. Therefore, it does not afford much protection for indigenous peoples against biopiracy. However, it establishes "soft law commitments" that frame the debate surrounding the protection of TK.[110] As stated by Taubman and Leistner, UNDRIP "provides a basic doctrinal framework for the protection of TK as a means of conserving the distinct cultural identity of indigenous peoples."[111] Although the Declaration received initial resistance from some states, including New Zealand,[112] this has been resolved over time.[113] UNDRIP has since been deemed to reflect a level of global consensus over the contents of indigenous peoples' rights, encouraging further developments in international law that provide greater protection to these rights.[114]

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105 UNDRIP, above n 12, art 31(2).

106 Article 11(2).

107 Article 3.

108 Article 8.

109 Article 11(1).

110 Tobin, above n 22, at 104.

111 Taubman and Leistner, above n 39, at 172. See also Dieter Dorr "Biopiracy and the right to self-determination of Indigenous Peoples" (2019) 52 Phytomedicine 308 at 310.

112 United Nations "General Assembly Adopts Declaration on Rights of Indigenous Peoples; 'Major Step Forward' Towards Human Rights for All, Says President" (press release, 13 September 2007).

113 Australia, Canada, New Zealand and the United States all voted against the adoption of UNDRIP by the General Assembly in 2007. Each state has since changed its stance to support UNDRIP, with New Zealand issuing its statement of support in 2010. See John Key "National Govt to support UN rights declaration" (press release, 20 April 2010); and United Nations Department of Economic and Social Affairs "United Nations Declaration on the Rights of Indigenous Peoples" <www.un.org>.

114 James Anaya *Report of the Special Rapporteur on the Rights of Indigenous Peoples* UN Doc A/68/317 (14 August 2013) at [60]; and Evana Wright *Protecting Traditional Knowledge: Lessons from Global Case Studies* (Edward Elgar Publishing Limited, Cheltenham, 2020) at 23.

B Convention on Biological Diversity

The Convention on Biological Diversity (CBD)[115] has been described as the "most dynamic legal system for promoting the protection of TK,"[116] and the "centre of gravity" in the international bioprospecting debate.[117] When the CBD entered into force on 27 December 1993, it became the first international convention to call for TK protection.[118] This is restricted to TK within the biosphere, with the CBD's ambit focused on the conservation and sustainable use of biological diversity and its components, as well as the fair and equitable sharing of benefits associated with the use of genetic biological material.[119]

The most influential provision providing for the protection of TK within the CBD is art 8(j). Article 8(j) calls for states to, "as far as possible and as appropriate:"[120]

> j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.

Article 8(j) comprises of several key elements. First, each state is required to "respect, preserve and maintain" TK relevant to the sustainable use and protection of biodiversity. Secondly, although calling for the wider application of TK, in recognition of the inherent value TK adds to conservation and resource management discourse, it qualifies this by

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115 Convention on Biological Diversity (opened for signature 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79.

116 Ni, above n 13, at 101.

117 Ricciardi, above n 46, at 291.

118 Aman Gebru "The Global Protection of Traditional Knowledge: Searching for Minimum Consensus" (2017) 17 J Marshall Rev Intell Prop L 42 at 53.

119 CBD, above n 115, art 1.

120 Article 8(j).

requiring that such TK use should *only* occur with the approval of TK holders.[121] Finally, states parties are expected to formulate systems that ensure TK holders enjoy the benefits derived from the use of their knowledge.[122] Through these elements, art 8(j) establishes the underlying principles of respect, responsibility and equity that promote the progressive development of international TK protections.[123]

Article 15 is also relevant. It does not directly provide for the protection of TK associated with genetic resources. Rather, art 15 affirms national sovereignty over natural and genetic resources and guides the sharing of these resources between states.[124] However, it also introduces key concepts for ensuring the fair access and benefit sharing of genetic resources.[125] Article 15 holds that access to genetic resources is subject to the prior informed consent of Contracting Parties,[126] must be granted on mutually agreed terms,[127] and that legislative, administrative and policy measures should be taken to ensure that benefits arising from genetic resource use are shared fairly and equitably.[128] These element have since been extended to cover TK associated with genetic resources through both the Bonn Guidelines and Nagoya Protocol.[129]

1 A Disappointing Foundation

121 Ni, above n 13, at 91.

122 At 91.

123 Brendan Tobin and Krystyna Swiderska *Speaking in Tongues: Indigenous Participation in the development of a sui generis regime to protect traditional knowledge in Peru* (International Institute for Environment and Development, 2001) at 11.

124 David Cooper and Kieran Nfonan-Mooney "Convention on Biological Diversity" in *Encyclopaedia of Biodiversity* (2nd ed, Elsevier Inc, Montreal, 2013) 307 at 308.

125 At 308; and Ni, above n 13, at 98.

126 CBD, above n 115, art 15(5).

127 Article 15(4).

128 Article 15(7).

129 Ni, above n 13, at 96.

Although formally recognising the importance of TK protection in an internationally binding regime for the first time,[130] the CBD has been criticised for its solely aspirational nature.[131] As a framework convention, its aim is simply to establish a general system of governance within the biodiversity sphere, rather than prescriptive or detailed obligations.[132] Characteristically then, it makes sense that the CBD does not advance a specific means of TK protection. However, the CBD is also weak on the aspirational front, articulating only vague and non-committal obligations that do not require meaningfully actions by member states.

Many qualifications to art 8(j) weaken the ability for the CBD to meaningfully guide TK protection. By using limiting language such as "as far as possible and as appropriate," and "subject to national legislation," alongside weak language such as "encourage" and "promote" to frame a state's obligations in respect of TK, the CBD contains no real obligations for states to take domestic measures to protect the knowledge held by their ILC's.[133] Of particular concern is subjecting the CBD to national legislation. Some have argued that this caveat has eviscerated a state's obligations under art 8(j), prioritizing national law over the CBD mandate,[134] permitting "backward, exploitative, and even abusive regimes to continue their practices under the banner of national legislation."[135] This has been recognised as falling short of the recognised minimum rights afforded to indigenous peoples in UNDRIP, undermining the Declaration's calls for states to take effective measures to aid indigenous peoples in the protection of their TK.[136] Such

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130 Uzuazo Etemire "The Status of Indigenous Peoples under the Convention on Biological Diversity Regime: The Right to Biological Resources and Protection of Traditional Knowledge" (2014) 3 Envtl L & Prac Rev 1 at 32.

131 Gebru, above n 118, at 54.

132 Daniel Bodanksy *Framework Convention/Protocol Approach* (World Health Organisation, January 1999) at 15.

133 Michael Jeffrey "Bioprospecting: Access to Genetic Resources" (2002) 6 Sing J Intl & Comp L 747 at 763; Meghan Davis "Indigenous Rights in Traditional Knowledge and Biological Diversity: Approaches to Protection" (1999) 4 Indigenous Law Reporter 1 at 3.

134 Grethel Aguilar "Access to Genetic Resources and Protection of Traditional Knowledge in Indigenous Territories" in Christophe Bellmann (ed) *Trading in Knowledge: Development Perspectives on TRIPS, Trade and Sustainability* (2003) 175 at 176.

135 Curtis M Horton "Protecting Biodiversity and Cultural Diversity under Intellectual Property Law: Toward a New International System" (1995) 10 J Environ Law Litigation 1 at 24.

136 Etemire, above n 130, at 33.

language has since pervaded further work undertaken by the Conference of Parties to the CBD in relation to art 8(j), with the 2010 Aichi Biodiversity Targets also subjecting the unambitious goal for states to "respect" TK to domestic laws.[137]

Leaving the decision to implement national laws that respect and preserve TK to the unilateral initiative of states has resulted in minimal action.[138] As the inclusion of art 8(j) was mostly attributable to NGO pressure, rather than the concerted efforts of states, it appears that safeguarding TK was not a priority of states throughout CBD negotiations.[139] It is thus unsurprising that, following the passage of the CBD, low levels of domestic implementation have ensued. Fifteen years after its passage, only 39 Contracting Parties to the CBD had established domestic legislation or were in the process of doing so.[140] As alluded above,[141] New Zealand is one of the many states that has not yet implemented satisfactory TK protections, despite being a signatory to the CBD since 1993 and indicating in its third National Report to the Secretariat that the implementation of art 8(j) was of high domestic concern.[142] Where measures have not been taken, states have cited financial, social and political barriers to the implementation of art 8(j), such as institutional weaknesses, a lack of economic incentives, limited cooperation amongst stakeholders, as well as a lack of "synergy" at national and international levels.[143]

There has also been poor reporting on both the implementation of art 8(j). In data collated from the CBD's Fifth National Reporting Series, 132 states (including New Zealand) did not report on measures taken to implement the Aichi Biodiversity Target in respect of

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137 Conference of Parties to the CBD *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets* UNEP/CBD/COP/DEC/X/2 (29 October 2010), Target 18.

138 Gebru, above n 118, at 54.

139 Dutfield, above n 50, at 237.

140 Matthias Buck and Claire Hamilton "The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity" (2011) 20 RECIEL 47 at 48.

141 See Part III.

142 CBD "Country Profiles: New Zealand" <www.cbd.int>; and Department of Conservation *New Zealand's Third National Report to the United Nations Convention on Biological Diversity: Revised Version* (June 2007) at 4.

143 John Scott "Protecting Traditional Knowledge and the Convention on Biological Diversity" (2006) 6 ILB 17 at 18.

TK.[144] Article 8(j) was not mentioned in New Zealand's most recent National Report.[145] As states are only required to report on the domestic measures taken to implement CBD provisions,[146] such limited mention of art 8(j) is reflective of both the weak language of this section and a subsequent lack of domestic movement in this space.

A key benefit of framework conventions is that, by promoting "cognitive consensus" on key issues, it can make the adoption of specific commitments by states more likely down the track.[147] Indeed, the CBD appears to have successfully achieved global cognitive consensus, through its now almost universal acceptance.[148] However, that such a weak provision provides the foundation for further international TK protections is worrying. As disregarding TK is directly contrary to the CBD's ultimate biodiversity conservation goals,[149] framing state obligations over TK protection in a way that invokes meaningful and urgent state action is necessary, and an issue that needs to be addressed.[150]

C Bonn Guidelines

The Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization (Bonn Guidelines) were adopted by the CBD Sixth Conference of the Parties in 2002.[151] This soft law instrument was created to operationalize the CBD's access and benefit sharing provisions, turning "opaque diplomatic language" into workable principles and processes.[152] The Guidelines have two key aims; to guide genetic resource providing countries in establishing legislative, administrative or policy measures that govern the access and benefit sharing of these resources, and to assist

144 CBD "Aichi Target 18" <www.cbd.int>. Data from the Sixth Reporting Series is yet to be compiled.

145 See Department of Conservation *New Zealand's Sixth National Report to the United Nations Convention on Biological Diversity. Reporting period: 2014–2018* (Wellington, New Zealand, 2019)

146 CBD, above n 115, art 26.

147 Bodanksy, above n 132, at 18.

148 There are 196 states party to the CBD: CBD "List of Parties" <www.cbd.int>.

149 See Part II.

150 Etemire, above n 130, at 36.

151 Konstantia Koutouki "The Nagoya Protocol: Sustainable Access and Benefit-Sharing for Indigenous and Local Communities" (2012) Vt J Envtl L 513 at 522.

152 Charles Lawson *The Role of 'Soft Law' Guidance in Different Jurisdictions* (International Union for the Protection of New Varieties of Plants, Publication No 358, October 2013) at 84.

all countries in the negotiation of mutually agreed terms, by providing examples of elements that should be included in these agreements.[153]

The Guidelines represents the first extension of access and benefit concepts contained within the CBD to TK associated with genetic resources.[154] A key objective of the Bonn Guidelines is to:[155]

> [C]ontribute to the development by Parties of mechanisms and access and benefit-sharing regimes that recognize the protection of traditional knowledge, innovations and practices of indigenous and local communities, in accordance with domestic laws and relevant international instruments.

The Bonn Guidelines provide for the protection of TK from instances of biopiracy, by establishing some key principles in relation to access and use.[156] States who are potential providers of genetic resources and/or associated TK are recommended to only provide such when there are entitled to do so.[157] TK is encouraged to be obtained only in accordance with traditional practices and national access policies, however, mirroring the language used in the CBD, this remains subject to domestic legislation.[158] States who discover that genetic resource users are under their jurisdiction "could" consider adopting measures to encourage the disclosure of the origin of TK when genetic resources users apply for IP rights.[159] In expanding on the CBD's requirement for the equitable sharing of genetic resources to be on mutually agreed terms, the Bonn Guidelines provides an indicative list of typical terms to be agreed upon, including whether relevant TK has been respected, preserved and maintained.[160]

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153 Secretariat of the Convention on Biological Diversity *The Bonn Guidelines Factsheet* (2011) at 3.

154 Secretariat of the Convention on Biological Diversity *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization [Bonn Guidelines]*(2002), cl 9.

155 Clause 11(j).

156 Malgosia Fitzmaurice "The Dilemma of Traditional Knowledge: Indigenous Peoples and Traditional Knowledge" (2008) 10 IntlL Comm L Rev 255 at 268.

157 Bonn Guidelines, above n 154, cl 16(c)(i).

158 Clause 31.

159 Clause 16(d)(ii).

160 Clause 44(g).

This guidance is intended to "serve as inputs when developing and drafting legislative, administrative or policy measures… and contracts and other arrangements under mutually agreed terms for access and benefit-sharing."[161] However, this is a voluntary instrument that does not require states undertake any real international obligations in managing access to genetic resources associated with TK.[162] Because of this, the relevance of the Bonn Guidelines has largely been overtaken by the passage of the Nagoya Protocol, seen mostly as a precursor or "evolutionary first step" to this latter established instrument.[163]

D The Nagoya Protocol

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization ("Nagoya Protocol")[164] was adopted in 2010 as a supplementary framework to the CBD. Like the Bonn Guidelines, it elaborates on the CBD's access and benefit sharing provisions and expands such to include the TK associated with genetic resources.[165] This is expressly acknowledged in art 3 of the Protocol. However, unlike the Bonn Guidelines, the Nagoya Protocol is a binding instrument.[166] It is an optional instrument, open to all states parties to the CBD.[167] However, where signed, states become subject to its binding obligations in respect of the establishment and enforcement of access and benefit sharing measures.[168]

The Protocol provides protection to ILC's against biopiracy through mandated access and benefit sharing requirements. It requires party states to take appropriate legal,

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161 Clause 1.

162 Ni, above n 13, at 97.

163 International Union for Conservation of Nature *An Explanatory Guide to the Nagoya Protocol on Access and Benefit-sharing* (IUCN Environmental Policy and Law Paper No 83, 2012) at xviii.

164 Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising out of their Utilization to the Convention on Biological Diversity *[the Nagoya Protocol]* (signed 29 October 2010, entered into force 12 October 2014) [2012] ATNIF 3.

165 Ricciardi, above n 46, at 282; Phillips, above n 53 at 3; Gebru, above n 118, at 55–56; and Cooper and Nfonan-Mooney, above n 124, at 306.

166 Roger Chennells "Traditional Knowledge and Benefit Sharing After the Nagoya Protocol: Three Case Studies from Africa" (2013) 9 Law, Environment and Development Journal 163 at 166.

167 Ricciardi, above n 165, at 292.

168 Chennells, above n 166, at 166.

administrative or policy measures to ensure TK associated with genetic resources is accessed with the prior informed consent of the TK holder,[169] and that benefits arising from the utilization of such TK are shared equitably between the users and providers of TK.[170] Benefit sharing must occur on mutually agreed terms. Such benefits may include monetary and non-monetary benefits, with a list of potential benefits, such as joint ventures, joint ownership of IP rights, social recognition and access to education or scientific information, found in the Annex of the Protocol.[171] Parties must take appropriate, effective and proportionate measures to ensure domestically established access and benefit sharing regimes are complied with, including enforcement measures where non-compliance is discovered.[172]

1 Impact of the Protocol

Compared to the CBD, the Nagoya Protocol has made some progress in terms of the language used within its provisions. Article 5(5), governing fair and equitable benefit sharing requirements, is not subordinate to domestic legislation. This marks the first time an international instrument has created an unqualified and mandatory obligation on state parties to ensure ILC's are rewarded for their role in the development and preservation of TK.[173] Confusingly, this is not the case when it comes to accessing TK; with any obligation to endorse a TK holder's right to prior informed consent hinging on whether domestic law affirms this right.[174] The inconsistency between these two provisions is puzzling, particularly when considering such an inconsistency was not raised as an issue in the final report of the Group of Technical and Legal TK Experts involved in the Protocol's development.[175]

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169 Nagoya Protocol, above n 164, art 7.

170 Article 5(5).

171 Koutouki, above n 151, at 526.

172 Nagoya Protocol, above n 164, art 16.

173 Morgera, Tsioumani and Buck, above n 68, at 127; and Etemire, above 130, at 29.

174 Ni, above n 13, at 99–100.

175 See Ad Hoc Open-Ended Working Group on Access and Benefit-Sharing *Report of the Meeting of the Group of Technical and Legal Experts on Traditional Knowledge Associated with Genetic Resources in the Context of the International Regie on Access and Benefit Sharing* UNEP/CBD/WG-ABS/8/2 (15 July 2009).

Although the Nagoya Protocol imposes stronger obligations, particularly in relation to benefit sharing, on states parties, there is a significant gap in ensuring there is compliance with established domestic benefit sharing regimes. While the Protocol establishes requirements for the monitoring of access and use of genetic resources to support compliance,[176] there is no such correlating requirement for monitoring the access and use of TK.[177]

The Nagoya Protocol also only deals with the access and benefit sharing portion of TK. However, in some situations access and benefit sharing will not be enough on their own to prevent biopiracy from occurring. As aforementioned, much TK is scattered within the public domain.[178] This can make it difficult for TK users to identify from whom they must receive access approval, or share the benefits of this use with.[179] Due to the inherent power imbalance between ILC's and the biotech corporations that seek to commodify TK, access and benefit sharing mechanisms have also been criticised as furthering the colonial agenda. Debra Harry states:[180]

> The focus on benefit-sharing has the effect of promoting, rather than preventing, the commercialization of genetic resources. Although a benefit-sharing scenario is more just than outright biopiracy, there are serious pitfalls for Indigenous peoples. Benefit-sharing entices Indigenous peoples to participate in the alienation of their genetic resources and knowledge.

The Protocol has been well accepted by many states. It was adopted with international consensus, and at the time of writing, has been ratified by 127 parties. However, many significant players with indigenous populations, such as Canada and the United States

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176 Nagoya Protocol, above n 164, art 17.

177 Brendan M Tobin "Bridging the Nagoya Compliance Gap: The Fundamental Role of Customary Law in Protection of Indigenous Peoples' Resource and Knowledge Rights" (2013) 9 Law Envt & Dev J 144 at 150.

178 See Part II, C.

179 Kamau, above n 17, at 144; and Jeremy Morse "Nurturing Nature, Nurturing Knowledge: The Nagoya Protocol on Access and Benefit Sharing" (2011) 7 ILB 3 at 4–5.

180 Harry, above n 26, at 714.

(US), remain outside of the Protocol.[181] This has been for varying reasons. The US, as a non-signatory of the CBD, is unable to sign up to the Nagoya Protocol. Canada, on the other hand, has held off due to lacking the comprehensive domestic access and benefit sharing regimes needed to fulfil their obligations under the Protocol.[182]

New Zealand is also yet to sign up to the Nagoya Protocol. In 2012, the New Zealand government announced that it would defer signing and ratifying the Nagoya Protocol until the Wai 262 "indigenous flora and fauna" claim was settled and some of the ambiguity surrounding the application of the Protocol were refined.[183] However, it appears that New Zealand's commitment to ratify the Nagoya Protocol may be waning. In its fifth National Report to the CBD, the Government identified the signing and implementation of the Nagoya Protocol as a key target to be achieved by 2015.[184] This did not transpire, and any reference to an expected timeline for implementation to occur was removed from New Zealand's subsequent National Report.[185] Susan Corbett posits two reasons for the governments continued reluctance in this space. First, there may be uncertainty as how best to comply with the complex governance arrangements the Protocol requires, such as the need to set up new administrative bodies, introduce new legislation and policies, and establish enforcement mechanisms.[186] More cynically, however, Corbett suggests New Zealand's reluctance to implement the Nagoya Protocol simply reflects a general level of ambivalence towards upholding Māori claims under the Treaty of Waitangi.[187] It is worth noting that the Waitangi Tribunal provided no recommendation as to whether the Nagoya Protocol should be ratified by New Zealand in its Wai 262 Report.[188] However, if the

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181 CBD "Parties to the Nagoya Protocol" <www.cbd.int>.

182 Government of Canada "Nagoya Protocol on access to genetic resources and benefit sharing" <www.canada.ca>.

183 Tim Stirrup "Bioprospecting, the Nagoya Protocol and Indigenous Rights: A New Zealand Perspective" (2016) 107 Intellectual Property Forum 53 at 60.

184 Ricciardi, above n 46, at 299; and Department of Conservation *New Zealand's Fifth National Report to the United Nations Convention on Biological Diversity. Reporting period: 2009–2013* (2014) at 51.

185 Department of Conservation, above n 145, at 121.

186 Susan Corbett "Governance Systems for Access to and Use of Indigenous Knowledge and Culture: A New Zealand Perspective" (SSRN, 7 March 2017) at 9.

187 At 9.

188 Ricciardi, above n 46, at 292.

Nagoya Protocol were to be implemented alongside the Waitangi Tribunal's Wai 262 reccomendations, it has been suggested that an optimal system of TK protection would exist in New Zealand law.[189]

V The Intellectual Property Problem

As established, the current international framework providing for TK protection has many inadequacies. The CBD, despite its potential as an almost universally binding instrument, requires only minimal commitments from states. Its subsidiary instruments are a positive step forward in ensuring the adequate involvement and compensation of TK holders where TK is utilised by biotech innovators. Nevertheless, each has its flaws. The soft law guidance of the Bonn Guidelines has been largely overshadowed by the creation of the Nagoya Protocol. In the case of the Nagoya Protocol, inconsistencies in language use, monitoring issues, the limitations of access and benefit sharing regimes, and, that it remains unaccepted by several states with significant indigenous populations, seriously limit its success as a binding instrument. These are all issues that must be addressed moving forward. However, the biggest shortfall of the current international framework is that any TK protection offered under this framework remains external to the IP regimes largely responsible for its abuse.

As discussed in Part II, the patents system itself has been recognised as a tool that allows for biopiracy to occur. It is a system that, through excluding many of the key characteristics of TK from the patentability criteria, favours Western innovations and leaves TK vulnerable to misappropriation. Thus, it does not make sense that TK protective mechanisms have been absent in this space. This is also problematic as international IP regimes are given priority over the provisions of the CBD. Article 22 of the CBD indicates that the Convention is subsidiary to other international agreements, unless the rights and obligations within these agreements would cause a serious damage or threat to biological

189 At 282.

diversity.[190] Therefore, the minimum IP standards set out in the TRIPS Agreement will generally take precedence over access and benefit sharing rights held by ILC's under the CBD.[191]

Prioritising the TRIPS Agreement over the CBD has been deemed a significant issue due to what has been described as an "inherent conflict" between the objectives of these two international agreements.[192] The CBD seeks to foster conservation and the sustainable use of biodiversity through a collaborative and collective manner.[193] TRIPS, on the other hand, has individualistic and commercial objectives, largely centred around removing impediments to trade.[194] Developing countries, such as Brazil, Columbia, and India state that it is this ideological conflict that allows for patents to occur without ensuring the CBD's (albeit weak) provisions relating to prior informed consent and benefit sharing are respected, allowing for biopiracy to occur.[195] However, whether any conflict exists is disputed amongst states. New Zealand, amongst other developed states, has supported the view there is no conflict between these two agreements. Flowing from this, New Zealand has also held there is little evidence that national systems regulating access to genetic resources and benefit-sharing are insufficient to deal with TK misappropriation on their own.[196]

Despite differing opinions over the problematic co-existence of the CBD and TRIPS agreement, the incorporation of TK protections within the IP sphere has been the subject

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190 CBD, above n 115, art 22. For discussion on the compatibility between the CBD and TRIPS Agreement, see Biswajit Dhar "The Convention on Biological Diversity and the TRIPS Agreement: compatibility or conflict" in Christophe Bellmann, Graham Dutfield and Riccardo Melèndez-Ortiz (eds) *Trading in Knowledge: Development Perspectives on TRIPS, Trade and Sustainability* (Earthscan, London, 2003) 77.

191 Waitangi Tribunal, above n 1, at 2.5.2(2).

192 Daum, above n 18, at 419; and Tulley, above n 59, at 87.

193 Daum, above n 18, at 419.

194 Johanna Gibson "Traditional Knowledge and the International Context for Protection" (2004) 1 SCRIPT ed 58 at 71; Etemire, above n 130, at 30; and Daum, above n 192, at 419.

195 Council for Trade-Related Aspects of Intellectual Property Rights *The Relationship Between the TRIPS Agreement and the Convention on Biological Diversity: Summary of Issues Raised and Points Made: Note by the Secretariat* IP/C/W/368/Rev.1 (8 February 2006) at [15].

196 At [11].

of much contemplation within both WTO and WIPO. However, with such discussions plagued with disagreements between states, little progress has eventuated.[197] Since the 2001 Doha Ministerial Declaration, WTO has been mandated to assess the relationship between the patenting of biotechnology and instances of biopiracy.[198] Accordingly, the TRIPS Council has been examining the relationship between TRIPS, the CBD and the protection of TK.[199] In 2006, a submission to the Trade Negotiations Committee by a group of developing countries, represented by Brazil and India[200] proposed the addition of a disclosure obligation to the TRIPS Agreement. Similar to that advanced in New Zealand by the Waitangi Tribunal, this would require WTO members to establish mechanisms that require patent applicants to disclose the source of the TK utilised and demonstrate compliance with the access and benefit sharing requirements of provider countries.[201] However, it seems unlikely such an amendment will be made. This has been highly contended by the US, arguing that, it is the dishonest procurement of TK, rather than the act of applying for a patent, that amounts to TK misappropriation, and thus is an issue better handled by access and benefit sharing regimes.[202] Other states have argued such an obligation would be too burdensome on patent applicants and patent officers, or deter future innovations.[203] In any case, debate over the inclusion of a disclosure requirement within the TRIPS agreement remains ongoing, and TK protections are yet to be implemented within the intellectual property sphere.[204]

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197 Ni, above n 13, at 107—108.

198 Gibson, above n 194, at 59.

199 Moody, above n 5, at 185.

200 Erstling, above n 31, at 309.

201 Moody, above n 5, at 185—186; and Kaur, above n 5, at 780.

202 Opposition by the United States began prior to the circulation of this amendment. See Council for Trade-Related Aspects of Intellectual Property Rights *Article 27.3(B), Relationship between the TRIPS Agreement and the CBD, And the Protection of Traditional Knowledge and Folklore: Communication by the United States* IP/C/W/434 (26 November 2004) at [7]—[8]; and Council for Trade-Related Aspects of Intellectual Property Rights *Article 27.3(b), Relationship between the TRIPS Agreement and the CBD, And the Protection of Traditional Knowledge and Folklore: Communication by the United States* IP/C/W/449 (10 June 2005) at [8]—[11].

203 Trade Negotiations Committee *Issues Related to the Extension of the Protection of Geographical Indications Provided for in Article 23 of the TRIPS Agreement to Products Other Than Wines and Spirits and Those Related to the Relationship Between the TRIPS Agreement and the Convention on Biological Diversity: Report by the Director General* WT/GC/W/633 (21 April 2011) at [20].

204 Waitangi Tribunal, above n 1, at 2.1; and Moody, above n 5, at 186.

VI Draft Articles on the Protection of Traditional Knowledge

Over the past two decades, WIPO has been working to fill the gaps between current international TK protections and global IP regimes. In 2000, WIPO established the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expression (IGC) as an informal "forum for discussion" on the interaction between indigenous and intellectual property rights.[205] Since then, the IGCs duties have extended, mandated in 2009 by the WIPO General Assembly to negotiate international instruments for the effective protection of TK in the IP sphere.[206] This has led to the creation of the Draft Articles for the Protection of Traditional Knowledge (the Draft Articles).[207] The Draft Articles aim to establish a *sui generis* instrument specifically to prevent TK misappropriation.[208] Purporting to provide a "mutually supportive relationship" between IP rights based on the use of TK and international agreements such as the CBD, Nagoya Protocol and the TRIPs agreement,[209] the Draft Articles may bring some cohesion to the currently fragmented framework for TK protection.[210]

Despite working on the Draft Articles for over a decade, these provisions are still being negotiated between member states. The latest draft provisions of this instrument were released on 19 June 2019.[211] The WIPO General Assembly have renewed the mandate for the IGC in 2019 for the 2020–2021 biennium, during which the IGC will meet six more

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205 Ni, above n 13, at 102.

206 Blake, above n 18, at 259; and Chidi Oguamanam *Tiered or Differentiated Approach to Traditional Knowledge and Traditional Cultural Expression: The Evolution of a Concept* (Centre for International Governance Innovation, Paper No 185, August 2018) at 1.

207 Blake, above n 18, at 259.

208 Phillips, above n 53, at 9; and Taubman and Liestner, above n 39, at 156.

209 Draft Articles, above n 21, art 13.1.

210 Moody, above n 5, at 176.

211 Draft Articles, above n 21.

times to continue their work on finalising an international legal instrument before providing an update at the 2021 General Assemblies.[212]

A An Overview

The Draft Articles are still under negotiation. Each provision is, at this point, almost incomprehensible; riddled with alternative wordings and versions as states contest how its provisions should be formulated.[213] Thus, the final meaning of any arising instrument will substantially differ depending on the wording that is ultimately accepted.[214]

This can be demonstrated through an analysis of the three alternatively proposed objectives for the Draft Articles. The first states the goal of the instrument should be to provide "effective balanced and adequate protection" against the unauthorized and/or uncompensated use of TK, and the erroneous grant of intellectual property rights over TK, while promoting its appropriate use.[215] The second proposed alternative also states that the instrument should support the "appropriate use and effective, balanced and adequate protection of traditional knowledge" within the intellectual property sphere, however, that this must occur "in accordance with national law.[216] Such an objective would have the undesirable effect of subordinating TK protection to domestic legislation, mimicking the qualifying language found in the CBD. The third proposed objective is the most verbose:[217]

> The objective of this instrument is to support the appropriate use of traditional knowledge within the patent system, in accordance with national law, respecting the values of traditional knowledge holders, by:
>
> > (a) contributing toward the protection of innovation and to the transfer and dissemination of knowledge, to the mutual advantage of holders and

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212 Danny Huntington "WIPO Renews Mandate for IGC on Genetic Resources, Traditional Knowledge, and Folklore" (17 December 2019) Fédération Internationale Des Conseils En Propriété Intellectuelle <www.blog.ficpi.org>.

213 Gebru, above n 118, at 72.

214 At 64.

215 Draft Articles, above n 21, art 2 (alt 1).

216 Article 2 (alt 2).

217 Article 2 (alt 3).

> users of protected traditional knowledge and in a manner conducive to social and economic welfare and to a balance of rights and obligations;
>
> (b) recognizing the value of a vibrant public domain, the body of knowledge that is available for all to use and which is essential for creativity and innovation, and the need to protect, preserve and enhance the public domain; and
>
> (c) preventing the erroneous grant of patent rights over non-secret traditional knowledge.

This objective offers the least protection. It speaks only of the "appropriate use" of TK, and the "protection of innovation," rather than TK itself, while also subordinating the instruments protections to national law. It has also been weakened since the previous version of the Draft Articles. Paragraph (c) used to read "prevent[ing] the grant of erroneous intellectual property/ [patent rights] over TK (or TK associated with genetic resources."[218] This has now been limited in scope to just focus on non-secret TK, ignoring the risk that even secret TK shared with a bioprospector or inventor could be erroneously patented.

As the overall meaning (and even the overall purpose) of the Draft Articles remains unsettled, it is difficult to conduct a deep analysis on the impact it will have on TK protection.[219] However, some of its proposed features can be explored.

Some form of disclosure obligation for patent applicants is proposed, however the requirements of such vary.[220] In the strongest worded proposal, all patent applicants using TK would be required to disclose the source and origin of TK, the country in which the knowledge was obtained and whether free, prior informed consent to access and use the knowledge has been given by the TK holder.[221] However, a weaker alternative proposes disclosure of such matters should only be necessary where it is material to satisfying the

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218 Blake, above n 18, at 267.

219 Blake, above n 18, at 259; and Gebru, above n 118, at 64.

220 Blake, above n 18, at 268.

221 Blake, above n 18, at 269. See Draft Articles, above n 21, art 7 (alt 1).

minimum patentability criteria.[222] As discussed in Part IV, the creation of disclosure obligations has long been debated in an international context and has recently dominated TK discourse in New Zealand, regarded positively by the Waitangi Tribunal as "[building] a bridge between the requirements of the CBD and those of patent law."[223]

The Draft Articles also reflect IGC consensus over the value of TK databases. The current draft provisions encourage member states to "endeavour" to establish TK databases at various protection levels; recording TK ranging from that which is secret or exclusive to the TK holders to TK that is largely in the public domain.[224] Most notably, the Draft Articles encourage the creation of a national traditional knowledge database accessible only by intellectual property officers.[225] Such databases, with similarities to the register proposed by the Waitangi Tribunal, would provide an effective means for preventing the erroneous granting of patents; allowing patent examiners to easily assess whether patent applicants possess the requisite elements of novelty and innovation, or are instead, just attempting to patent TK that already exists as a prior art form.[226]

B Critique

1 A Slow Negotiation Process

Despite lengthy negotiations, it does not appear a final legal instrument will emerge from the Draft Articles any time soon. With competing agendas falling largely along economic divides, it has been difficult for states to reach agreement over the appropriate terminology and function of any resulting legal instrument.[227] Accordingly, the work of the IGC has severely stalled.[228] This is contrary to the need for urgent international protection in this

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222 Draft Articles, above n 21, art 7 (alt 4).

223 Waitangi Tribunal, above n 1, at 2.9.3(4).

224 Draft Articles, above n 21, Article 5Bis.

225 Article 5Bis.2

226 Kaur, above n 5, at 790; Etemire, above n 130, at 34; and Deepa Varadarajant "A Trade Secret Approach to Protecting Traditional Knowledge" (2011) 36 Yale J Intl L 371 at 382.

227 Moody, above n 5, at 183.

228 At 183.

area.[229] Abdel-Latif attributes this delay more broadly to a "severe crisis" in multilateral treaty making:[230]

> With an increasing number of countries and a growing diversity of stakeholders and interests at play, it has become challenging for the international community to agree on global multilateral norms to address issues which are becoming more complex and that straddle different areas of international regulation.

As progress wanes, so do the contributions of IGC member states. This has been evinced through New Zealand's dwindling involvement in recent years.[231] New Zealand has typically been recognised for its active role throughout IGC negotiations, participating actively in the drafting process,[232] providing experts to participate in panel discussions,[233] and encouraging greater indigenous involvement in negotiations.[234] However, New Zealand has not participated in an IGC session since 2016 in order to "prioritise domestic policy development on mātauranga Māori issues."[235] While this may be valid reasoning by this state, the loss of involvement of a prominent player in the negotiations does not bode well for the continued engagement of other less invested states.

A key tension instrumental to the stalling of deliberations has been the proposed legal nature of the Draft Articles. The division of member states on this issue has largely been drawn in line with levels of economic development. Developing countries that typically host the largest abundance of biodiversity have advocated for the Articles to become legally

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229 Gibson, above n 194, at 59.

230 Ahmed Abdel-Latif "WIPO and the traditional knowledge conundrum" in Daniel Robinson, Ahmed Abdel Latif and Pedro Roffe (eds) *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (Taylor & Francis Group, 2017) 317 at 322.

231 Jessica Lai "New Zealand, mātauranga Māori and the IGC" in Daniel Robinson, Ahmed Abdel Latif and Pedro Roffe (eds) *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (Taylor & Francis Group, Abingdon, 2017) 289 at 294.

232 For example, see IGC *Report: Adopted by the Committee* WIPO/GRTKF/IC/19/12 (23 February 2012) at [177]–[179] and [217]–[222].

233 At [17].

234 Lai, above n 231, at 293. See also Part VII, C.

235 MBIE, above n 98.

binding, arguing TK protection will not be effective if not enforceable.[236] On the other hand, developed countries are in favour of another "soft law" instrument.[237]

In this writer's opinion, if the resulting document is not to be binding, it is unclear how influential its impact on the status quo will be. Although states generally prefer to be provided as much discretion to act as possible,[238] the flexible nature of the CBD and non-binding agreements have proven insufficient at addressing the risk of biopiracy in the international domain.[239]As Gebru states:[240]

> [T]he problem is not a lack of international documents providing aspirational statements and general principles. Rather, the lack of a clear and binding legal instrument seems to be what is missing… some form of binding international instrument will be necessary if the global use of TK in modern industries is to achieve its full potential…

However, that adherence to WIPO treaties is not mandatory by member states provides another element of concern as to whether a binding instrument would receive the necessary support needed to be accepted and ratified by member states in order for any resulting TK protections to be meaningfully.[241]

There are also tensions between member states as to the correct balance between flexibility and effectiveness. While directed provisions provide clarity on the measures states can or must take to protect TK, flexibility allows states to establish protective mechanisms appropriate for their specific local context.[242] Canada and the United States have been notably vocal in their advocacy for an instrument with "maximum flexibility,"[243] while

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236 Gebru, above n 118, at 66–69.

237 At 66–69.

238 Ni, above n 13, at 88—89.

239 For example, see the Statement by the Brazilian Delegate at the Ninth IGC session: IGC *Draft Report (Second Draft)* WIPO/GRTKF/IC/9/14 Prov 2 (5 November 2006) at 16.

240 Gebru, above n 118, at 69.

241 Abdel-Latif, above n 230, at 322.

242 Gebru, above n 118, at 70.

243 IGC, above n 239, at 64.

many developing states call for greater clarity instead.[244] New Zealand, concerned to ensure any resulting instrument does not unnecessarily restrict states from meeting the diverse needs of their indigenous peoples, has advocated for the middle ground "menu of options approach."[245] This would give states the ability to choose from a range of tools (such as codes, guidelines, checklists and model clauses), that reflect key principles agreed upon by the IGC, when implementing TK protection.[246] Any consensus on this issue is also yet to be reached.

Despite the delay, it is likely the Draft Articles will, one day, come into fruition. Much time, intellectual and political capital has been invested in the creation of this instrument. A failure to reach an outcome would "deal a severe blow to the universality and legitimacy of the global IP regime which WIPO has been building up for decades."[247] However, the strength of any resulting instrument arising from these Articles remains unknown.[248] In the meantime, with little progress eventuating, TK remains vulnerable to biopiracy and its misappropriation able to continue unabated around the world.[249]

2 WIPO v WTO

Contention also persists as to whether WIPO is the correct international body for developing TK protections.[250] Developed countries have advocated for the use of WIPO and the IGC for regulating TK protection due to its relaxed status.[251] On the other hand, ILC's have advocated for WTO as the most appropriate forum to develop TK protection due to its ability to enforce any TK obligations against member states.[252] WIPO is a

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244 Gebru, above n 118, at 70.

245 IGC *Sixth Session Report* WIPO/GRTKF/IC/6/14 (14 April 2004) at [88].

246 Lai, above n 231, at 293.

247 Abdel-Latif, above n 230, at 323.

248 At 324.

249 Maui Solomon "An indigenous perspective on the WIPO IGC" in in Daniel Robinson, Ahmed Abdel Latif and Pedro Roffe (eds) *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (Routledge, Abingdon, 2017) 219 at 222.

250 Kenneth J Armour and Peter Harrison "Poisons and Politics – Indigenous rights and IP protection" (2007) 29 World Patent Information 255 at 257.

251 Ni, above n 13, at 108.

252 Ni, above n 13, at 107–108.

specialized UN agency, responsible for the administration of intergovernmental IP treaties.[253] Signing up to these treaties is voluntary for member states.[254] Although WTO was primarily established to regulate the rules of trade between nations,[255] it has gained "parallel competence" in the IP sphere, responsible for the establishment and subsequent enforcement of the TRIPS Agreement amongst its 164 member countries.[256] In fact, as the TRIPS Agreement has since been regarded the most comprehensive multilateral agreement on IP protection,[257] it has been argued that WTO has superseded WIPO as the most important institution for IP protection.[258]

WTO has been preferred by indigenous groups due to its stronger enforcement capabilities. In fact, a key reason for the creation of the TRIPS Agreement under WTO was because of the dissatisfaction of WIPO member states with WIPO's poor enforcement mechanisms.[259] For example, although it seems unlikely a disclosure obligation will be added to the TRIPS agreement,[260] any such amendment would become obligatory upon each WTO member, requiring national IP laws to be revised accordingly in order for member states to continue to access the trade advantages associated with being a WTO signatory.[261] Non-compliance with this obligation would, in theory, be subject to WTO's dispute settlement mechanisms, with WTO member states able to sue other members for failure to comply with these obligations.[262] Such disputes would be heard by an ad hoc panel, or, if appealed, by the Appellate Body, with both providing binding outcomes.[263]

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253 Carolyn Deere Birkbeck *The World Intellectual Property Organization (WIPO): A Reference Guide* (Edward Elgar Publishing Ltd, Cheltenham, 2016) at 7–9; and World Trade Organisation "Overview" <www.wto.org.nz>.

254 Abdel-Latif, above n 230, at 322.

255 Ni, above n 13, at 88.

256 At 107; Nair, above n 42, at 35; World Trade Organisation "Overview" <www.wto.org.nz>.

257 WTO "Overview: The TRIPS Agreement" <ww.wto.org.nz>.

258 Nair, above n 42, at 35.

259 Ni, above n 13, at 107.

260 See Part IV, E.

261 Ni, above n 13, at 110; and Gibson, above n 194, at 68.

262 Ni, above n 13, at 110; and Kaur, above n 5, at 783.

263 World Trade Organization *A Handbook on the WTO Dispute Settlement System* (2nd ed, Cambridge University Press, Cambridge, 2017) at 2.

However, WTO's dispute settlement mechanism is currently in disarray, casting doubt on whether placing the responsibility for TK protection within WTO's ambit would be beneficial. As of 10 December 2019, following the blocking of new appointments by the US, WTO's appellate body has been left with only one adjudicator. As the WTO rules require at least three appellate members to operate (with three members assigned to any one case)[264] this has left the appellate body unable to function, plunging the dispute settlement process into paralysis.[265] With the potential for this situation to continue for a prolonged period of time, it is questionable what value WTO's enforceability mechanisms would bring to ensuring the effective protection of TK.

It is also doubtful member states would bring it upon themselves to take other members states through the WTO dispute settlement process to enforce TK protection. The fact that there has been very limited domestic implementation of TK protections worldwide demonstrates that this is not a top priority for these countries. Despite WTO's primary goal of establishing a fair and equitable dispute settlement mechanism, developing countries are overwhelmingly absent from this process.[266] This is largely owing to the resource-demanding nature of this process, compounded by remedial rules that prescribe the payment of any compensation awarded to be non-mandatory.[267] Developing countries typically hold the greatest abundance of both biodiversity and ILC's.[268] Thus, it is the countries the system disadvantages most that may be most willing to uphold rules of TK

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264 Dispute Settlement Rules: Understanding on Rules and Procedures Governing the Settlement of Disputes, Marrakesh Agreement Establishing the World Trade Organization, Annex *2* (signed 15 April 1994, entered into force 1 January 1995) 1869 UNTS 401*,* art 17(1).

265 Julien Chaisse *The Dispute Settlement Crisis in the World Trade Organization: Issues, Challenges and Directions* (online looseleaf ed, Research Outreach).

266 Although an assessment of data by the WTO Secretariat from 1995–2005 found approximately one-third of formal WTO complaints were made by developing countries, it was noted that five developing member states constituted 60% of this activity, leaving most developing states remarkably absent. See Roderick Abbott *Are Developing Countries Deterred from Using the WTO Dispute Settlement System? Participation of developing Countries in the DSM in the years 1995–2005* (European Centre for International Political Economy, 2007) at 3—11.

267 Gregory Shaffer *How to Make the WTO Dispute Settlement System Work for Developing Countries: Some Proactive Developing Country Strategies* (International Centre for Trade and Sustainable Development, March 2003) at 37.

268 Rosemary J Coombe "The Recognition of Indigenous Peoples' and Community Traditional Knowledge in International law" (2001) 14 St Thomas L Rev 275 at 279.

protection against other states. Requiring these obligations to be enforced by member states could also be seen as removing the agency of indigenous peoples and their right to protect their intellectual property themselves.[269]

While WIPO (as the body responsible for the negotiation of the Draft Articles) has taken the lead in the development of global TK protection,[270] the WIPO/WTO debate highlights the key problems of TK development in this space. If a treaty of significant strength was to emerge from the Draft Articles, its reception within the international community may be limited, particularly due to states being presented the option of adherence. On the other hand, although the addition of explicit and mandatory TK protection (such as a disclosure obligation) to the TRIPs agreement may satisfy the calls of indigenous groups for a binding protection mechanism, the likelihood of these protections being enforced by member states may be low. Ultimately, it remains unclear which global IP body provides the better avenue for TK protection.

VII Indigenous Participation in International TK Protection

An issue that has transcended the formulation of all international TK protection is a lack of adequate indigenous involvement in their creation. This adds important context to the failure of the existent protections against biopiracy in the international sphere. The remainder of this paper explores the grounds for indigenous participation in future international TK developments. It emphasises that this is crucial to ensure the legitimacy and success of such international protections in preventing biopiracy and its associated negative connotations.

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269 See Part IV, A.

270 Moody, above n 5, at 182; and Ni, above n 13, at 116.

A The case for Indigenous Participation

The right for indigenous people to effectively participate in the development of TK Protection is clearly mandated by UNDRIP. The wording of art 31(1) expressly indicates indigenous peoples have the right to control and protect their intellectual property themselves.[271] This has been regarded as a strong statement about the sovereignty of indigenous peoples over their TK.[272] It also reflects the assertions made by over 150 indigenous delegates[273] in the 1993 Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous People[274] that indigenous peoples are willing to provide the benefits of their TK to humanity *only* if their ability to define and control TK is protected by the international community.[275]

UNDRIP also provides a broader legal basis for indigenous participation in international negotiations on TK protection, acknowledging the general right of indigenous peoples to participate in decision-making matters that would affect their rights.[276] also places obligations on specialised agencies of the UN, such as WIPO, to "contribute to the full realisation of the provisions of this Declaration through the full mobilization, inter alia, of financial cooperation and technical assistance".[277] When considering these provisions cumulatively, the international community has a clear responsibility to ensure indigenous peoples are adequately participating in international negotiations, such that they can control and protect their TK themselves.

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271 See Part IV.

272 Veronica Gordon "Appropriation without Representation – the Limited Role of Indigenous Groups in WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore" (2014) 16 Vand J Ent & Tech L 629 at 629.

273 Representing Japan, Australia, Cook Islands, Fiji, India, Panama, Peru, Philippines, Surinam, the United States of America and New Zealand.

274 This declaration was made at the First International Conference on the Cultural and Intellectual Property Rights of Indigenous Peoples in Whakatane, New Zealand during the UN International Year for the World's Indigenous People.

275 Jo Recht "Hearing Indigenous Voices, Protecting Indigenous Knowledge" (2009) 16 ICJP 233 at 236. This is demonstrated in the Declaration's preamble: *The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples* (1993).

276 UNDRIP, above n 12, art 18.

277 Article 41.

Veronica Gordon highlights that in order to achieve legitimacy and satisfy human rights standards within any new TK protective instrument, indigenous participation is crucial. Without adequately consulting with the lived experience of indigenous peoples, any resulting instrument runs the risk of creating inappropriate legal solutions that do not address, or are contrary to, the key cultural concerns of indigenous peoples, calling the legitimacy of any resulting instrument into question.[278] Additionally, the right of indigenous peoples to participate in international decision-making is a basic human right, underpinned by the precepts of self-determination, equality and cultural integrity.[279] As explained above, UNDRIP, as a human rights instrument itself,[280] has clearly recognised the importance of indigenous participation both broadly and in the context of managing TK. Moreover, the self-determination of indigenous peoples over their own governance is expressly provided for within UNDRIP, however "effective self-determination… means not just maintaining local customary law and autonomous institutions, but also participating in the larger political [and legal] order."[281] Where participation is not provided for, the basic human rights of indigenous groups are infringed and the international decision-making processes becomes incongruous with the very principles that have been identified by them.[282]

B Indigenous Participation in Practice

Inadequate levels of indigenous participation have pervaded the entire international framework. The dismissal of indigenous issues as only of "preliminary significance" at the first COP to the CBD meeting is indicative of the minimal indigenous involvement in the

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278 Gordon, above n 272, at 644–64. See also Etemire, above n 130, at 6.

279 As stated by James Anaya during his tenure as Special Rapporteur on the Rights of Indigenous Peoples: James Anaya *Situation of human rights and fundamental freedoms of indigenous people: Note by the Secretary-General: Interim report of the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous people* UN Doc A/65/264 (9 August 2010) at [39].

280 Office of the High Commissioner "Indigenous rights declaration endorsed by States" (23 December 2010) <www.ohchr.org>.

281 James Anaya "International Human Rights and Indigenous Peoples: The move towards a Multicultural State" (2004) 21 Ariz J Intl & Comp L 13 at 52.

282 Gordon, above n 272, at 646.

passage of the CBD.[283] Since then, participation within the CBD has somewhat improved.[284] An indigenous caucus, the International Indigenous Forum on Biodiversity (IIFB), operates parallel to the COP and is able to table proposals; although ultimately only granted observer status and obtaining no voting rights.[285] The establishment of the Open-Ended Woking Group on Article 8(j) in 1998 has also provided positive movement in this space, aiming to achieve "the widest participation [of ILC's] possible"[286] by giving indigenous representatives equally the floor as government representatives and the ability to table proposals.[287] However, these mechanisms did not translate to effective participation during the creation of the CBD's subsidiary instruments relating to TK protection.

Both the Bonn Guidelines and Nagoya Protocol have faced criticisms for the limited participation of indigenous peoples in their negotiation process.[288] In each instance, negotiations occurred outside of the Open-Ended Working Group on Article 8(j) and within the Open-Ended Working Group on Access and Benefit Sharing.[289] Thus, the positive steps taken to improve indigenous participation within the CBD were left largely external to the creation of access and benefit sharing regimes involving TK. This was a deliberate choice. When the negotiations of the Nagoya Protocol began, there was much preliminary debate about the appropriate input of indigenous people in the creation of this instrument. Although the possibility of providing indigenous representatives the same influence as that held under the Open-ended Working Group on Art 8(j) was discussed, this was ultimately

283 Alexander Gillespie "Biodiversity, Indigenous Peoples and Equity in International Law" (2000) 4 NZJ Envt L 1 at 5.

284 Carola Betzold and Anaid Flesken "Indigenous Peoples in International Environmental Negotiations: Evidence from Biodiversity and Climate Change" in Thoko Kaime (ed) *International Climate Change Law and Policy: Cultural Legitimacy in Adaptation and Mitigation* (Routledge, Abingdon, 2014) 63 at 64.

285 Etemire, above n 130, at 13; James Anaya *Report of the Special Rapporteur on the Rights of Indigenous Peoples* UN Doc A/67/301 (13 August 2012) at [57].

286 Gillespie, above n 283, at 6.

287 Arthur Manuel and Debra Harry "Indigenous Voices Silenced in Negotiation of International ABS Protocol" *First Nations Strategic Bulletin* (Canada, November 2010) at 7.

288 This criticism has also come from Māori: Te Hunga Roia Māori o Aotearoa *Submission: Bioprospecting Discussion Document* (October 2007) at [5.1]. See also Manuel and Harry, above n 287; and Harry, above n 26, at 716.

289 Gebru, above n 118, at 106.

dismissed, leaving indigenous representatives unable to table proposals without the endorsement of a member state.[290]

Debra Harry, Executive Director of the Indigenous Peoples Council on Bio-colonialism and an indigenous representative present during Nagoya negotiations, has been particularly vocal about the tactics that have been used to sideline indigenous voices during these negotiations.[291] She notes that most suggestions made by indigenous representative prior to the tabling of the Co-Chairs text in March 2010 were removed from this text.[292] Contrary to the usual practice of all Indigenous peoples participating in negotiations through the IIFB, a small "indigenous negotiators group" was established, through which private meetings were held with the CBD Secretariat.[293] This prevented any broad-based participation of indigenous peoples in negotiations while also polarizing indigenous representatives present during the negotiations.[294] Ultimately, Harry proclaims that the resulting Protocol reflects unfavourable outcomes for indigenous peoples, attributing the qualifying language ultimately contained in art 7 to the small group of indigenous negotiators who accepted this text.[295]

C Participation in the IGC

It has been within the IGC that a lack of meaningful indigenous participation has been particularly recognised. The IIFB have argued that the IGC's current rules of procedure systematically ignore the internationally recognised rights of indigenous peoples to self-determination and full and equitable participation at all levels.[296] While measures exist through which ILC's are able to participate in the IGC, most of this participation occurs

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290 Manuel and Harry, above n 287, at 8.

291 See Manuel and Harry, above n 287; and Harry, above n 26.

292 Harry, above n 26, at 709.

293 At 710.

294 At 710.

295 At 710—711. For further discussion, refer to Part IV, D.

296 International Indigenous Forum on Biodiversity (IIFB) *Statement of the International Indigenous Forum* (press release, 21 February 2012).

outside of the substantive decision making that occurs within the formal IGC sessions.[297] Indigenous representatives are able to attend formal IGC negotiations if registered as accredited observers.[298] However, as observers, indigenous representatives are not given the right to vote or submit proposals, amendments and motions, with these functions remaining the exclusive rights of member states.[299] Thus, proposals made by indigenous observers will only be taken into account if they receive state support.[300] Even indigenous participation in debates is restricted, dependent on the invitation of the Chairman.[301]

The limited involvement of indigenous peoples within IGC negotiations has been responsible for much turbulence within IGC sessions. Indigenous representatives have argued that most of the "collectively developed and sound" proposals advanced by indigenous representatives in IGC sessions have been ignored, "dumbed down", or remain in brackets within the negotiating text.[302] Maui Solomon, an indigenous representative present at IGC negotiations notes that IGC meetings are typically characterized by indigenous representatives and member states "talking past" one another.[303] He states that over years of negotiations, indigenous peoples have made clear their needs and expectations in relation to the recognition and protection of TK; namely, the development of a *sui generis* system, recognition of customary law, the need for prior informed consent from TK holders before use, a binding international instrument and recognition as custodians and owners of their own TK. However, at IGC meetings, member states encourage the continual status quo, the creation of a non-binding regime, and reject a human rights based approach solutions. The frustration of indigenous representatives

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297 For example, each IGC session is preceded by a meeting of the Indigenous Peoples and Local Communities Consultation Forum with the WIPO Secretariat, and panel presentations by members of ILC's now precede IGC sessions. See WIPO Secretariat *Note On Existing Mechanisms for Participation of Observers in the Work of the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklor*e (10 October 2011) at 2–3.

298 WIPO *The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore Background Brief No 2* (2016) at .

299 WIPO *General Rules of Procedure* (1998),r 24(2).

300 IGC *Practical Guide for Observers* (online ed, WIPO) at 1.

301 WIPO, above n 299, r 24(2).

302 Solomon, above n 249, at 220; and IIFB, above n 296.

303 Solomon, above n 249, at 220.

throughout this process has culminated in walk outs from several IGC meetings,[304] withdrawals from the drafting process,[305] as well as calls from the IIFB for "full and effective" participation in relevant IGC negotiations, and for proposals to have "equal footing" with state proposals.[306] These actions have so far been ineffectual, with the IGC rules of procedure remaining unchanged.

Structural barriers have also excluded indigenous voices from IGC negotiations. The participation of accredited indigenous observers within the IGC is largely dependent on the WIPO Voluntary Fund. The Fund was created in 2005 to address the financial difficulties disproportionately faced by ILC's seeking to participate in IGC meetings, particularly in relation to travel and accommodation costs.[307] It operates externally to WIPO's regular budget, relying solely (as the name suggests) on voluntary contributions.[308] Although initially well received by the international community, with many early contributions to the fund,[309] donations have since dwindled, leaving the Fund largely empty.

The depletion of WIPO's Voluntary Fund has been flagged repeatedly since 2013. During the IGC's 24th session, WIPO Director-General Francis Gurry noted the "situation could not be more dramatic", with the Fund no longer containing sufficient amounts to support the participation of *any* representatives to future IGC meetings.[310] Due to this depletion, the Fund was unable to support any indigenous applicants from the Twenty-Seventh to the

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304 General walkouts by the majority of indigenous representatives have occurred at both the eleventh and twelfth IGC meetings. See Solomon, above n 249, at 221.

305 Withdrawal from the drafting process has occurred at both the 18th IGC session, after almost every proposal advanced by them was deleted from the Draft Articles, and at the 20th IGC session. See Harry, above n 26, at 716; and Catherine Saez "Indigenous Peoples Walk out of WIPO Committee on Genetic Resources" (22 February 2012) Intellectual Property Watch <www.ip-watch.org>. See also IIIFB, above n 296.

306 Harry, above n 26, at 716.

307 WIPO *A Stronger Voice for Indigenous and Local Communities in WIPO's work on Traditional Knowledge, Traditional Cultural Expressions and Genetic Resources: The WIPO Voluntary Fund* (2007) at 8.

308 IGC *Participation of Indigenous and Local Communities: Voluntary Fund* WIPO/GRTKF/IC/40/3 (13 May 2019), Annex 1, cl 6(a).

309 WIPO, above n 307, at 8—9.

310 William New "In 'Great Shame' WIPO Fund for Indigenous Peoples' Participation Running Dry" (26 April 2013) Intellectual Property Watch <www.ip-watch.org>.

Thirty-Third Sessions of the IGC, as well as the Thirty-Seventh and Thirty-Ninth sessions.[311]

Recently, this situation has seen marginal improvement, with contributions made by Canada, Finland and Germany in 2019 after a two-year donation drought.[312] However, these donations have not facilitated meaningful participation. For example, Canada's contribution enabled four indigenous representatives to participate in the IGC–40. While better than complete absence, supporting only a handful of indigenous representatives is hardly a fair representation of the diversity of indigenous peoples worldwide.[313] The lack of indigenous representation is particularly disconcerting when considering that it is within these later IGC sessions that the crucial negotiations towards a final legal instrument are taking place.[314]

That this Fund remains largely empty has created major barriers to the ability of indigenous peoples to satisfy their right to both participate in the decision-making process, as well as to control and protect their own TK. As a UN sub-organ, it is also evident WIPO is not realising its legal obligations under art 41 of UNDRIP to facilitate, through the "full realization" of financial cooperation, the fulfilment of indigenous rights. In 2014, a proposal spearheaded by New Zealand suggested that, to ensure consistent and effective representation in the IGC, WIPO's Program and Budget Committee should be able to recommend to the General Assembly the reallocation of money within WIPO's regular budget to fill the Voluntary Fund.[315] However, this proposal was deemed highly

311 IGC, above n 308, at [6].

312 WIPO "New Contributions to the WIPO Voluntary Fund" (1 October 2019) <www.wipo.int>; and WIPO "Summary of IGC 39" (25 March 2019) <www.wipo.int>. The most recent contribution prior to this was made by Australia in 2017. The last time that New Zealand contributed to the WIPO Voluntary Fund was in 2013. See IGC *Participation of Indigenous and Local Communities: Voluntary Fund* WIPO/GRTKF/IC/30/3 (25 April 2016) at 1.

313 Gordon, above n 272, at 655–656.

314 At 655.

315 Wendy Wendland "Protecting Indigenous Knowledge: A personal perspective on international negotiations at WIPO" WIPO Magazine (December 2019) <www.ipwatch.org> and Catherine Saez "Do WIPO Delegations Want Indigenous Peoples' Participation?" (8 July 2014) Intellectual Property Watch <www.ipwatch.org>. See also IGC *Participation of Indigenous and Local Communities:*

contentious, representing the first time a UN agency's core budget would be used to replenish a volunteer found.[316] Ultimately, no changes to the financing of the Fund have been made, with indigenous involvement remaining a pertinent procedural and structural issue in continuing IGC negotiations.[317]

D Moving Forward

The inadequate levels of indigenous participation in the development of legal protections over their own intellectual property is concerning. It is contrary to the recognised rights of indigenous peoples to participate in decision making, as enshrined in UNDRIP. It also calls into question for whose benefit an instrument on TK protection is being sought, and consequently, whether it will sufficiently protect ILC's from instances of biopiracy.

A lack of indigenous participation within the international sphere is a product of international law itself. It reflects the fundamental notion that states are the primary actors in international law.[318] Therefore, as it is between states that consensus on legal issues must be reached, ILCs are left on the side-lines.[319] However, indigenous peoples have a valuable voice in the development of TK protective instruments. It is their knowledge that is sought to be protected. Accordingly, indigenous guidance is critical for the development of protections that adequately mitigate the risks of bio-piracy.[320] The side-lining of indigenous voices in this context is not only contrary to the minimum indigenous rights enshrined in UNDRIP, but will also likely lead to the failure of any resulting legal instrument to actually protect TK from misappropriation.

Proposal for Subsidiary Contributions to the Voluntary Fund (Proposal by the Delegations of Australia, Finland, New Zealand and Switzerland) WIPO/GRTKF/IC/28/10 (19 May 2014).

316 Catherine Saez, above n 315.

317 To view the rules governing the Voluntary Fund, see WIPO General Assembly *WIPO Voluntary Fund for Accredited Indigenous and Local Communities: Amendments to the Rules* WIPO/GA/39/11 (5 June 2010).

318 *The Case of the SS "Lotus" (France v Turkey) (Judgement)* (1972) PCIJ (Series A) No 10 at 18; and Alberto Costi "Introduction to International Law" in *Public International Law: A New Zealand Perspective* (LexisNexis NZ Limited, Wellington, 2020) 1 at 6.

319 Betzold and Flesken, above n 284, at 65; and Seth Gordon "Indigenous Rights in Modern International Law from a Critical Third World Perspective" (2007) 31 Am Indian L Rev 401 at 402.

320 Michael Jeffrey, above n 133, at 791.

Moving forward, procedural and structural changes must be made to the IGC. First, indigenous representatives must be able to attend negotiations in order to be heard. States, such as New Zealand, should continue to advocate for the ability for WIPO's general budget to replenish the WIPO Voluntary Fund where it is depleted, to ensure a diverse and wide range of indigenous voices have a seat at the negotiating table. Secondly, allowing for indigenous representatives to table proposals on their own within negotiations could be one step towards the elevation of indigenous voices. However, on its own, this will not be enough. As it is ultimately states that are afforded voting rights in international matters such as these, these tabled proposals could be dismissed. Indeed, this has already occurred in the IGC, even where indigenous proposals have been tabled by member states.[321] It is therefore equally important that states, in their own capacity, listen and elevate indigenous voices from within. According to the needs Solomon reports as being advanced by indigenous peoples during IGC negotiations,[322] elevating such voices would include placing a greater emphasis on the need for a binding international instrument, the introduction of mandatory prior informed consent requirements, and an instrument that recognises the validity of customary indigenous law.

Whether states would shift their priorities away from their self-interests in order to prioritise indigenous voices in this space is doubtful. This is particularly so when considering that many states, including New Zealand, have continuously failed to implement domestic TK protections, and have negotiated relatively weak obligations in this space thus far. However, if states are to be serious about avoiding the wide-reaching biological and cultural ramifications of TK erosion, as well as affording indigenous peoples their basic rights enshrined in UNDRIP, it is in their best interests to do so.

321 See Part VII, A.

322 See Part VII, A.

VIII Conclusion

As the biotech industry continues to grow, so too does the threat of patent-based biopiracy for ILC's. Currently, the patent system acts as a tool for the exploitation of TK in favour of Western-based innovations. This perpetuates both the misappropriation of TK and its subsequent cultural and biodiversity implications. Such an issue is of key relevance to New Zealand. Containing both an abundance of endemic diversity attractive to bioprospectors and a wealth of associated mātauranga Māori, the correlating risk of biopiracy within this country is high. However, New Zealand's current domestic mechanism is lacking, in relation to both bioprospecting regulations and protection within patents legislation.

A strong international framework is necessary to establish a global minimum standard of protection for TK against misappropriation. Progress has been made on this front over the last three decades, through the establishment of a recognised indigenous rights instrument, the creation of the CBD as the first international instrument addressing TK protection, and its subsidiary agreements. However, this framework is ultimately inadequate. The use of qualifying and non-committal language throughout these instruments has left states open to continuing to ignore or fail to adequately provide for TK protections within domestic legislation. In respect of the Nagoya Protocol, monitoring issues, the limitations of access and benefit sharing regimes, and the unenthusiasm of some states, including New Zealand, to adopt a binding instrument, have hindered its ability to properly address the threats of biopiracy. However, the most notable failure of the current framework is the fact that these current protections exist outside of, and subordinate to, the IP regimes that places TK at risk.

Since 2009, work has been undertaken by the WIPO IGC towards the creation of a new protective instrument within the IP sphere. However, as negotiations drag on, with agreement yet to be reached on even what the objective of the Draft Articles should be, when such an instrument will eventuate and the strength of such instrument is anyone's guess. A key tension in the development of further TK protection in this space is which global IP institution is best placed to develop such frameworks. Many indigenous groups have advocated for WTO as the more appropriate body to handle such developments,

creating enforceable obligations that states must oblige with in order to receive trade benefits. Although there are many drawbacks to centring TK protection within WTO, the WIPO/WTO debate highlights the calls of indigenous peoples for an enforceable and binding instrument in this space, a need which may be undermined by the voluntary nature of adherence to any binding instrument that might result from WIPO negotiations.

A key reason for the inadequacies that transcend the international framework is the lack of meaningful participation by indigenous peoples. This has been particularly evident throughout IGC negotiations. Failing to provide for the adequate participation of indigenous peoples is contrary to indigenous rights enshrined in UNDRIP, and calls into question the intentions of the international community in developing a TK instrument. Moving forward, indigenous voices must be elevated in order to adequately mitigate the risks of bio-piracy and avoid its troubling consequences.

IX Bibliography

A Cases

The Case of the SS "Lotus" (France v Turkey) (Judgement) (1972) PCIJ (Series A) No 10.

B Legislation

Patents Act 2013.

C International Agreements

Convention on Biological Diversity (opened for signature 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79.

Dispute Settlement Rules: Understanding on Rules and Procedures Governing the Settlement of Disputes, Marrakesh Agreement Establishing the World Trade Organization, Annex 2 (signed 15 April 1994, entered into force 1 January 1995) 1869 UNTS 401, art 17(1).

Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising out of their Utilization to the Convention on Biological Diversity (signed 29 October 2010, entered into force 12 October 2014) [2012] ATNIF 3.

TRIPS Agreement (signed 15 April 1994, entered into force 1 January 1995) 1869 UNTS 299.

United Nations Declaration on the Rights of Indigenous Peoples GA Res 61/295 (2007).

D International Materials

James Anaya *Report of the Special Rapporteur on the Rights of Indigenous Peoples* UN Doc A/68/317 (14 August 2013).

James Anaya *Report of the Special Rapporteur on the Rights of Indigenous Peoples* UN Doc A/67/301 (13 August 2012).

James Anaya *Situation of human rights and fundamental freedoms of indigenous people: Note by the Secretary-General: Interim report of the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous people* UN Doc A/65/264 (9 August 2010).

Ad Hoc Open-Ended Working Group on Access and Benefit-Sharing *Report of the Meeting of the Group of Technical and Legal Experts on Traditional Knowledge Associated with Genetic Resources in the Context of the International Regie on Access and Benefit Sharing* UNEP/CBD/WG-ABS/8/2 (15 July 2009).

Aroha Te Pareake Mead *International Workshop on Traditional Knowledge: Emerging Issues in Māori Traditional Knowledge, can these be addressed by UN agencies?* PFII/2005/WS.TK/14 (23 September 2005).

Conference of Parties to the CBD *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets* UNEP/CBD/COP/DEC/X/2 (29 October 2010).

Council for Trade-Related Aspects of Intellectual Property Rights *The Relationship Between the TRIPS Agreement and the Convention on Biological Diversity: Summary of Issues Raised and Points Made: Note by the Secretariat* IP/C/W/368/Rev.1 (8 February 2006).

Council for Trade-Related Aspects of Intellectual Property Rights *Article 27.3(B), Relationship between the TRIPS Agreement and the CBD, And the Protection of*

Traditional Knowledge and Folklore: Communication by the United States IP/C/W/434 (26 November 2004).

Council for Trade-Related Aspects of Intellectual Property Rights *Article 27.3(b), Relationship between the TRIPS Agreement and the CBD, And the Protection of Traditional Knowledge and Folklore: Communication by the United States* IP/C/W/449 (10 June 2005).

Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expression (IGC) *Draft Report (Second Draft)* WIPO/GRTKF/IC/9/14 Prov.2 (5 November 2006).

IGC *Participation of Indigenous and Local Communities: Voluntary Fund* WIPO/GRTKF/IC/40/3 (13 May 2019).

IGC *The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore Background Brief No 2* (2016).

IGC *Participation of Indigenous and Local Communities: Voluntary Fund* WIPO/GRTKF/IC/30/3 (25 April 2016).

IGC *Participation of Indigenous and Local Communities: Proposal for Subsidiary Contributions to the Voluntary Fund (Proposal by the Delegations of Australia, Finland, New Zealand and Switzerland*) WIPO/GRTKF/IC/28/10 (19 May 2014).

IGC *Report: Adopted by the Committee* WIPO/GRTKF/IC/19/12 (23 February 2012).

IGC *Sixth Session Report* WIPO/GRTKF/IC/6/14 (14 April 2004).

IGC *The Protection of Traditional Knowledge: Draft Articles, Facilitators Review [Draft Articles]* WIPO/GRTKR/IC/40 (19 June 2019).

Secretariat of the Convention on Biological Diversity *The Bonn Guidelines Factsheet* (2011).

Secretariat of the Convention on Biological Diversity *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization [Bonn Guidelines]*.

Trade Negotiations Committee *Issues Related to the Extension of the Protection of Geographical Indications Provided for in Article 23 of the TRIPS Agreement to Products Other Than Wines and Spirits and Those Related to the Relationship Between the TRIPS Agreement and the Convention on Biological Diversity: Report by the Director General* WT/GC/W/633 (21 April 2011).

UN General Assembly *Rio Declaration on Environment and Development* UN Doc A/CONF.151/26 (12 August 1992).

UN Secretary-General *Development and International Cooperation: Environment: Rep. of the Secretary General, Annex* UN Doc A/42/427 (4 August 1987).

WIPO General Assembly *WIPO Voluntary Fund for Accredited Indigenous and Local Communities: Amendments to the Rules* WIPO/GA/39/11 (5 June 2010).

WIPO *General Rules of Procedure* (1998).

E Books and Chapters in Edited Books

Ahmed Abdel-Latif "WIPO and the traditional knowledge conundrum" in Daniel Robinson, Ahmed Abdel Latif and Pedro Roffe (eds) *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (Taylor & Francis Group, 2017) 317.

Grethel Aguilar "Access to Genetic Resources and Protection of Traditional Knowledge in Indigenous Territories" in Christophe Bellmann (ed) *Trading in Knowledge: Development Perspectives on TRIPS, Trade and Sustainability* (2003) 175.

Carola Betzold and Anaid Flesken "Indigenous Peoples in International Environmental Negotiations: Evidence from Biodiversity and Climate Change" in Thoko Kaime (ed) *International Climate Change Law and Policy: Cultural Legitimacy in Adaptation and Mitigation* (Routledge, Abingdon, 2014) 63.

Janet Blake "Cultural Heritage and Intellectual Property Law" in *International Cultural Heritage Law* (Oxford University Press, Oxford, 2015) 230.

David Cooper and Kieran Nfonan-Mooney "Convention on Biological Diversity" in *Encyclopaedia of Biodiversity* (2nd ed, Elsevier Inc, Montreal, 2013) 307.

Alberto Costi "Introduction to International Law" in *Public International Law: A New Zealand Perspective* (LexisNexis NZ Limited, Wellington, 2020) 1.

Carolyn Deere Birkbeck *The World Intellectual Property Organization: A Reference Guide* (Edward Elgar Publishing Ltd, Cheltenham, 2016).

Biswajit Dhar "The Convention on Biological Diversity and the TRIPS Agreement: compatibility or conflict" in Christophe Bellmann, Graham Dutfield and Riccardo

Melèndez-Ortiz (eds) *Trading in Knowledge: Development Perspectives on TRIPS, Trade and Sustainability* (Earthscan, London, 2003) 77.

Peter Drahos and Susy Frankel "Indigenous Peoples' Innovation and Intellectual Property: The Issues" in *Indigenous Peoples' Innovation: Intellectual Property Pathways to Development* (Australian National University E Press, Canberra, 2012) 1.

Evanson C Kamau "Protecting TK Amid Disseminated Knowledge – a New Task for ABS Regimes? A Kenyan Legal View" in Evanson C Kamau and Gerd Winter (eds) *Genetic Resources, Traditional Knowledge and the Law* (Earthscan, London, 2009) 143.

Jessica Lai *Indigenous Cultural Heritage and Intellectual Property Rights: Learning from New Zealand Experience?* (Springer Nature, London, 2013).

Jessica Lai "New Zealand, mātauranga Māori and the IGC" in Daniel Robinson, Ahmed Abdel Latif and Pedro Roffe (eds) Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (Taylor & Francis Group, Abingdon, 2017) 289.

Ikechi Mgbejoi "Patents, Indigenous and Traditional Knowledge, and Biopiracy" in *Global Biopiracy: Patents, Plants and Indigenous Knowledge* (UBC Press, Vancouver, 2015) 9 at 15.

Oluwatobiloba Moody "Trade-Related Aspects of Traditional Knowledge Protection" in John Borrows (ed) *Indigenous Peoples and International Trade: Building Equitable and Inclusive International Trade and Investment Agreements* (Cambridge University Press, Cambridge, 2020) 164.

Elisa Morgera, Elsa Tsioumani and Matthias Buck *Unravelling the Nagoya Protocol: A Commentary on the Nagoya Protocol on Access and Benefit-sharing to the Convention on Biological Diversity* (Brill, Boston, 2015).

Daniel Robinson "Biopiracy and the Innovations of Indigenous peoples and Local Communities" in Peter Drahos and Susy Frankel (eds) *Indigenous Peoples' Innovation: Intellectual Property Pathways to Development* (Australian National University Press, Canberra, 2012) 77.

Gregory Shaffer *How to Make the WTO Dispute Settlement System Work for Developing Countries: Some Proactive Developing Country Strategies* (International Centre for Trade and Sustainable Development, March 2003).

Maui Solomon "An indigenous perspective on the WIPO IGC" in in Daniel Robinson, Ahmed Abdel Latif and Pedro Roffe (eds) *Protecting Traditional Knowledge: The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (Routledge, Abingdon, 2017) 219.

Anthony Taubman and Matthias Leistmer "Traditional Knowledge" in Silke Von Lewinski (ed) *Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge and Folklore* (2nd ed, Kluwer Law International, Alphen aan den Rijn, 2008) 95.

Brendan Tobin "Setting Protection of TK to Rights – Placing Human Rights and Customary Law at the Heart of TK Governance" in Evanson Kamau and Gerd Winter (eds) *Genetic Resources, Traditional Knowledge and the Law* (Earthscan, London, 2009) 101.

Evana Wright *Protecting Traditional Knowledge: Lessons from Global Case Studies* (Edward Elgar Publishing Limited, Cheltenham, 2020).

World Trade Organization *A Handbook on the WTO Dispute Settlement System* (2nd ed, Cambridge University Press, Cambridge, 2017).

F Journal Articles

Adam Andrzejewski "Traditional Knowledge and Patent Protection: Conflicting Views on International Patent Standards" (2010) 13 Potchefstroom Electronic Law Journal 93.

James Anaya "International Human Rights and Indigenous Peoples: The move towards a Multicultural State" (2004) 21 Ariz J Intl & Comp L 13.

Jennifer Amiott "Investigating the Convention on Biological Diversity's Protections for Traditional Knowledge" (2003) 11 Mo Envtl L & Poly Rev 3.

Kenneth J Armour and Peter Harrison "Poisons and Politics – Indigenous rights and IP protection" (2007) 29 World Patent Information 255.

Lida Ayoubi "Intellectual Property Commercialisation and Protection of Mātauranga Māori in New Zealand Universities" (2019) 28 NZULR 521.

Margo Bagley "The Fallacy of Defensive Protection for Traditional Knowledge" (2019) 58 Washburn LJ 323.

Matthias Buck and Claire Hamilton "The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity" (2011) 20 RECIEL 47.

Roger Chennells "Traditional Knowledge and Benefit Sharing After the Nagoya Protocol: Three Case Studies from Africa" (2013) 9 Law, Environment and Development Journal 163.

Rosemary J Coombe "The Recognition of Indigenous Peoples' and Community Traditional Knowledge in International law" (2001) 14 St Thomas L Rev 275.

Thomas Cottier and Marion Panizon "Legal Perspectives on Traditional Knowledge: The Case for Intellectual Property Protection" (2004) 7 JIEL 371.

Tesh Dagne "Protecting Traditional Knowledge in International Intellectual Property Law: Imperatives for Protection and Choice of Modalities" (2014) 14 J Marshall Rev Intell Prop L 25.

Isabel Daum "Legal Conflicts in the Protection of Traditional Knowledge and Intellectual Property in International Law" (2014) 57 German YB Intl L 411.

Meghan Davis "Indigenous Rights in Traditional Knowledge and Biological Diversity: Approaches to Protection" (1999) 4 Indigenous Law Reporter 1.

Marcia De Geer "Biopiracy: The Appropriation of Indigenous Peoples Cultural Knowledge" (2003) New Eng J Intl & Comp L 179.

Dieter Dorr "Biopiracy and the right to self-determination of Indigenous Peoples" (2019) 52 Phytomedicine 308.

Graham Dutfield "TRIPS-Related Aspects of Traditional Knowledge" (2001) 33 Case W Res J Intl L 233.

Lorna Dwyer "Biopiracy, Trade and Sustainable Development" (2008) 19 Colo J Intl Envtl L & Poly 219.

Jay Erstling "Using Patent to Protect Traditional Knowledge" (2009) 15 Tex Wesleyan L Rev 295.

Uzuazo Etemire "The Status of Indigenous Peoples under the Convention on Biological Diversity Regime: The Right to Biological Resources and Protection of Traditional Knowledge" (2014) 3 Envtl L & Prac Rev 1.

Malgosia Fitzmaurice "The Dilemma of Traditional Knowledge: Indigenous Peoples and Traditional Knowledge" (2008) 10 IntlL Comm L Rev 255.

Aman Gebru "The Global Protection of Traditional Knowledge: Searching for Minimum Consensus" (2017) 17 J Marshall Rev Intell Prop L 42.

Daniel Gervais "Traditional Knowledge and Intellectual Property: A TRIPS-Compatible Approach" (2005) Mich St L Rev 135.

Johanna Gibson "Traditional Knowledge and the International Context for Protection" (2004) 1 SCRIPT ed 58.

Alexander Gillespie "Biodiversity, Indigenous Peoples and Equity in International Law" (2000) 4 NZJ Envt L 1.

Veronica Gordon "Appropriation without Representation – the Limited Role of Indigenous Groups in WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore" (2014) 16 Vand J Ent & Tech L 629.

Seth Gordon "Indigenous Rights in Modern International Law from a Critical Third World Perspective" (2007) 31 Am Indian L Rev 401.

Debra Harry "Biocolonialism and Indigenous Knowledge in United Nations Discourse" (2011) 20 Griffith Law Review 702.

Hans Morten Haugen "Draft Trans-Pacific Partnership Agreement and TK" (2014) 17 JWIP 81.

Curtis M Horton "Protecting Biodiversity and Cultural Diversity under Intellectual Property Law: Toward a New International System" (1995) 10 J Environ Law Litigation 1.

Felipe Gomez Isa "UNDRIP: An Increasingly Robust Legal Parameter" (2019) 23 IJHR 7.

Grant Isaac and William Kerr "Bioprospecting or Biopiracy: Intellectual Property and Traditional Knowledge in Biotechnology Innovation" (2004) 7 JWIP 35.

Michael Jeffrey "Bioprospecting: Access to Genetic Resources" (2002) 6 Sing J Intl & Comp L 747.

Surinder Kaur "Protecting Traditional Knowledge: Is a Sui Generis System an Answer?" (2004) 7 JWIP 765.

Konstantia Koutouki "The Nagoya Protocol: Sustainable Access and Benefit-Sharing for Indigenous and Local Communities" (2012) Vt J Envtl L 513.

Jessica Lai "Māori Traditional Knowledge and New Zealand Patent Law: The 2013 Act and the Dawn of a New Era?" (2014) 17 JWIP 34.

Jessica Lai, Daniel Robinson, Tim Stirrup, Hai-Yuean Tualima "Māori knowledge under the microscope: Appropriating and patenting of mātauranga Māori and related resources" (2019) 22 JWIP 205.

Rhys Manely "Developmental Perspectives on the TRIPS and Traditional Knowledge Debate" (2006) 3 Macquarie J Intl Comp Envtl L 113.

Anja Meyer "International Environmental Law and Human Rights: Towards the Explicit Recognition of Traditional Knowledge" (2001) 10 RECIEL 37.

Jeremy Morse "Nurturing Nature, Nurturing Knowledge: The Nagoya Protocol on Access and Benefit Sharing" (2011) 7 ILB 3

Mohan D Nair "TRIPS, WTO and IPR: Protection of Bioresources and Traditional Knowledge" (2011) 16 JIPR 35.

Kuei-Jung Ni "Traditional Knowledge and Global Lawmaking" (2011) 10 NWUJINTL Hum Rts 85.

Freedom Kai Phillips "Intellectual Property Rights in Traditional Knowledge: Enabler of Sustainable Development" (2016) 32 Utrecht Journal of International and European Law 1.

Jo Recht "Hearing Indigenous Voices, Protecting Indigenous Knowledge" (2009) 16 ICJP 233.

Emily Ricciardi "How New Zealand's Adoption of the Nagoya Protocol Would Enhance Protection of Māori Traditional Knowledge" (2019) 28 Minnesota Journal of International Law 281.

Gurdial Singh Nijar "Incorporating Traditional Knowledge in an International Regime on Access to Genetic Resources and Benefit Sharing: Problems and Prospects" (2010) 21 EJIL 457.

Insoon Song "Old Knowledge into New Patent Law: The Impact of United States Patent Law on Less Developed Countries" (2005) 16 Ind Intl & Comp L Rev 261.

Shannon Smith "All Hands On Deck: Biopiracy & Available Protections for Traditional Knowledge" (2014) 10 J Animal & Nat Resource L 273.

Gavin Stenton "Biopiracy within the Pharmaceutical Industry: A Stark Illustration of how Abusive, Manipulative and Perverse the Patenting Process can be towards Countries of the South" (2004) EIPR 17.

Tim Stirrup "Bioprospecting, the Nagoya Protocol and Indigenous Rights: A New Zealand Perspective" (2016) 107 Intellectual Property Forum 53.

Brendan M Tobin "Bridging the Nagoya Compliance Gap: The Fundamental Role of Customary Law in Protection of Indigenous Peoples' Resource and Knowledge Rights" (2013) 9 Law Envt & Dev J 144.

Stephen Tulley "The Bonn Guidelines on Access to Genetic Resourcs and Benefit Sharing" (2003) 12 RECIEL 84.

Deepa Varadarajant "A Trade Secret Approach to Protecting Traditional Knowledge" (2011) 36 Yale J Intl L 371.

Urmika Vinay Tripathi "Biopiracy: Myth or Reality" (2014) 2 ELSJ 21.

Joseph Williams "Lx Aotearoa: A Heroic Attempt to Map the Māori Dimension in Modern New Zealand Law" (2013) 21 Waikato L Rev 1 at 30-31.

Seamus Woods "Patents, PVRs and Pragmatism: Giving Effect to the WAI 262" (2013) 19 Canterbury L Rev 97.

G Government Materials

Department of Conservation *Biodiversity in Aotearoa: An overview of state, trends and pressures 2020* (Department of Conservation, August 2020).

Department of Conservation *New Zealand Biodiversity Strategy* (February 2000).

Department of Conservation *New Zealand's Fifth National Report to the United Nations Convention on Biological Diversity. Reporting period: 2009–2013* (2014).

Department of Conservation *New Zealand's Sixth National Report to the United Nations Convention on Biological Diversity. Reporting period: 2014–2018* (Wellington, New Zealand, 2019).

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services *Summary for Policymakers of the IPBES Global Assessment Report on Biodiversity and Ecosystem Services* (2019).

Ministry of Business, Innovation and Employment (MBIE) *Disclosure of origin of genetic resources and traditional knowledge in the Patents regime* (Discussion Paper, September 2018).

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

H Reports

Roderick Abbott *Are Developing Countries Deterred from Using the WTO Dispute Settlement System? Participation of developing Countries in the DSM in the years 1995–2005* (European Centre for International Political Economy, 2007).

Daniel Bodanksy *Framework Convention/Protocol Approach* (World Health Organisation, January 1999).

Charles Lawson *The Role of 'Soft Law' Guidance in Different Jurisdictions* (International Union for the Protection of New Varieties of Plants, Publication No 358, October 2013).

International Union for Conservation of Nature *An Explanatory Guide to the Nagoya Protocol on Access and Benefit-sharing* (IUCN Environmental Policy and Law Paper No 83, 2012).

Chidi Oguamanam *Tiered or Differentiated Approach to Traditional Knowledge and Traditional Cultural Expression: The Evolution of a Concept* (Centre for International Governance Innovation, Paper No 185, August 2018).

Ruth L Okediji *Traditional Knowledge and the Public Domain* (Centre for International Governance Innovation, Paper 176, June 2018).

Brendan Tobin and Krystyna Swiderska *Speaking in Tongues: Indigenous Participation in the development of a sui generis regime to protect traditional knowledge in Peru* (International Institute for Environment and Development, London, 2001).

Waitangi Tribunal *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity, Te Taumata Tuarua* (Wai 262, 2011).

World Bank *The Role of Indigenous peoples in Biodiversity Conservation: The Natural but Often Forgotten Partners* (May 2008).

World Intellectual Property Organisation (WIPO) *Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions: An Overview* (October 2012).

WIPO *A Stronger Voice for Indigenous and Local Communities in WIPO's work on Traditional Knowledge, Traditional Cultural Expressions and Genetic Resources: The WIPO Voluntary Fund* (2007).

I Internet Resources

Catherine Saez "Indigenous Peoples Walk out of WIPO Committee on Genetic Resources" (22 February 2012) Intellectual Property Watch <www.ip-watch.org>.

Catherine Saez "Do WIPO Delegations Want Indigenous Peoples' Participation?" (8 July 2014) Intellectual Property Watch <www.ipwatch.org>.

Convention on Biological Diversity (CBD) "Country Profiles: New Zealand" <www.cbd.int>.

CBD "List of Parties" <www.cbd.int>.

CBD "Parties to the Nagoya Protocol" <www.cbd.int>.

CBD "Traditional Knowledge and the Convention on Biological Diversity" <www.cbd.int>.

Critical Ecosystem Partnership Fund "New Zealand" <www.cepf.net>.

Danny Huntington "WIPO Renews Mandate for IGC on Genetic Resources, Traditional Knowledge, and Folklore" (17 December 2019) Fédération Internationale Des Conseils En Propriété Intellectuelle <www.blog.ficpi.org>.

Government of Canada "Nagoya Protocol on access to genetic resources and benefit sharing" <www.canada.ca>.

Ministry of Business, Innovation and Employment "Disclosure of origin requirements in the patents regime" <www.mbie.govt.nz>.

New Zealand Intellectual Property Office "Māori Advisory Committees" <www.iponz.govt.nz>.

Office of the High Commissioner "Indigenous rights declaration endorsed by States" (23 December 2010) <www.ohchr.org>.

United Nations Department of Economic and Social Affairs "United Nations Declaration on the Rights of Indigenous Peoples" <www.un.org>.

Wendy Wendland "Protecting Indigenous Knowledge: A personal perspective on international negotiations at WIPO" WIPO Magazine (December 2019) <www.ipwatch.org>

William New "In 'Great Shame' WIPO Fund for Indigenous Peoples' Participation Running Dry" (26 April 2013) Intellectual Property Watch <www.ip-watch.org>.

World Intellectual Property Organisation (WIPO) "New Contributions to the WIPO Voluntary Fund" (1 October 2019) <www.wipo.int>.

WIPO "Summary of IGC 39" (25 March 2019) <www.wipo.int>.

World Trade Organisation (WTO) "Overview" <www.wto.org.nz>.

WTO "Overview: The TRIPS Agreement" <ww.wto.org.nz>.

J Other Sources

Julien Chaisse *The Dispute Settlement Crisis in the World Trade Organization: Issues, Challenges and Directions* (online looseleaf ed, Research Outreach).

Susan Corbett "Governance Systems for Access to and Use of Indigenous Knowledge and Culture: A New Zealand Perspective" (SSRN, 7 March 2017).

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) "Nature's Dangerous Decline 'Unprecedented' – Species Extinction Rates Accelerating"(press release, 7 May 2019).

IGC *Practical Guide for Observers* (online ed, WIPO).

International Indigenous Forum on Biodiversity *Statement of the International Indigenous Forum* (press release, 21 February 2012).

John Key "National Govt to support UN rights declaration" (press release, 20 April 2010).
Marisella Ouma "Traditional knowledge: the challenges facing international lawmakers" *WIPO Magazine* (online ed, February 2017).

Arthur Manuel and Debra Harry "Indigenous Voices Silenced in Negotiation of International ABS Protocol" *First Nations Strategic Bulletin* (Canada, November 2010).

Te Hunga Roia Māori o Aotearoa *Submission: Bioprospecting Discussion Document* (October 2007).

The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples (1993).

United Nations "General Assembly Adopts Declaration on Rights of Indigenous Peoples; 'Major Step Forward' Towards Human Rights for All, Says President" (press release, 13 September 2007).

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