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Legal geographies of kava, kastom and indigenous knowledge: Next steps under the Nagoya Protocol

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ABSTRACT

A binding international regulatory regime over access and benefit-sharing relating to biological resources and related traditional (including Indigenous) knowledge was established through 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 2010* (Nagoya Protocol), which entered into force in October 2014. The Nagoya Protocol encourages country Parties to take into consideration Indigenous and local communities' customary laws, community protocols and procedures, as applicable, with respect to traditional knowledge associated with genetic resources and encourages support for the creation of community protocols. With a focus on the kava plant (*Piper methysticum*), this article explores some of the issues associated with implementation of the Nagoya Protocol at state and community scales. We explore concerns around patent activity and the potential impacts upon customary uses of kava especially in Vanuatu. We then consider some of the recent activities and reforms being undertaken in relation to *kastom* in Vanuatu, which may be of relevance for the development of access and benefit-sharing regimes and for the improved regional protection of Indigenous knowledge.

1. Introduction

This article considers the impetus under 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 2010](#) (Nagoya Protocol), which entered into force in October 2014, to encourage recognition of customary laws and community protocols relating to genetic resources and associated traditional knowledge. Like many sources of international law, the Nagoya Protocol contains some ambiguous language and its provisions on traditional knowledge are limited. Some Indigenous authors have also criticised the language on 'sovereign rights over natural resources' in the [United Nations Convention on Biological Diversity 2002](#) (CBD) (Harry, 2011). Despite this, it does present new legal opportunities for the recognition of customary law and governance within state law structures (Robinson and Forsyth, 2016; Bavikatte and Robinson, 2011), and we focus here on the Pacific and particularly Vanuatu. These add to the more substantive rights recognised in the non-binding [United Nations Declaration on the](#)

[Rights of Indigenous Peoples 2007](#) (UNDRIP), such as those expressed under articles 9–12 and articles 24–25.

The Nagoya Protocol explicitly encourages country Parties to take into consideration Indigenous and local communities' customary laws, community protocols and procedures, as applicable, with respect to traditional knowledge associated with genetic resources (article 12.1); and encourages support for the creation of community protocols (article 12.3(a)). In the Pacific several countries have signed and/or ratified the Nagoya Protocol: Vanuatu, Federated States of Micronesia, Fiji, Samoa, Marshall Islands, Palau, Tonga and Solomon Islands. Considerable legal analysis has already been undertaken on the potential legal processes for implementing the Nagoya Protocol and for protecting traditional knowledge in this region (Robinson and Forsyth, 2016; Forsyth, 2012; Buck and Hamilton, 2011; Nijar, 2011). Adopting a legal geography framework, the research underpinning this article focuses on the translational space between policymaking, legal implementation, and local communities. Given the prevalence and relative strength of customary systems in the Pacific, there is considerable opportunity for

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the documentation and recognition of customary law — and subsequent protection of Indigenous knowledge — where state-based regulatory regimes are appropriately harmonised to reflect their ecological contexts (see [Techera, 2006](#)).

As an entry point into these issues, this article focuses on patent activity relating to the kava plant (*Piper methysticum*) and concerns that might arise from this, regarding the protection of Indigenous knowledge. This article then considers efforts being made under laws including the amended *Kava Act (2002, amended 2015)*, the [Protection of Traditional Knowledge and Expressions of Culture Act 2020](#), and the [Custom Land Management Act No.33 of 2013](#). These laws regulate kava and have led to codification of custom in some parts of Vanuatu and specific mapping of the boundaries of different cultural-linguistic groups. The paper also acknowledges the role of complementary legislation that has been developed to protect traditional knowledge and potential challenges that remain — particularly where such knowledge is shared between different groups of customary landowners and/or transcends state-based jurisdictional boundaries.

Legal geography provides a framework for analysis of the intersection between intellectual property law, biodiversity conservation law, customary law and governance. Importantly, this framework foreshadows the difficulties of placing jurisdictional boundaries between spatially different realms of Indigenous ecological knowledge and points to the need for exploration and recognition of customary law in legal systems. Finally, in recognition of the need for further consideration of these issues at a regional scale, this article sets out future research opportunities relevant Indigenous knowledge in the Pacific.

2. Legal geography in practice

Legal geography is a relatively new disciplinary field, inspired in part by the insights of human geography, that emphasises the mutually constitutive relationship of law and place/space (for an overview, see [O'Donnell, Robinson and Gillespie, 2020](#); see also [Blomley, 1994](#); [Braverman, 2014](#)). In practice, legal geographers seek to understand the operation and intersection of laws at differing spatial scales and upon specific geographical contexts ([Bartel and Graham, 2016](#); [Bennett and Layard, 2015](#); [Delaney, 2015](#)). Implicit in legal geographical research, therefore, is an understanding that law/s have an important role in shaping ecological realities, but so too do these realities have agency, in shaping the development and implementation of law/s (e.g. the Whanganui River in Aotearoa New Zealand has been given legal personhood). Moving beyond positivistic notions of law, legal geographers' embrace with openness the ever dynamic coming together of people, law and place. In so doing, they employ a range of quantitative and qualitative methods to generate their analysis (see generally [O'Donnell, Robinson and Gillespie, 2020](#)) — one of which, patent landscaping/mapping and analysis, will be explored further below.

In the context of the Pacific, where international, national and customary legal systems intersect, our legal geographical analysis is particularly concerned with the impacts of such laws upon different Indigenous and cultural groups, and communities. Importantly, this includes an acknowledgment of the complexities of practising legal pluralism and multi-layered legal regimes in postcolonial contexts — particularly where state-based recognition of customary law and governance is occurring (see [Forsyth, 2009, 2012](#); [Gillespie, 2018](#)). Where legal geography meets legal pluralism, we acknowledge authors such as [Vermeylin \(2010: 53\)](#) who encourages researchers to 'embrace the idea of a[n intersecting] legal space where law-making consists of a praxis that interlocks a whole range of legal actors ranging from international institutions to daily localised legal actors'.

Furthermore, in relation to Vanuatu kava and traditional knowledge, we seek to understand how intellectual property law utilises patents as a tool to isolate, re-interpret and commodify aspects of the more-than-human world ([Brown et al., 2019](#); [Whatmore, 2006](#)). In so doing, patent laws detach genetic resources, such as traditional medicinal plants

like kava, from their customary legal contexts. In order to understand kava from a legal geographical perspective, we need to not only appreciate its function as a source of consumer-driven research, development and production; rather, we must also seek to understand the customary law (*kastom*) relating to its use in places like Vanuatu, and the belief systems that underpin its use. Importantly, we must also appreciate the influences of biodiversity conservation law (operating at the international and national scale) in shaping national legal responses that seek to recognise systems of customary law and governance and protect Indigenous knowledge from misappropriation — if only to share economic benefits with traditional knowledge-holders.

Many authors have been critical of the way that intellectual property regimes re-orient, de-materialise and commodify the more-than-human world (see, e.g. [McAfee, 1999](#); [Parry, 2004](#)), including in the context of Indigenous rights ([Oguamanam, 2014](#); [Robinson, 2010](#)). This article builds upon these critiques and explores the ways that new and existing regulatory regimes can strengthen the agency of Indigenous people through the recognition of customary laws. Importantly, we consider opportunities for so-called formal legal systems to better align with pre-existing legal geographies shaped by *kastom* / customary law and governance systems and their associated Indigenous belief systems. Our aim is to strengthen the Indigenous knowledge systems that are otherwise being undermined by global trends catalysing the commercialisation of this knowledge. Through our wider research efforts, we (the authors) are investigating the potential for self-determined legal tools such as community protocols to reify this *kastom* (for examples of other work that explores the rights and values of Indigenous communities in the context of intellectual property law, see e.g. [Bowrey, 2006](#); [Anderson, 2009](#)). Although protocols are not an explicit focus in this article, we acknowledge their significance to our legal geographical endeavours. With this theoretical context in mind, we now turn to kava-related patents, with specific reference to both the responsive regulatory regimes being developed in Vanuatu and the implications for traditional knowledge across the Pacific region. Vanuatu is an ideal place to study the endurance of customary law and traditions (*kastom*) given the Vanuatu Constitution Article 94 (3) states: Customary law shall continue to have effect as part of the law of the Republic of Vanuatu.

3. Patent landscaping/mapping: identification of 'species of interest'

Patent landscape analysis is a useful method for legal geographers considering the interaction between intellectual property law and its specific geographic context. The method enables researchers to examine the utilisation of biological resources in innovations registered and/or protected by a patent. The most comprehensive quantitative studies relating to patents and biodiversity have been conducted at the global level by [Oldham \(2006](#); see also [Oldham, Hall and Forero, 2013](#)). As [Bubela et al. \(2013: 202\)](#) explain, 'a landscape is an analysis of the relationships between multiple sets of indicators measured against temporal, technical or spatial dimensions' and can be applied to patents, scientific articles, clinical trials and other indicators ([Robinson and Raven, 2017](#)). The application of a quantitative landscaping analysis to global patent searches serves to identify both the scale and extent of utilisation of biological resources and associated traditional knowledge. Following this, further qualitative analysis can be undertaken to identify potential incidents of misappropriation of traditional knowledge, also known as 'biopiracy' (see generally [Dutfield, 2015](#)). Importantly for this analysis, these quantitative and qualitative analyses can assist with the identification of issues that can inform policymaking relevant to the implementation of the Nagoya Protocol.

Regarding the wider Oceania region, we have conducted patent landscaping analyses for 321 Australian native plants with known Indigenous uses. Through this study, ([Robinson and Raven, 2017](#)) we have uncovered over 1300 patents and applications, including 150 relating to endemic species. For example, initial landscaping/mapping

highlighted the existence of an Australian patent over *Pittosporum angustifolium* (traditionally known as Gumbi Gumbi) for processes relating to extracts of the plant. The patent itself directly cites Indigenous knowledge and broadly relates to treatment of sicknesses, consistent with known traditional uses of the plant. The study also identifies patents over *Alphitonia excelsa* (Soap Tree or Red Ash) and *Nymphaea gigantea* (Giant Waterlily or Blue Waterlily) — both of which were also used traditionally for a range of ailments. Subsequent research undertaken by Robinson et al. (2018) has identified extensive literature relevant to these species, which in many cases published Indigenous knowledge to which the patents either directly or indirectly relate. Such case studies reveal the need for protection of traditional ecological knowledge in Australia, consistent with the legal framework established under the Nagoya Protocol.

The patent landscaping/mapping process, undertaken with the use of ethnobotanical texts to identify further potential misappropriations of knowledge, thus assists in identifying ‘species of interest’ that can form the basis of case studies to explore the implementation of the Nagoya Protocol. Ethnobotanical texts provide a publicly available source of information collected about Indigenous uses of plants, animals and other biota. However, these collections have often been undertaken without clear permissions or, in more recent cases, without the free, prior and informed consent (FPIC) of the local informants that is generally required for proper adherence to the UNDRIP. The patent landscaping process can therefore try to identify where past disclosures of Indigenous knowledge may have then led to further research and development, and subsequent commercial activity. While it is difficult to establish direct links between past ethnobotanical activity and commercial appropriation (once in the ‘public domain’ anyone can find and use the information), these findings can both serve as a marker of how traditional or Indigenous knowledge has been shared and, importantly, identify where there may have been a breach of international law.

Several patent databases enable patent mapping analysis and key examples include the World Intellectual Property Organization (WIPO) ‘PatentScope’ database¹, and the independent Cambia-developed ‘Patent Lens’ database². Structured keyword searches for species names can be made in these publicly available databases. Species names can be narrowed down to species with known uses, particularly those with uses identified by traditional or Indigenous knowledge systems. Although some species are endemic to one particular country, previous studies Robinson et al. (2020) have identified many species as having shared Indigenous knowledge across multiple countries and cultural groups. The transboundary nature of these analyses highlights the complexity of protecting traditional and Indigenous knowledge from potential misappropriation.

The authors of this article are using the patent landscaping/mapping method to undertake further studies in Australia and the Pacific, with an initial focus on plant species with uses identified by Indigenous knowledge systems that may be subject to biopiracy. As Mead (2007, p35) explains, ‘the Pacific has the dubious honour of providing to the world’s policy analysts, legislators, students and researchers in ethnobotany, bio-ethics and indigenous intellectual property policy and law, some of the very best examples of unethical practice’. A current Access and Benefit Sharing Capacity Development Initiative Project is undertaking further analysis of patents that have been lodged over plant species across the Pacific, with a specific focus on species present in Vanuatu and the Cook Islands.³ Through this project, thousands of patents have now been identified relating to plants found in the Pacific that have Indigenous knowledge associated with them, particularly as

medicinal plants (reported in more quantitative detail in Robinson et al. (2020)). Many of these plants are found across the Pacific region as well as across the tropics globally, and so there are varying customs and different cultural uses of the plants. Further detailed analysis of both traditional uses and the patent claims is also currently taking place, but there are some preliminary results that will be discussed below in relation to the popular traditional drink, kava (*Piper methysticum*).

4. Kava: From *kastom* (customary) drink to urban hipster brew

Kava is a well-known plant native to the Pacific, particularly the tropical parts of Oceania. Roots and rhizomes from the noble cultivars of the kava plant, *Piper methysticum* G. Forst. (family *Piperaceae*)⁴ (see Fig. 1) are used to prepare a non-fermented beverage with relaxant effects that is today used for traditional ceremonies as well as for social and recreational purposes, and which has also been traditionally used in ceremonies (Aporosa, 2019; McDonald and Jowitt, 2000; Emiliani, 2017; Forsyth, 2009). Since Vanuatu achieved independence in 1980, kava has been consumed in urban centres and villages on a regular basis by both men and women (in traditional contexts, women do not usually consume kava). In the Vanuatu capital of Port Vila, there are now hundreds of bars serving kava where people meet to relax after work and socialise well into the evenings. At urban *nakamals* (a term which today refers to either a community meeting place or a kava bar), kava roots are mechanically ground; traditionally, the roots were chewed or ground into a pulp through other means and the active components then extracted in water. The resulting brew, which has non-euphoric relaxant effects, has been used as a ceremonial drink in the Pacific islands for hundreds of years – often intended to stimulate ‘clear-headed’ discussions (D’Abbs, 1995; Aporosa and Tomlinson, 2014; Aporosa et al., 2020). Kava is considered a sacred plant in the South Pacific and is used in a variety of ceremonies, however, it is also used in traditional medicine to relieve anxiety, stress, fatigue, and insomnia and to treat urinary



Fig. 1. A healthy kava garden on Aneityum island, Vanuatu. Source: Author: Francis Hickey, August 2017.

⁴ A Codex Alimentarius (joint FAO /WHO) Food Standards Programme Coordinating Committee for North America and the South West Pacific (15th session, Port Vila, Vanuatu, 16–20 September 2019) has discussed a Proposed Draft Regional Standard for Kava Product that can be used as a Beverage When Mixed with Water. This standard appears to be largely designed to ensure quality and safety with regards to kava use. For example, only noble varieties of kava are allowed under the standard. Kava of the wild, *Piper wichmannii* and Two-day (Tudei) varieties are excluded. Procedures for identification, quality, storage, hygiene and labelling are detailed.

¹ <https://www.wipo.int/patentscope/en/>, accessed 23 March 2020.

² <https://www.lens.org/>, accessed 23 March 2020.

³ Australian Research Council (ARC) Discovery Project Indigenous Knowledge futures: Protecting and promoting Indigenous knowledge (DP DP180100507), which runs between 2018 and 2022.

tract infections and menopausal symptoms. It also has a range of potential pharmacological, antioxidant, and even anti-cancer properties (Lebot and Cabalion, 1988; Lim, 2016).

Cultivated kava plant (*Piper methysticum*) now grows in a multitude of locations across the Pacific islands. It is believed to derive from a wild progenitor, *Piper wichmannii* C.DC., which is a fertile *Piper* species indigenous to New Guinea, the Solomon Islands and Vanuatu (Lebot, Merlin and Lindstrom, 1997). Lebot, Merlin and Lindstrom (1997: 5) suggest that ‘farmers in the Northern islands of Vanuatu were the first to select and develop the species as a vegetatively reproduced root crop’. This crop was domesticated less than 3000 years ago in Vanuatu before being carried eastwards via traditional trade routes to Fiji and Polynesia, and westwards into New Guinea and parts of Micronesia.

In addition to these indications about the genetic and breeding origins of kava, there are also multiple *kastom* or traditional stories about the origins of the plant, which give it a kind of ‘more-than-plant’ status that goes beyond its depiction as ‘genetic material’. In Hawaiian myths, kava was imported by the gods Kane and Kanaloa, who subsisted on the plant as they roamed across the Hawaiian archipelago planting kava and causing springs to flow where there was no ready supply of water with which to make the kava brew (Beckwith, 1970). In Vanuatu, it is often known as *maloku* or *mologu* (from Ragu language in North Pentecost), or a similar variant, and there are many stories concerning its traditional use in Vanuatu culture (Taylor, 2010). A common theme found in stories about kava’s supernatural, womanly or animal origins is that the first kava plant sprouted from the buried corpse of a woman or an animal (Lindstrom, 1997). Vanuatu kava origin myths and stories often speak to wider cultural notions in *kastom* about proper relations between men and women, leaders and followers and between the living and the dead which Lindstrom (1997: 129) refers to as the ‘germinant corpse’. Kava is embroiled in the linkage between death and life, fertility, and growth (Turner, 2012) and was traditionally used to enhance communication with ancestral spirits (Taylor, 2010). For example, when a traditional tabu was placed on a reef to prohibit fishing activities so as to manage marine resources, kava would be used by a traditional specialist to commune with ancestral spirits to engage them to watch over the area to ensure compliance (Hickey, 2007). The effects and agency of kava has influenced and regulated human behaviour in these *kastom* stories and practices, highlighting the significance of this ‘more-than-plant’ in Vanuatu and the wider Pacific (e.g. Head and Atchison, 2009). As kava was central to the traditional cosmology of Vanuatu, the more fundamental Christian religions actively campaigned against its use (Taylor, 2010; Lindstrom, 1997; Aporosa, 2014) and this continues today to some degree within some denominations.

For many people within the Ni-Vanuatu ethnic group, kava is a cultural icon and important source of identity and pride that links people to their ancestral traditions in an almost mystical *taem befo* (Bislama for ‘time before’). For this reason, there is an inherent resentment against foreigners being involved in the commercialisation of kava, as they are seen as interlopers with no historical or cultural connection to the plant. Instead, commercialisation of the plant by foreigners represents just another form of biopiracy, which is connected with a long history of European ‘Men of Enterprise’ arriving to Vanuatu’s shores (starting in the early 1800s) to exploit resources such as sandalwood, giant kauri, sea cucumbers (*beche-de-mer*), or otherwise alienate vast tracts of land for coconut plantations and other crops. For this reason, the operation of kava bars is on the Vanuatu Government’s reserve list for Ni-Vanuatu only. However, with passport sales increasingly used as a source of government revenue, expatriates are now eligible to operate kava bars provided they first acquire Ni-Vanuatu citizenship. This requirement, however, does not always diminish the resentment felt by the local people about foreigners profiting from this spiritually powerful and culturally significant plant.

Forsyth (2009) explains the typical operation of the *kastom* system in Vanuatu and dispute settlement procedures which involve meetings, often involving many members of each community, in a *nakamal*. In

modern Vanuatu, cash payments may be used to resolve disputes, although *kastom* payments of pigs, pig tusks, mats, kava and root crops (or other traditional wealth items) are also still used, especially in rural areas (Forsyth, 2009). In a *kastom* observation study, 33 per cent of cases involved a ceremony in which the parties drank kava or ate together, there was an apology, and a *kastom* payment was made or the parties shook hands (Forsyth, 2009). As Forsyth (2009: 105) explains, kava is commonly involved in some form of reconciliation which varies from island to island in Vanuatu, for example:

In the Torres Islands, the reconciliation ceremony involves a kava ritual. One person makes the kava and gives two shells of kava to each party who then have to drink the shells all at once. This is said to symbolise washing the sin of the conflict from your eyes because the truth and facts of the world enter your body through your eyes. From that moment on the grievances should be buried.

Clearly, kava has been traditionally utilised for its calming and peace-giving qualities. In recent times, Taylor (2010) points out that oral-historical narratives remember that the first kava bar in Luganville on Espiritu Santo played a crucial role in establishing harmonious relations between the Ni-Vanuatu and many mainly francophone foreigners that frequented there, following the 1980 ‘Santo Rebellion’. It is believed that kava was introduced to the Western world by Captain James Cook in 1768 (Lebot, Merlin and Lindstrom, 1997), and initially experienced limited use. However, in recent decades, kava has gained considerable popularity in many Western countries, where it is promoted in supplemental form for anxiety, insomnia, and stress, and as a relaxant brew served in ‘hipster bars’ and health food shops (Wolinski, 2018). Given these recent trends, concerns have again escalated in the Pacific about foreign companies gaining patents relating to the kava plant, the overseas production of kava in non-traditional countries,⁵ (Vanuatu Government, 2002b) and price pressures that export markets have brought to domestic consumption markets.

The Government of Vanuatu recognizes the importance of kava not only as inherent to the culture of Vanuatu, including for ceremonial and medicinal purposes, but also as an agricultural product for local domestic use and as a significant export crop. To protect and regulate kava (or “green gold” as it has recently been referred to) production for commercial purposes, the *Kava Act* was passed in 2002 and commenced in 2008 (amended 2015) (Vanuatu Government, 2002b).

Of relevance is the legal definition of kava provided in the *Kava Act* (2002):

1. Definitions. In this Act unless the contrary intention appears, kava means:
 - (a) plants of the species, *Piper methysticum*; or
 - (b) the traditional beverage obtained by cold water extraction of the plant’s underground organs.

Kava products include dried kava, bark, peelings and makas of kava. Makas means the residues remaining after the cold-water extraction of the kava plant’s underground organs to obtain the traditional beverage. Wild kava (*Piper wichmannii*) and “two day” (*tudei*, named “two day” in Bislama due to the duration of the effects) kava are both prohibited to be sold for commercial or export purposes due to the health risks associated with consuming these kavas.

The *Kava Act* (2002), Schedule 3, also specifies that kava (including medicinal kava) produced for local commercial use must be one of the noble or medicinal varieties listed in the Act, must be produced organically (“free of artificial fertilizers, pesticides and other residues”) and must be cultivated for at least three years prior to harvesting. Only

⁵ Hawai’i was a traditional producer, so local production and use is not generally resented and efforts to revive kava varieties and use is actively pursued in Hawai’i, and at least one kava bar now operates in Honolulu.

Indigenous ni-Vanuatu may sell, or offer to sell kava or kava products, or in the case of companies, if at least 51% of its shares are owned or controlled by Indigenous ni-Vanuatu. For commercial export purposes, only kava of the noble varieties listed in the Act may be exported, and they must be cultivated organically and must be cultivated at least 5 years old prior to harvest.

The Act, Schedule 3, also states clearly that “Nothing in this Act is to be taken to prevent a person from cultivating any variety of kava for personal use.” As there are an estimated 100 varieties of different kava cultivars found throughout Vanuatu, this provides the option for people to continue to cultivate specialty kavas for cultural, medicinal or personal reasons.

The Act, Schedule 9, also prohibits a person from exporting or exchanging with a person outside of Vanuatu stumps, shoots, growing buds, lateral branches and/or other planting materials of kava that could be used for propagation, so as to protect Vanuatu’s exclusive right to cultivating the kava’s found in Vanuatu. This is one avenue adopted by the Vanuatu Government to protect the traditional knowledge associated with the rich variety of kava cultivars that the previous generations of kava growers have passed on to the present, where kava is now a significant cash crop.

Given the issues associated with enforcing the provisions of the Kava Act of 2002, like if, in fact, they are organically grown, or only noble varieties are sold, and the need for quality control to protect the growing kava export industry, the Act was subsequently amended in 2015 and this version came into effect in 2017. The amendment outlines the role of the Director of Agriculture in research and development of the kava industry, including implementation of government policies, monitoring, preparing codes of practice and reporting back to government. It also outlines the powers of the Director in delegating powers to other officers, including “authorized officers” to inspect kava plantations and processing facilities, collect data/evidence, confiscate non-noble kava not in compliance with the Act, as well as inspect facilities that are licensed to export dried kava to ensure compliance with the Act and amendments.

The provisions in the original Act of 2002 (Parts 2 and 3) that only Indigenous ni-Vanuatu may sell kava and that it may only be organically produced, and the age of kava for domestic and export outlined above were not altered in the amendment. However, the provision in the original Act whereby at least 51% of any Company exporting kava must be controlled by Indigenous ni-Vanuatu appears to be undermined by the amendment Part 3A(4) that states: “The Director may refuse to grant or renew a license under this section if: the applicant is not a citizen⁶ of Vanuatu.”

The original definitions were also repealed and substituted with just two categories of kava. These are the noble varieties of kava and “narafala⁷ kava”, which includes all non-noble varieties including wild kava (*Piper wichmannii*), as well as medicinal kava, and two-day kava. Under the amendments in Schedule 6, all narafala kavas are prohibited from being sold commercially for the domestic market, or exported, unless they are specifically requested by an overseas buyer, providing it complies with the Plant Protection Act.

Also, of interest in regionally regulating kava is that the UN organization Codex Alimentarius Commission (a joint FAO/WHO

Commission) agreed to Vanuatu hosting an Electronic Working Group (EWG) in 2016 to prepare a draft regional standard for kava as a beverage when mixed with potable water. This document is now in its first draft, as of 2019, of the *Regional Standard for Kava Products for Use as a Beverage*⁸ which culminates some fifteen years of discussions. The document covers which cultivars are suitable for consumption as a beverage, which parts of the plant are suitable for use, dried kava product moisture content, the method of preparation using only potable water extraction which precludes the use of other solvents and extraction methods, the analysis of kavalactones and flavokavins as a quality control measure to strengthen the use of Codex Alimentarius regional standards, along with labelling protocols and other relevant issues. This standard once completed will assist in regulating the regional production and global trade in kava.

5. Patent landscaping of Kava

Recent patent landscaping undertaken by the authors has identified 200 patents (including current applications) from 132 ‘patent families’, using a structured patent search for ‘title, abstract and claims’ in Patent Lens.⁹ Because patents are often filed in multiple jurisdictions, they can be described in families – and so the lesser number is indicative of patent innovation surrounding the kava plant. The search used the keyword ‘Piper methysticum’ and a ‘structured search’ was employed in order to limit the possibility of spurious mentions of the species in the patent documents or cases where it is not critical to the patent. While some of these patents may be for processes or methods of producing extracts from the kava plant for different uses, some of them are explicitly for extracts derived from the plant biological material itself. These patents vary in terms of the field of use, the part of the plant used, the purpose of intended use, as well as many other variables. From the 200 identifiable kava-related patents, there are several patents that create unique examples for exploring the complexities associated with implementing the Nagoya Protocol for specific species with known traditional uses. Three examples will be discussed in detail below.

5.1. Patent 1: ‘Piper Methysticum Plant Extract’

Patent WO2002/007743 A3 was published in 2003 and is a WIPO patent entitled ‘Piper Methysticum Plant Extract’. The abstract explains that the:

invention relates to an extract taken from *Piper methysticum* G. Forster, which is extracted from above-ground growing parts of these plants, especially from the leaves. Said extract offers advantages with regard to the action and extraction and, according to HPLC analysis, is distinctly different from known extracts taken from root material. One such extract can be obtained by extracting substances from above-ground growing plant material of *Piper methysticum* G. Forster, preferably from the leaf material, and is suited for use in medicaments having an anxiolytic, anticonvulsive, muscle relaxant, narcosis increasing, analgesic, sleep-inducing, anti-inflammatory and/or neuroprotective effect.¹⁰

In this case, the patent has likely been granted as ‘inventive’ because it is utilising a different part of the plant; it specifically focuses on use of the leaves of the plant rather than the root, as offering certain

⁶ Over recent years Vanuatu has been selling citizenship in order to generate revenue and attract investors. China has been one of the main countries targeted. Revenue from citizenship sales is now reputedly the main source of Government revenue (https://dailypost.vu/news/passport-sales-out-earn-vat/article_82ac5f99-e80a-54e3-b924-077966309a64.html)

⁷ Narafala is Bislama for ‘Other’

⁸ The draft standard can be found here (9 March 2020): http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FMeetings%252FCX-732-15%252FWorking%2Bdocuments%252Fna15_13e.pdf

⁹ Patent Lens, accessed 27 August 2018 <<https://www.lens.org/lens/>>.

¹⁰ WO2002/007743 A3, published 3 April 2003, entitled ‘Piper Methysticum Plant Extract’ identified through Patent Lens, accessed 27 August 2018 <<https://www.lens.org/lens/>>.

advantages. Importantly, most of the Indigenous knowledge representing ‘prior art’ relates to use of the root of the kava plant.¹¹ Regardless, patents of this type are concerning in that Indigenous knowledge has almost certainly contributed to the development of this ‘invention’ — particularly in terms of the plant’s known properties — without appropriate attribution. Indigenous knowledge about kava, for example, specifically covers its use as a relaxant and its calming effects and sleep-inducing qualities, amongst other things. This type of patent therefore likely ‘free-rides’ off traditional/Indigenous knowledge systems concerning its properties. As such, there should be some recognition of this, and potential benefit-sharing with the original providers of both the plant itself and the associated Indigenous knowledge regarding its use. This latter idea is the central fulcrum of the ‘access and benefit-sharing’ provisions that operate under the CBD and the more recent Nagoya Protocol.

5.2. Patent 2: ‘Pipermethystine-free Extract of Piper Methysticum Useful for Treating Anxiety, Nervous Tension and Agitation’

Another example is the German patent DE 102004039012 A1 published 24 March 2005, entitled ‘Pipermethystine-free Extract of Piper Methysticum Useful for Treating Anxiety, Nervous Tension and Agitation’. The translated abstract obtained explains:

Pipermethystine-free extract of Piper methysticum (kava) is new. An independent claim is also included for producing an extract as above by a process comprising a primary extraction step, a purification step comprising liquid-liquid partition, adsorption-desorption on an ion-exchange or other resin or chromatographic separation to remove pipermethystine and/or other piperidine alkaloids, and optionally a concentration step to produce a dry extract.¹²

In this case, the claims appear to be for a method of producing an extract and for the extract itself, which is claimed to be “pipermethystine-free”. Pipermethystine is a toxic alkaloid present in the aerial portions of the kava plant such as the leaves, which was a matter of health concern in some jurisdictions – particularly Europe (Lechtenberg et al., 2008). There was a belief that imported commercial kava powder contained the compound and that it was causing liver problems or liver failure in some consumers of kava, which ultimately contributed to the closure of the market in Europe for a period (a withdrawal of marketing approval occurred). Subsequent studies have shown that powdered kava root typically contains only low quantities of the alkaloid (Showman et al., 2015; Abbott, 2016). Reputedly, challenges still remain in the trade of kava to the EU, due to ‘burden of proof’ safety requirements under the European Union Novel Food Regulations (EU 2015/2283) (Francis Hickey and Vincent Lebot, pers. comm, 9 March 2020). This particular patent appears to seek a way to create a safe extract in response to the European regulations and concerns. However, the purpose of the extract – for treating anxiety, nervous tension and agitation — is clearly also based on the Indigenous knowledge and traditional uses of kava. The same arguments raised above in relation to the likely effects of ‘free-riding’ off Indigenous knowledge systems, and the need for proper recognition and appropriate benefit-sharing arrangements may also apply to this patent.

¹¹ In intellectual property law, the term ‘prior art’ refers to all information that has been made available to the public before a patent claim is made – in this case, over an inventive use of the kava plant. Where a claimed patent is based on, or obvious as a result of, prior art (such as use of the root of the kava plant for calmativ purposes), then the claimed invention may not constitute a valid patent.

¹² DE 102,004,039,012 A1 published 24 March 2005, entitled ‘Pipermethystine-free Extract of Piper Methysticum Useful for Treating Anxiety, Nervous Tension and Agitation’ identified through *Patent Lens*, accessed 27 August 2018 <<https://www.lens.org/lens/>>.

5.3. Patent 3: ‘Kava Piper Methysticum Extract and Preparation Method Thereof’

A final patent worth examining is CN 101239104B — a Chinese patent granted to the China Food Industry Group Company and published on 19 January 2011 — entitled ‘Kava Piper Methysticum Extract and Preparation Method Thereof’. The translation of the abstract describes the invention:

Disclosed is a kava pepper extract and the preparation thereof, characterized in involving the following steps: collecting and sorting raw material, cleaning, drying, crushing, primarily extracting of alcohol, filtering, concentrating, drying and crushing, secondarily extracting of alcohol from residue, concentrating the secondary extract under a reduced pressure, smashing and mixing, and last the kava pepper extract is obtained. The invention has the advantages of safety, efficient and cost saving, with a kava lactone content and a glutathione content of the prepared kava pepper extract respectively of 20 to 50% and 0.1 to 0.8%.¹³

There is only a limited translation of this patent, therefore we cannot look at the claims in-depth. However, the patent lists a claimed kava extract and preparation method. The purpose of the patent method is unclear, however given the ‘food industry’ focus of the company, we can assume it is likely to be for human consumption. The patent-holder has made some argument about the benefits namely the safety, efficacy and cost-saving of creating an abstract with a limited kava lactone content and glutathione content. However, the patent-holder has used a common approach when describing its innovation; for instance, the patent refers to a broad range for the kava lactone content of 20 to 50%. This has the advantage of potentially restricting other companies from selling kava extracts with similar kava lactone content ranges. Although the patent-holder uses what may seem like a complicated method, there are many ways that one might dilute kava to limit the lactone content (see generally examples discussed above). Critically, all such methods build upon traditional knowledge requiring dilution of the kava plant to activate the properties of its ‘structurally unique lactones’ (Wang et al. 2018: 2). This patent might therefore raise validity concerns as well as the same concerns as the patents discussed above.

5.4. Patent summary

The three examples outlined above represent a small sample of the 132 patent families identified by the authors, in relation to uses of the kava plant. These examples reveal the potential issues that arise when Indigenous and traditional knowledge is firstly shared and later commercialised in the absence of regulatory regimes designed to protect the interests of Indigenous knowledge holders. Of course, some of the other identified patent families might be for very different purposes than those adopted in traditional contexts; for instance, they may involve new plant cultivars, or new uses of kava plant. Indeed, there are some patents that apply uses of the plant to cosmetic and skin-care applications. Many others, however, raise very similar questions to the ones raised in the above examples as to whether recognition and appropriate benefit-sharing provisions should be in place. With these points in mind, analysis must turn to future implementation of the Nagoya Protocol in order that traditional knowledge-holders can rightfully begin to influence the nature and extent of kava’s commercialisation.

¹³ Granted Patent: CN 101,239,104B, published 19 January 2011, entitled ‘Kava Piper Methysticum Extract And Preparation Method Thereof’ identified through *Patent Lens*, accessed 27 August 2018 <<https://www.lens.org/lens/>>.

6. Nagoya Protocol and implementation in Vanuatu — Legal and market-based mechanisms for the protection of traditional knowledge

In the years since the Nagoya Protocol has come into force (since 2014), there has been a renewed impetus and framework for analysing these challenges. Two articles of the Nagoya Protocol provide motivation for future participatory research and community-based activities. For instance, article 7 of the Nagoya Protocol directs Parties to take measures to ensure that traditional knowledge associated with genetic resources held by Indigenous peoples and local communities is ‘accessed with the prior and informed consent or approval and involvement of these’ communities and that ‘mutually agreed terms have been established’. Additionally, article 12 of the Nagoya Protocol directs Parties to take into consideration Indigenous peoples and local communities’ customary laws, community protocols and procedures with respect to traditional knowledge associated with genetic resources.

Vanuatu ratified the Nagoya Protocol in 2014 and is now implementing it through operation of the Biodiversity Advisory Council (the Council), established under sections 29–34 of the amended ([Vanuatu Government, 2002a](#)). The EMC Act is largely compliant with the Nagoya Protocol, although some amendments relating to monitoring and compliance are likely necessary to ensure its proper implementation. The Council is chaired by the Director of the Department of Environmental Protection and Conservation, and has a membership made up of several relevant government departments (Fisheries, Agriculture, Cultural Centre, Trade, Forestry, and Foreign Affairs). In brief, section 31 provides that the primary function of the Council is to advise the Minister on any matter relating to implementation of the CBD, particularly matters relating to commercial bioprospecting. As such, all bioprospecting activities require a permit - applications for which are to be determined by the Council. Under section 34(6) of the EMC Act, applicants will not be granted a permit unless the Council is satisfied that:

- (a) a legally binding and enforceable contract is concluded with custom landowners, or any owner of traditional knowledge, concerning: (i) rights of access; and (ii) rights of acquisition of any biological resource or traditional knowledge; and (iii) appropriate fees, concessions of royalties that will be charged for any research, or the acquisition of any biological resources or traditional knowledge, or for any commercial benefit that may be obtained.

Importantly also, section 32 of the EMC Act sets out that any contravention of these provisions (i.e. bioprospecting without a permit) is an offence which potentially carries jail terms and fines for non-compliance (see also part 5, relating to offences). The enforceability of these provisions, however, in relation to foreign researchers and bioprospecting companies is yet to be tested and may provide a major source of weakness in the regulatory regime. Moreover, in the example patents noted above, it is not known if the plant resources used for the research were obtained from Vanuatu, another Pacific nation, or from another source, for example a genebank or herbarium. Because of this disclosure issue, many countries have begun arguing for a patent requirement for ‘disclosure of origin’ in relation to use of genetic resources, such as medicinal plants, to support the ABS systems being put in place around the world under the Nagoya Protocol (see [Bagley, 2017](#)). Such issues reveal the complexity faced by state-based legislators where plant resources and their related traditional knowledge exist across jurisdictional boundaries — particularly in the absence of regionally (and globally) harmonised regulatory frameworks that protect traditional knowledge.

Moving beyond these transboundary issues, the requirements imposed by section 34(6)(a) of the EMC Act are relevant to the appropriate regulation of access to a range of plant species present in the Vanuatu context. This includes species like kava - which are important to custom landholders and have *kastom* ceremonial and spiritual

significance, and also where there is associated traditional knowledge. These requirements, however, are not without issue in the domestic context. Any determination as to exactly who the ‘providers’ of traditional knowledge and custom landholders might be is likely to be problematic for future protection of knowledge relating to kava. Potentially dozens of communities could be the providers, therefore requiring a series of separate agreements in place for proper compliance with the EMC Act. This will likely be a key practical difficulty in operationalising the EMC Act, and may lead to the exclusion of some communities from benefit-sharing arrangements.

The Vanuatu Kaljoral Senta (Bislama for ‘Vanuatu Cultural Centre’) (2016) also plays a role in regulating foreigners wishing to conduct cultural-related research including traditional knowledge through a research permit process. This process, established by policy, facilitates a standard for the conduct of ethical research that does not exploit traditional knowledge, or the natural resources of the communities involved ([Vanuatu Kaljoral Senta, 2016](#)). Under their research policy, researchers are obligated to respect local traditions as well as submit any publications produced from their research to the Vanuatu Kaljoral Senta. They are also encouraged to produce research outputs that will benefit the community, such as educational resources in the vernacular language for use in community schools. However, the Vanuatu Kaljoral Senta does not have any enforcement or compliance mechanism for this permit process (aside from a bond provided prior to the permit being issued), so it remains largely self-enforced by researchers, and, in the case of academics, their university ethics committees. Nevertheless, the role of this policy in stimulating a culture of compliance and respect for traditional knowledge ought not be underestimated; indeed, further analysis of the impacts of such measures is likely necessary to understand the norms present within research communities working in the Pacific region.

In addition to the EMC Act and the work of the Vanuatu Kaljoral Senta, the *Custom Land Management Act No. 33 of 2013* (CLM Act) formalises the recognition of customary institutions, such as the *nakamals* and ‘custom area land tribunals’, particularly in the resolution of land disputes. Under section 1(2) of the CLM Act, ‘final decisions reached by these customary institutions, when appropriately recorded, become recorded interests in land which are binding in law and are not subject to appeal, or judicial review, by, any Court of law’. Parts 4, 5 and 6 of the CLM Act also set out dispute resolution provisions, which have been established in part to deal with issues of land acquisition and foreign ownership (through leasehold), as well as for the clarification of procedures for community involvement in land leases. The CLM Act is relevant for access and benefit-sharing related issues because it may gradually assist with determining which communities/groups have the ‘established right to grant access’ to genetic resources and associated traditional knowledge, as required by article 2.6 of the Nagoya Protocol. The operation of the CLM Act in this way reveals the critical importance of national laws that recognise and empower traditional property regimes, in the protection of traditional ecological knowledge and the ethical creation of economic opportunities for Indigenous and traditional knowledge holders.

Despite this potential, the CLM Act is still undergoing some reform and its implementation is unlikely to be without issues and concerns. This is particularly the case where customary land boundaries remain unclear or are contested. Indeed, a pilot project has recently been undertaken – through a custom governance resolution made under the CLM Act – in order to identify customary boundaries, set up area councils, identify tabu places (sacred sites) and submit reports on these findings to the Malvatumauri Council of Chiefs (one of the key

authorities empowered to determine land claims). One participant has described such a pilot project as ‘the only roadmap for chiefs to tackle land issues’ and thus bring greater clarity to the determination of customary land rights in Vanuatu.¹⁴ At the time of writing, the project has been piloted on four islands - Malo, Ambae, Efate and Tanna – and it has been extended and is still ongoing on Efate, thus providing for a more detailed assessment of the potential scope of operation for the CLM Act into the future.

Importantly also for the protection of traditional knowledge, the Vanuatu Government has introduced the *Act for the Protection of Traditional Knowledge and Expressions of Culture 2020* which has been developed in response to the Nagoya Protocol and other regional developments (see below).¹⁵ At the time of writing, the law has reportedly passed parliament but has not been implemented and does not yet have regulations in place to guide its operation.¹⁶ The legislation is intended to enable traditional owners to protect traditional knowledge, through the creation of an offence (under part 8) for any use of traditional knowledge that takes place without the prior informed consent of traditional owners. Through the creation of user agreements, traditional owners may be entitled to receive ‘fair and equitable compensation’ for use of their traditional knowledge: section 32(1). Despite its clear purpose of protecting Ni-Vanuatu traditional knowledge, careful implementation will be required to minimise any exclusionary impacts of this regulatory regime. Through the granting of exclusive rights to traditional owners in respect of their traditional knowledge (under section 4), the legislation may either undermine or unnecessarily duplicate *kastom* systems of governance. Furthermore, although identification of traditional owners must take place in consultation with the Malvatumauri Council of Chiefs which is otherwise empowered to determine ‘custom owners’ under part 2 of the CLM Act, no explicit reference is made to the interrelationship between these two laws. Some would argue that this model is parallel with the approach adopted in the former land lease legislation that existed prior to the CLM Act, which led to endless ‘ownership’ disputes, as it encouraged and/or recognized individual ownership of land, whereas the fundamental change the CLM Act introduced is the recognition of communal ownership, which is much more akin to the reality of traditional land custodianship, i.e., looking after land for future generations to utilize.

Whereas the new law effectively creates a registration system for individual or communal traditional knowledge owners, it is not yet clear how such a system will grapple with multiple overlapping traditional knowledge registrations — especially for a species like kava, which is widely found and used not only in Vanuatu but across the Pacific. Such complexities clearly require ongoing consideration and point to the

¹⁴ Napwatt, F. (2017) Land Management Act - Better Roadmap for Land Issues, *Vanuatu Daily Post*, 7 January, accessed 28 August 2018 <http://dailypost.vu/news/land-management-act-better-roadmap-for-land-issues/article_3f5fffb8-99d2-56c3-99ec-2ea1cc4dde2e.html>.

¹⁵ A recent version of the Bill was accessed on 21 January 2020, <https://parliament.gov.vu/images/Bills/2018/2nd_Ordinary_Session/Bill_for_the_Protection_of_Traditional_Knowledge_Act_No._of_2018.pdf> (Vanuatu Government, 2018). For another example from the Pacific, there has also been some activity in the Cook Islands. While the Cook Islands are yet to sign the Nagoya Protocol; it has some of the legal foundations for implementing this provision. The Cook Islands’ *Traditional Knowledge Act No. 7 of 2013* gives ‘legal recognition to rights in traditional knowledge of the traditional communities of the Cook Islands’ and ‘help those communities, and holders of those rights, to protect those rights for the benefit of the people of the Cook Islands’. Despite being in force for a few years, there are not yet implementing regulations for the Act and so it is only partially implemented. See Robinson and Forsyth (2016) for more detail.

¹⁶ See Srinivasin, P. (2019) Vanuatu’s Indigenous Group’s Fight for Recognition of Bungee Jumping’s Roots. *ABC News Online*, 12 January, accessed 22 January 2020 <<https://www.abc.net.au/news/2020-01-12/vanuatu-death-defying-nagol-bungee-jumping-tribal-initiation/11855016>>.

merits of a legal geography perspective in terms of both appraising and catalysing the evolution of law. Additionally, while traditional knowledge registration systems have often been encouraged by organisations such as WIPO, and by some delegates in the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC), there are also concerns about how such knowledge is formally shared with governmental powers (see Robinson and Chiarolla, 2017). At the heart of these concerns is both the subordination of customary law and governance systems within domestic legal frameworks and the consequential de-legitimisation of unregistered traditional knowledge. Given these potential issues, further analysis as to the operation of this law is likely required as its interaction with other laws relevant to traditional knowledge becomes clearer.

Lastly, and although domestic laws that implements the Nagoya Protocol have an important role to play in the protection of traditional knowledge, such laws will remain limited in their capacity to enforce access and benefit sharing requirements — particularly where traditional knowledge is transboundary in nature. Some commentators, therefore, argue for the complementary adoption of normative measures that are more potentially impactful upon globalised markets. For example, Lindstrom (2009: 291) suggests that a ‘promising strategy may be developing consumer awareness of geographic indicators and “noble” kava varieties that Vanuatu’s local producers may control yet globally market as “the best in the world”’. Given that many of the noble kava cultivars are endemic to Vanuatu, this might be a good strategy for linking the product to ‘terroir’. It may also support the seeking of reciprocal protections in regions like the European Union, as well as equivalent recognitions in ‘new world’ markets like the United States of America and Australia through ‘certification trademarks’. However, there are considerable costs in setting up geographical indications systems as they require a strong collaborative association of producers to monitor and enforce its protections, and it may take some years for foreign markets to ‘buy-in’ to the idea that these are the best varieties of kava plant. Despite these drawbacks, such developments in this globalised context can be mutually supportive of regulatory regimes that recognise and protect ownership of Indigenous and traditional ecological knowledge.

7. Regional aspects and implications

During visits to various Pacific islands for fieldwork, informal discussions about Kava regularly reveal the wider need for more comprehensive prior informed consent processes and benefit-sharing for genetic resources. Despite the community desire for law in this area, considerable practical challenges have arisen in relation to the protection of Indigenous knowledge and genetic resources in the region — especially in terms of the transboundary nature of many genetic resources (see, e.g. Robinson and Forsyth, 2016; Forsyth, 2012; Mead, 2007). As with kava, various species of plant and animal can be found in multiple islands, countries or regions. In such cases, the relevant traditional knowledge associated with those species may also be from multiple places and thus unevenly protected by law.

Certainly, these issues are not new to the Pacific and, as mentioned above, there have been both economic and cultural concerns about the misappropriation of genetic resources for decades. In the late 1990s, for example, *The Guardian* reported that incoming industry and exporters were making deals to appropriate the Kava plant. At that time, the Pacific Concerns Resource Centre drew up legislation for the ‘Intellectual Property of Indigenous Peoples’ with the centre’s Fei Tevi quoted as saying:

Kava has already been hijacked... In traditional custom you do not harvest the kava for money. We want pharmaceutical companies to

follow a 10-point plan respecting Indigenous people's culture and their rights to royalties.¹⁷

Indeed, even in places like Vanuatu and the Cook Islands where national laws protecting traditional knowledge have been developed, such laws are not retrospective in scope and will thus do little to remedy the past misappropriation of traditional knowledge. The kava plant, therefore, presents a cautionary tale for the Pacific about the urgent need for a system of regionally harmonised laws that better reflect the geographic context.

In an effort to overcome the limitations of jurisdictional boundaries, the Secretariat of the Pacific Committee (with others) led in the development of the [Model Law for the Protection of Traditional Knowledge and Expressions of Culture 2002](#) (for an overview of this and other related regional initiatives, see [Blakeney, 2011](#)). This model law was then subsequently accompanied by guidelines to support its adoption at a national level and additional work to promote national implementation through the Pacific Islands Forum Secretariat.¹⁸ Although as [For-syth \(2003\)](#) has noted, the model law gives priority to intellectual property regimes, it nevertheless works toward the increased plurality of law in the Pacific. However, excepting Vanuatu and the Cook Islands, aspects or approaches like this model law have not yet been widely implemented. Most likely, this been due to different internal/national concerns and interests, or because of the difficulty in reconciling between traditional systems of governance and customary law, state laws and supra-state laws.

As the Vanuatu experience shows, wider legal frameworks recognising *kastom* are firstly required in order to identify, and thus protect the rights and interests of, traditional owners – and this process is far from straightforward. In his detailed discussion of the biopiracy of kava, [Lindstrom \(2009: 299\)](#) explains some of the issues associated with operating between these legal layers and systems:

In Vanuatu, [...] individuals (and their families and lineages) may claim overlapping rights to this or that kava variety and would deny common cultural heritage. There are also (chiefly) titled versus untitled, and male versus female, claims to use and exchange kava. On the island of Tanna, for example, certain families have the right to consume specially grown and decorated kava tapuga at festivals celebrating boys' circumcisions. Overlapping claims to this sort of kava by scattered families across the island would be difficult to adjudicate. Any sui generis patent system that awarded general rights to kava to all ni-Vanuatu, or to the state, also could spark opposition from individuals, regions, kin-groups, and classes jealous of their particular kava claims.

It is indeed possible, therefore, that the creation of additional state laws, even if harmonised at a regional level, may simply compound these issues until the question of overlapping/shared traditional ownership receives further consideration.

Conversely, if the Pacific Island countries do not coordinate some sort of ABS and traditional knowledge framework, then they risk missing out on future agreements and benefits, or they risk competing directly with each other. Biogeographically speaking, Vanuatu has an advantage in terms of further development of the global market for kava, given that it is a centre for diversity for noble kava varieties. However, it is currently competing with larger markets for commodity sale of kava powder as well as 'value-added' goods like kava capsules in larger tourist and export markets such as Fiji. In places where intellectual

property regimes continue to predominate and shape the lives of Indigenous peoples, further work is required to strengthen customary rights of ownership and custodianship — particularly where supportive legislative regimes remain in development. The region-wide development of community protocols as recommended by the Nagoya Protocol is therefore an important way that Indigenous peoples can bridge the divide between the various legal geographies of kava plant and other plants. Community protocols may be important especially for culturally significant 'more-than-plant' customary species like kava, which are yet to be commercialised.

8. Conclusions and directions for future research

In summary, there are ongoing issues relating to the appropriation of biological resources and associated traditional knowledge in the Pacific, including in relation to high value and culturally significant species like kava. While there are a number of legal developments both stemming from the Nagoya Protocol and being developed in parallel to international law, it is clear that there is an ongoing need for the improved recognition of customary laws, protocols and practices — particularly at the regional scale where the transboundary nature of some traditional knowledge may, if unevenly regulated, enable biopiracy. Despite the need for improved regulation to protect Indigenous and traditional knowledge systems, it should also be acknowledged that the use of domestic legal systems to recognise customary laws and protocols is often inherently fraught. Such laws may, in some cases, lead to the exclusion of some overlapping traditional knowledge holders from rights to access and benefit sharing arrangements and careful consideration must be given to overlapping claims to both customary lands and traditional knowledge. As legal geographers, we must question both the concept of 'boundaries' espoused by Western systems of law and governance, along with the concept's proper application in the context of protecting Indigenous systems of law and governance. Undoubtedly, the protection of diverse traditional knowledges will also face ongoing challenges as some oral systems of customary governance become codified and 'reified' by formal law, while others remain 'unprotected' by such laws. Importantly, and as is emphasised by the language of the UNDRIP, laws which protect traditional knowledge must be self-determined by, and thus reflect the goals and aspirations of, the Indigenous peoples with whom they are concerned. Given these points, we suggest that only Indigenous-led regional collaboration for the harmonised regulation of access to genetic resources and the protection of Indigenous and traditional knowledge will support best practice outcomes for Indigenous and local communities in the Pacific region.

Over the next five years, the Australian Research Council (ARC) Discovery Project Indigenous knowledge futures: Protecting and promoting Indigenous knowledge (DP DP180100507) seeks to continue research in Vanuatu, the Cook Islands and communities across the north of Australia. Species such as the kava plant, which are of growing value and interest in economic and cultural terms, are our main interest in this project. Through studies such as those explored in this article, the project aims to support local communities and Pacific Island Governments to prevent 'misappropriation' of traditional knowledge and genetic resources, and to ensure reasonable and practical outcomes for research and commercial interests also.

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¹⁷ Adams, C. (1998) Fiji Loses its Wonder Drug to Western Stress-Busters, *The Guardian*, 8 October, 19.

¹⁸ Secretariat of the Pacific Community (2006) *Guidelines for Developing National Legislation for the Protection of Traditional Knowledge and Expressions of Culture Based on the Pacific Model Law 2002*, accessed 22 January 2020 <<https://www.wipo.int/edocs/lexdocs/laws/en/spc/spc001en.pdf>>.

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