# Navigating the Landscape of Indigenous Knowledge – A Legal Perspective

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## Introduction

Australia is a party to a number of international treaties and declarations which recognise the significance of traditional and Indigenous knowledge and cultural expressions, and emphasise the need to respect, preserve and maintain knowledge, innovations and practices of Indigenous and local communities. For example, the *Convention on Biological Diversity* 1992 (CBD) provides member nations with the opportunity to establish regimes that would regulate foreign and domestic access to valuable genetic resources and traditional and Indigenous knowledge while establishing benefit-sharing mechanisms relating to that access. The CBD has also led to significant international debate on the interrelationship with intellectual property rights, particularly patent rights and plant breeders' rights, which are often the end goal of the desire to access such genetic resources.

Intertwined with this debate has been the impact of the role of Indigenous or traditional knowledge which is not protected under conventional intellectual property regimes. This has led to significant investigation by the World Intellectual Property Organisation (WIPO), revealing the variety of mechanisms that nations have engaged to protect traditional and Indigenous knowledge and has led to the ongoing development of draft provisions for their protection. At the local level, much lip-service has been given to the topic of protecting Indigenous or traditional knowledge but very little action has ensued.

Australia has been reluctant to take the necessary steps to adequately protect Indigenous knowledge and to ensure that equitable benefit sharing occurs in the use of that knowledge across the country. Conversely, some Indigenous communities have taken their own steps either to engage creatively with the intellectual property regime or to operate outside of that regime. This article will navigate this complex landscape and consider some of the solutions posed by other nations and regions of the world.

However, first, this article will address the meaning of Indigenous knowledge and the more widely used term "traditional knowledge" and will identify the key issues that have arisen in relation to that knowledge. The article will then address Australia's international obligations to respect, preserve and maintain the knowledge of our First Nation peoples, namely Australia's Aboriginal and Torres Strait Islander peoples. This will require an analysis of the shortcomings of intellectual property laws to deal adequately with Indigenous knowledge. What needs to be kept in mind is that Australia's obligations under the CBD provide alternative mechanisms for respecting, preserving and maintaining Indigenous or traditional knowledge. However, what began as an attempt to establish a national approach became a "nationally consistent" approach, which is yet to be achieved. Perhaps some examples of regimes from other nations will provide some direction for Australia. What is encouraging is the recent consultation initiated by IP Australia and the Department of the Attorney-General into the protection of Indigenous knowledge.

### What is Indigenous Knowledge?

While this article utilises the term Indigenous knowledge, the international literature focuses on the term "traditional knowledge" or TK. This focus emanates from the work carried out by the WIPO at the end of the last century resulting in the publication, in April 2001, of WIPO's report on its fact-finding missions on intellectual property and traditional knowledge (1998-1999): *Intellectual Property Needs and Expectations of Traditional Knowledge Holders*.[1]

In that report, WIPO's use of the term "traditional knowledge" referred to "tradition-based literary, artistic or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information; and

all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields".[2] The emphasis is clearly influenced by intellectual property concepts, but the report goes on to clarify the distinguishing feature, namely, that these elements are "tradition-based". Here, WIPO refers to "knowledge systems, creations, innovations and cultural expressions which: have generally been transmitted from generation to generation; are generally regarded as pertaining to a particular people or its territory; and are constantly evolving in response to a changing environment".[3] Among the various categories of traditional knowledge listed in the report, WIPO includes "agricultural knowledge; scientific knowledge; technical knowledge; medicinal knowledge, including related medicines and remedies; biodiversity-related knowledge".[4]

WIPO does supply separate definitions for "Indigenous knowledge" suggesting, on the one hand, that such knowledge is "traditional knowledge" of Indigenous peoples, thereby making "Indigenous knowledge" a subset of "traditional knowledge".[5] In this sense, "Indigenous knowledge" is described as "knowledge held and used by communities, peoples and nations that are 'Indigenous"'.[6] On the other hand, "traditional knowledge" and "Indigenous knowledge" could be interchangeable if we consider the term "Indigenous" to mean "belonging to, or specific to, a particular place".[7]

Meanwhile, these terms and other combinations and permutations are being utilised to refer essentially to the same type of body of knowledge such as traditional Indigenous knowledge, Indigenous cultural knowledge, including "Indigenous cultural and intellectual property" as suggested by Terri Janke, an Indigenous Australian lawyer, acknowledging three principles relevant to identifying the nature of such information:

- Communal ownership and attribution.
- Ongoing positive obligations and rights to use and deal with cultural knowledge.
- The sharing of Indigenous cultural knowledge through specific consent and decision-making procedures of the relevant group.[8]

More recently, in her vision for a National Indigenous Cultural Authority, Janke has embraced the distinction made by WIPO between traditional knowledge and traditional cultural expressions,[9] noting that "[t]raditional knowledge is the underlying knowledge which is created, acquired or inspired for traditional purposes, transmitted from one generation to another, it belongs to a clan or group, and has collective origins".[10] Davis acknowledges the difficulty of trying to formulate a general definition of Indigenous knowledge but does identify a number of characteristic features of Indigenous knowledge systems that seem to expand upon the principles noted by Janke:

- Indigenous peoples often hold communal rights and interests in their knowledge.
- There is a close interdependence between knowledge, land, and spirituality in Indigenous societies.
- Knowledge is passed down through generations in indigenous societies.
- Knowledge, innovations and practices are often transmitted orally in accordance with customary rules and principles.
- There are rules regarding secrecy and sacredness that govern the management of knowledge.[11]

These characteristics accord with the definition that the Secretariat for the CBD has adopted, namely:

> *Traditional knowledge refers to the knowledge, innovations and practices of Indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, and forestry.*[12]

What is important to realise is that the use of the term "traditional" is not intended to mean unchanging or static or based in the past; rather, it refers to the way in which knowledge has been developed, transmitted and preserved within a community.[13] Specifically, the term "traditional" implies that the knowledge, or for that matter the cultural expression, is imbued with community social norms, customary laws and protocols, cosmology but also connection with the land,

environment and location of that community in an integral sense. Importantly, it is necessary to recognise that this knowledge is dynamic, innovative and constantly responding or adapting to the needs of the community, their environment and sense of place.[14]

Indigenous ecological knowledge has become increasingly recognised as a more effective means of managing the Australian landscape particularly since that knowledge has an holistic approach of understanding the seasons, biodiversity, land and water.[15] An example is the managed burning practices of Indigenous peoples. Such knowledge and associated practices were ignored in Australia for the most part of the last century to the detriment of the land, resulting in extinctions of biodiversity due to wildfires that probably would not have occurred had the traditional land management practices been allowed to continue.[16] Such attitudes have been changing and the knowledge of Indigenous elders is being implemented more and more across Australia.[17]

For the purposes of this article, special consideration is given to traditional or Indigenous medicinal knowledge which may contribute to the development of pharmaceutical patents, often with no benefit flowing back to the holders of the medicinal knowledge. Knowledge of the healing properties of different plants can be restricted to particular members within an Indigenous community. These Indigenous healers are a group of persons recognised by the community in which they live as being competent to provide health by using vegetable, animal and mineral substances and other methods based on the social, cultural and religious backgrounds as well as the knowledge, attitudes and beliefs that are prevalent in the community regarding physical, mental and social well-being and the causation of disease and disability.[18]

The knowledge is often "stored" and communicated through cultural expressions such as stories, song, dance and art and reflect a process of intergenerational observation and experience not unlike modern scientific method. On the front cover of *Our Culture Our Future*, Janke's seminal work in this field, there is an artwork called *Cumbarra Dreaming*. This artwork records Indigenous knowledge regarding the Cumbarra plant:

> *This painting depicts the life cycle of the Cumbarra plant. The Emu berries, buds, flowers and leaves are represented alongside a waterhole. The plant is used by Indigenous people for various purposes including eating, healing and spiritual wellbeing. Indigenous people's knowledge concerning the use and the preparation of the fruit and the leaves is part of their living cultural heritage.*[19]

This demonstrates how Indigenous knowledge and culture are intertwined and raises the issue of the impact that outsiders might have when engaging with that knowledge outside the cultural context. This issue becomes significant when one realises that it is believed "that up to 80% of the world's population" had relied on traditional medicines and remedies for primary health and that this was not just due to poverty of the people.[20] Rather, such treatments were and still are more culturally acceptable,[21] once again emphasising the intertwining of culture and knowledge and reinforcing the fact that engagement with such knowledge is not merely engagement with information and facts but is engagement with knowledge that must be in accordance with customary laws. This then leads to the question – what then are the issues surrounding Indigenous or traditional knowledge?

### What are the Issues?

While such traditional knowledge may be considered by the Indigenous community as common heritage to their community, conflict arises when such information is commodified through patents by scientists and researchers, pharmaceutical companies and the like. This has been an argument raised by India in many circumstances and claimed to be "biopiracy" by such authors as Vandana Shiva.[22] Conversely, this concept of common heritage has been expanded to mean common heritage to the whole of humanity thereby justifying those who would use the knowledge without providing due recognition let alone compensation to those who are the traditional holders of that knowledge.[23] Janke points out that:

> *A major concern of Indigenous people is that their cultural knowledge of plants, animals and the environment is being used by scientists, medical researchers, nutritionists and pharmaceutical companies for commercial gain, often without their informed consent and without any benefits flowing back to them.*[24]

The commercialisation of Indigenous or traditional knowledge is often through the process of gaining intellectual property protection for inventions

derived from such knowledge, more specifically patents and plant breeders' rights. One could say that without the use of such knowledge of local communities, the bioprospectors and ultimately biotechnological and pharmaceutical companies would not have discovered the correct leads for patentable bioactive materials. The Prime Minister's Science Engineering and Innovation Council, in its 2005 report on Biodiscovery, gave explicit recognition to the role of Indigenous knowledge and the more broadly defined traditional knowledge.[25] This knowledge, pertaining to the medicinal and other properties of living organisms, is recognised as an important source of wisdom, providing a catalyst for the biodiscovery[26] process.[27] This raises issues of how such knowledge is to be utilised in the biodiscovery process and what mechanisms ought to be in place to ensure benefit finds its way back to the relevant Indigenous community.

The first element is the issue of how the knowledge will be used. Use of such knowledge, whether it be in environmental resource management, health practices and medicinal uses, needs to be respectful of Indigenous values; custodianship needs to be recognised and with that the issue of prior informed consent is essential. It further needs to be recognised that the knowledge-holders themselves have obligations under customary law regarding the preservation and use of the knowledge and how that knowledge is passed on to the next generation and to others. Accordingly, those seeking to use that knowledge outside the community need to obtain prior informed consent from the custodians in order to do so and protocols of engagement are required to ensure due process is followed.

This then leads to the second element of determining mutually agreed terms to ensure that benefit flows to the community of the knowledge-holders from the use of that knowledge by such third parties as bioprospectors and the like. These concepts of prior informed consent, benefit-sharing and mutually agreed terms have been reinforced in the provisions of the CBD and been the subject of much discussion, debate and development at the Conference of the Parties to the CBD. This has resulted in the Bonn Guidelines[28] to assist with determining access and benefit sharing arrangements, and more recently, in the Nagoya Protocol,[29] which is directed at improving legal certainty transparency and compliance with benefit-sharing mechanisms. Failure to adhere to these concepts and protocols would amount to misappropriation of the relevant knowledge; the question is what mechanisms are available to deal with such misappropriation?

If one takes a further step back into this process of gaining access to Indigenous knowledge one will discover that there is yet another significant issue that requires attention, namely, intergenerational loss of knowledge. This is not a new issue but rather a well-recognised issue that is cause for concern for the knowledge-holders and their communities and the whole of humanity. This concern is borne out in the writings of scholars such as Chambers,[30] Shiva[31] and Gupta[32] and quantified by scholars such as Haruyama,[33] noting the impact of modern western knowledge on the loss of traditional ecological knowledge.

More importantly, the holders of cultural knowledge themselves are concerned about the very same issue as the younger generation is being educated away from country and therefore spending less time on country and losing their traditional language in which the culture and the knowledge is maintained through oral tradition.[34] Accordingly, there is a strong interest in documenting, recording and recovering knowledge, to make it available for future generations of community members. India achieved this through its Traditional Knowledge Digital Library,[35] focused on public domain knowledge in order to prevent inappropriate patents from being granted over such knowledge, and its Anthropological Survey of India. And, to ensure integrity of the knowledge is maintained, an holistic approach is essential and one that is in keeping with ethical research practices.

The Australian Institute of Aboriginal and Torres Strait Islander Studies provides such a framework through its *Guidelines for Ethical Research in Australian Indigenous Studies* which "are founded on respect for Indigenous peoples' inherent right to self-determination, and to control and maintain their culture and heritage".[36] Meanwhile, various communities are taking matters into their own hands and documenting their knowledge and culture through a variety of mechanisms including digital libraries.[37] It needs to be recognised that these processes are costly and that communities require funding to achieve such goals. But what will become necessary in the future is the creation of a complete digital library or linked libraries for the purpose of supporting protection and access regimes over Indigenous knowledge and cultural

property. However, first, Australia's obligations in this regard need to be determined.

### Australia's Obligations

Australia's obligations in relation to Indigenous knowledge and cultural expressions stem from its international obligations. These include, among others: the CBD, entered into force and ratified by Australia in 1993; the *International Treaty on Plant Genetic Resources for Food and Agriculture* 2001 (PGR), entered into force in 2004 and ratified by Australia in December 2005; and the *United Nations Declaration on the Rights of Indigenous Peoples* 2007 (UNDRIP), a non-binding declaration endorsed by Australia in 2009. Meanwhile, the obligations of Indigenous people toward their cultural knowledge and practices are founded in the customary laws of that community. Ruby Langford Ginibi explains that:

> *Aboriginal laws were encoded in each group's religious tradition, and were handed down from generation to generation, by word of mouth. They were a part of the oral tradition, passed on by the guardians of that tradition, who gained access to it as they were initiated. All Aboriginal and Torres Strait Islander people were familiar with their own laws and with the daily rights and obligations that were imposed. From early childhood they learnt what the law allowed and what it forbade. They knew both the spiritual dangers and punishments that threatened the law breaker. They witnessed the process by which offenders were punished, cases argued and decided.*[38]

While the Australian legal system has no room for a separate body of law to operate alongside it, there is growing recognition that such customary law may be capable of integration in the mainstream system. In fact, it is arguable that Australia's international obligations require it.

#### *Convention on Biological Diversity (CBD)*

There are three objectives of the CBD, namely conservation of biological diversity, sustainable use of that biodiversity and, thirdly, the fair and equitable sharing of benefits arising from the utilisation of genetic resources.[39] In regard to the third, Article 1 states that:

> *The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.*

This objective of the CBD specifically requires that all rights over the genetic resources be taken into account when determining the fair and equitable sharing of benefits arising from the use of those resources. The question of "all rights" requires the identification of whose rights. This would include the sovereign nations themselves, as Article 3 acknowledges, landowners and Indigenous peoples, bioprospectors, pharmaceutical or biotechnology companies or holders of intellectual property over such resources.

It is the work of bioprospectors that often commences the process of developing technologies from biological or genetic resources. These people collect samples of biological material, identifying potentially valuable compounds or attributes for scientific, conservation or commercial purposes. Bioprospecting is said to be "the systematic search of new sources of chemical compounds, genes, proteins, microorganisms and other products that have potential economic value present in our biotic resources". Clearly, the idea of benefit-sharing espoused in the CBD is relevant when considering this economic value and the commercial purposes of bioprospecting. Further, as traditional knowledge often assists the bioprospecting process it is no wonder the issue of benefit-sharing becomes important.

If the development of Australian policy is considered in this regard, there is a clear recognition of the contribution and rights of Indigenous peoples over such genetic resources, particularly if their cultural knowledge has been used. In 1996, the then Commonwealth Department of the Environment, Sport and Territories published the *National Strategy for the Conservation of Australia's Biological Diversity* (*The National Strategy*). This document was prepared by the Australian and New Zealand Environment and Conservation Council, a Ministerial Council that existed between 1991 and 2001. *The National Strategy* focused on Australia's Indigenous biological diversity and attempted to provide a comprehensive and integrated approach to the identification, conservation and management of that biodiversity.[40] This key policy document had as its goal the protection of "biological diversity and [maintenance of] ecological processes and systems".[41]

There are nine principles that form the basis of the objectives and actions of *The National Strategy* and

it is the ninth objective that is of significance in relation to the recognition of traditional knowledge in the sphere of biodiscovery, namely:

> *The close, traditional association of Australia's Indigenous peoples with components of biological diversity should be recognised, as should the desirability of sharing equitably benefits arising from the innovative use of traditional knowledge of biological diversity.*[42]

This is a clear statement of how *The National Strategy* is to be implemented and there are more details in Chapter 1 of *The National Strategy.* Specifically, Objective 1.8 requires Australia to "[r]ecognise and ensure the continuity of the contribution of the ethno-biological knowledge of Australia's Indigenous peoples to the conservation of Australia's biological diversity".[43] In doing so, it is also recognised that such knowledge may be privileged or not be in the public domain,[44] and, accordingly, Action item 1.8.2 provides a mechanism by which use of such traditional biological knowledge will be protected and will accrue social and economic benefits to the traditional owners of that knowledge.[45] Use must only proceed "with the cooperation and control of the traditional owners of that knowledge".[46] Thereafter, collaborative agreements, which account for existing intellectual property rights, may be used to protect the use of traditional biological knowledge.[47] Further, a royalty payment system may be established, where there are commercial developments using that traditional knowledge.[48] Objective 2.8 on access to genetic resources specifically notes Action item 1.8.2 in reference to the issue of property rights over such resources given that the aim is to "[e]nsure that the social and economic benefits of the use of genetic material and products derived from Australia's biological diversity accrue to Australia".[49]

The value of ethno-biological knowledge is specifically noted in Action item 4.1.8 in relation to its contribution to Objective 4.1, namely, to assist effective conservation and management through a knowledge and understanding of Australia's biodiversity.[50] Action item 4.1.8 seeks to incorporate the knowledge and practices of Aboriginal and Torres Strait Islander peoples in conservation programs and biodiversity research.[51] The recording of such knowledge would therefore be necessary, and should be with the approval and involvement of the relevant Indigenous community.[52] The potential benefits of the knowledge and practices would need to be assessed and applied so as to ensure equitable sharing of those benefits.[53]

Of the priorities under *The National Strategy* to be achieved by the year 2000, the second priority confirms the expectation that engagement with and protection of the ethno-biological knowledge of Aboriginal and Torres Strait Islander peoples will be implemented under cooperative programs.[54] In the 2001 Review of the National Strategy for the Conservation of Australia's Biological Diversity, Objective 1.8 was considered not to have been achieved despite the various programs in place in many of the States and Territories and despite the establishment of the Indigenous Advisory Committee under the Commonwealth's *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) (EPBC Act). Currently, *Australia's Biodiversity Conservation Strategy* for 2010 to 2030 has as one of its key principles underpinning the Strategy the need to acknowledge and respect the culture, values, innovations, practices and knowledge of Indigenous peoples.[55] Interestingly, one of the priorities is the increased engagement of Indigenous people along the following terms:

> *Indigenous peoples have a special connection and relationship with Australia's natural environments. Accordingly, the important role of Indigenous traditional ecological knowledge in conserving Australia's biodiversity needs to be more actively promoted to other biodiversity managers. This transfer of knowledge needs to be two-way – it is also important that Indigenous peoples have access to scientific knowledge and best practice for natural resource management. In addition, traditional ecological knowledge is continually evolving and Indigenous peoples need support for the recording, ongoing development and intergenerational transfer of Indigenous knowledge.*[56]

It appears that this Strategy is attempting to deal with the issue of benefit-sharing in a way which equates the knowledge flows from the Indigenous community to the knowledge flow and "support" back to the Indigenous community.

It may well be that this is in keeping with the third objective of the CBD. The third objective must be read in conjunction with those provisions of the CBD that enable the Contracting Parties, i.e. the nations, to take control over the same genetic

resources. The CBD provides an opportunity for Contracting Parties to assert control over these resources by recognising the sovereign rights of states over their natural resources (Article 3) and the authority of those states to determine access to genetic resources using national legislation. Article 15 paragraph 1 specifically states such recognition:

> *Recognising the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.*

In particular, Article 15 paragraph 7 requires that each Contracting Party "take legislative, administrative or policy measures, as appropriate" for the fair and equitable sharing of benefits "arising from the commercial and other utilisation of genetic resources with the Contracting Party providing such resources". This paragraph requires co-operation between nations on a variety of fronts, but given that the party seeking the resources is likely to be a private organisation, the responsibility of establishing the measures lies with the Contracting Party providing the genetic resources. But what of the use of traditional knowledge? Article 8(j) makes it quite clear that a nation shall:

> *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.*

Accordingly, Article 8(j) provides for the recognition of – and the equitable sharing of – benefits in relation to the use of traditional knowledge. However, the implementation of Article 8(j) is to be subject to national legislation. As for customary uses of biological resources in line with traditional practice, Article 10(c) of the CBD encourages such uses and the protection of such uses. Meanwhile, Article 18(4) requires Contracting Parties to "encourage and develop methods of cooperation for the development and use of technologies, including Indigenous and traditional technologies". In addition, the CBD recognises the influence of patents and other intellectual property rights and requires "that such rights are supportive of and do not run counter to" the objectives of the CBD.[57] Meanwhile, the developments on Article 8(j) include an emphasis on the benefit-sharing requirements in the provision. To this end, one must be mindful of the Bonn Guidelines referred to above and the potential of the Nagoya Protocol once the document is ratified.

***International Treaty on Plant Genetic Resources for Food and Agriculture 2001 (PGRFA)***

The *International Treaty on PGRFA*, intended to be in harmony with the CBD, has the objectives of conservation and sustainable use of plant genetic resources for food and agriculture, fair and equitable sharing of the benefits arising from their use, and, harmony with the CBD for sustainable agriculture and food security. The Treaty recognises the contribution of local and Indigenous communities and farmers,[58] and creates an obligation to take measures to protect and promote farmers' rights including the protection of traditional knowledge relevant to PGRFA, and the right to share in the benefits and to participate in decision-making traditional knowledge.[59]

***United Nations Declaration on the Rights of Indigenous People (UNDRIP)***

This Declaration is a non-binding document adopted by the General Assembly on 13 September 2007, by a vote of 144 in favour, four against and 11 abstentions. Australia, Canada, New Zealand and the United States all voted against the text, concerned about the obligations for compensation and/or self-determination that might follow. Since then, however, Australia endorsed the Declaration in April 2009, with New Zealand endorsing the Declaration a year later, Canada in November 2010, and the US in December 2010. However, that does not mean that steps have been taken to ratify the Declaration. Nonetheless, endorsement does indicate a political will to take those steps, and in so doing, can only reinforce Australia's obligations in regard to providing an adequate regime to protect, preserve and utilise Indigenous knowledge, culture and practices. The Preamble states:

> *Recognising that respect for Indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment.*

Specifically, Article 11 recognises the right of Indigenous people "to practise and revitalise their cultural traditions and customs". This extends to "the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature".[60] The expectation is that the State will develop with Indigenous peoples effective compensation mechanisms "with respect to their cultural, intellectual, religious and spiritual property taken without their free, prior and informed consent or in violation of their laws, traditions and customs".[61]

Meanwhile, Article 24.1 displays a clear link with the CBD providing that "Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals". But perhaps the most significant provision is Article 31, which if implemented, will in many ways reflect the work of the WIPO Intergovernmental Committee that has been investigating and drafting provisions for the protection of Traditional Knowledge and Traditional Cultural Expressions for more than a decade:

1. ***Indigenous peoples have the right to maintain, control, protect and develop*** *their cultural heritage, traditional knowledge and traditional cultural expressions, 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, oral traditions, literatures, designs, sports and traditional games and visual and performing arts.* ***They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.*** [emphasis added]
2. *In conjunction with Indigenous peoples, States shall take effective measures to recognise and protect the exercise of these rights.*

Article 31 clearly provides the direction that countries like Australia should be travelling. Is this breaking new ground? There are many nations and regions around the world that have already adopted legislative regimes to accommodate such rights. Nations utilising *sui generis* legislation recognising and protecting traditional or Indigenous knowledge include Brazil, Peru, Panama, and the Philippines, requiring the establishment of registers or databases and a representative authority of some sort. Some are based on the *WIPO-UNESCO Model Provisions* 1982, which contain intellectual property type provisions.

More recently, the *Pacific Regional Framework for the Protection of Traditional Knowledge and Expressions of Culture* provides the *Model Law For The Protection Of Traditional Knowledge And Expressions Of Culture* 2002, establishing traditional cultural rights and moral rights over such knowledge and expressions, the need for prior informed consent as discussed above, a regime for applications for use and identifying the traditional owners, authorised user agreements, an enforcement regime covering both civil and criminal actions and providing defences, and finally, establishing a Cultural Authority to oversee the entire regime. Other regional solutions are found in Africa, the Andean Community of Nations (formerly, Andean Pact nations) and ASEAN.

If the above international obligations and their implementation are to be summarised, one could say that there is a clear expectation that the protection of traditional or Indigenous knowledge must be in conjunction with Indigenous laws, traditions and customs. Prior informed consent is essential in any dealing and engagement must be on mutually agreed terms. The access and benefit-sharing arrangement must pay heed to the Bonn Guidelines and anticipate the implementation of the Nagoya Protocol.

### *The Role of Intellectual Property Laws – Square Pegs into Round Holes*

The concept of intellectual property has a long legal history with clearly defined rules that have gained international acceptability. The numerous international conventions dealing with the various forms of intellectual property have culminated in global recognition of the important economic contribution such property makes, particularly through the avenue of trade. This has been acknowledged through the requirement for compliance with the Agreement on Trade Related Aspects of Intellectual Property (TRIPs), as adopted by the World Trade Organisation Agreement.[62]

In this section, the potential for using intellectual property rights regimes in order to protect Indigenous culture and knowledge will be considered. This can be achieved by dividing regimes according to the nature of what is being

protected: Indigenous or traditional knowledge on the one hand, and traditional cultural expressions (TCEs) on the other. For example, copyright and design law will be considered in the context of cultural expressions such as Indigenous art and handicrafts, music and performance. Similarly, patent law and confidentiality will be considered in the context of Indigenous or traditional knowledge about native plants, animals and minerals. The rules pertaining to patents are most relevant here when one recognises that the fruits of biodiscovery will most likely result in patent protection. While TRIPs acknowledges the potential of protecting inventions from all fields of technology,[63] there is no specific acknowledgement of traditional knowledge as a potential form of intellectual property. This is an important issue when one recognises that the benefits to be derived from biodiscovery are often in the form of patent protection based on an invention that was derived from some form of traditional knowledge.

***Gap Analysis***

What is important to note is that WIPO conducted its own Gap Analysis in 2008[64] to identify where the gaps are in intellectual property protection of Indigenous or traditional knowledge and expressions. In the case of TCEs, it was recognised that there is no internationally accepted definition of TCEs. Rather, the Analysis considered five categories of TCEs:

1. Literary and artistic productions, such as music and visual arts.
2. Performances of TCEs.
3. Designs embodied in handicrafts and other creative arts.
4. Secret TCEs.
5. Indigenous and traditional names, words and symbols.[65]

For literary and artistic productions, issues arose with the requirement of originality in order to attract copyright protection, the inability of copyright to stop imitation or misappropriation of the style of an Indigenous production, the inability to deal with communal ownership and lack of identifiable author. Further, the term of protection is definite in copyright as the work must ultimately become part of the public domain – on the other hand, protection of TCEs would be expected to continue. Exceptions and limitations to copyright protection in favour of the public domain are not considered appropriate for TCEs. The desire for defensive protection – denying copyright protection to authors outside the community who have developed derivative works based on the TCEs of the community – would not be possible. Ownership in documentation and recordings of TCEs vest in the author, not the community, whose TCEs are being recorded, hence a lack of control for the community.

What about performances of TCEs? Performers' rights are aimed at the individual performer who may or may not be Indigenous. If the troupe is comprised of members of the Indigenous community then there is a benefit back to the community. Further, only aural performances are protected under the *WIPO Performances and Phonograms Treaty* 1996, and performers' rights are a limited in the audio-visual genre in that if consent is given to be photographed or filmed that is the end of the rights. It should be noted that performers' rights in relation to an unfixed performance are not time-limited but those that are fixed in say a sound recording are time-limited.

Meanwhile, designs, unless registered, are not protected. The period of design protection is short in any event and unsuitable for old TCE designs or even newly evolving ones. Further, where the TCEs are secret, maintaining or determining the elements of confidentiality may be difficult – particularly where there is no uniformity between jurisdictions: for example, statutory unfair competition rules compared to common law breach of confidence elements. Further, if Article 39 of TRIPs is to be followed, it requires that the undisclosed information be commercially valuable to attract protection. Finally, Indigenous and traditional names, words and symbols require special measures to prevent the use or registration of Indigenous and traditional names, words and symbols as trade marks by non-Indigenous entities. Out of this analysis, some desired protections for TCEs were identified:

(i) Protection of TCEs against unauthorised use.

(ii) Prevention of insulting, derogatory and/or culturally and spiritually offensive uses of TCEs.

(iii) Prevention of false and misleading claims to authenticity and origin.

(iv) Protection against the failure to acknowledge source when TCEs are used.

(v) Defensive protection of TCEs.

(vi) Provisions dealing with the unauthorised disclosure of confidential or secret TCEs.[66]

The WIPO Gap Analysis also considered traditional knowledge. Gaps have been identified in the definition or identification of traditional knowledge to be protected and in the objectives or policy rationales of protection (not formally recognised), including failure to:

1. Recognise the intrinsic value of TK systems.
2. Recognise that TK systems are valuable forms of innovation.
3. Promote respect for TK systems and the cultural and spiritual values of the holders of TK.
4. Respect the rights of holders and custodians of traditional knowledge.
5. Promote conservation and preservation of traditional knowledge.
6. Strengthen traditional knowledge systems, including supporting continuing the customary use, development, exchange and transmission of traditional knowledge.
7. Support continuing innovation within traditional knowledge systems and encouraging innovation derived from the traditional knowledge base.
8. Support the safeguarding and preservation of traditional knowledge.
9. Repress misappropriation and unfair and inequitable uses of traditional knowledge, and promote equitable benefit-sharing from traditional knowledge.
10. Ensure that access and use of traditional knowledge is subject to prior informed consent.
11. Promote sustainable community development and legitimate trading activities based on traditional knowledge systems.
12. Curtail the grant or exercise of improper intellectual property rights over traditional knowledge.[67]

More specifically, gaps in the legal mechanisms have been clearly identified. Traditional knowledge is not covered by existing forms of intellectual property protection and this is partly due to the fact that the innovation found in the knowledge is cumulative and collective, often over generations within the one community. Accordingly, finding evidence of that single spark of ingenuity is not probable. Further, due to the collective rights, interests and entitlements within the customary traditional knowledge system, beneficiaries or right holders are not recognised for intellectual property rights purposes – who is the inventor? International regimes currently do not provide appropriate protections. There is a need for: a specific disclosure requirement relating to traditional knowledge; protection against unjust enrichment, misappropriation or misuse of TK; prior informed consent; and a right of acknowledgement and integrity. Meanwhile, there is an absence of entitlement to obtain remuneration or other benefits.[68]

Options identified to address these gaps include:

(i) A binding international instrument or instruments.

(ii) Authoritative or persuasive interpretations or elaborations of existing legal instruments.

(iii) A non-binding normative international instrument or instruments.

(iv) A high-level political resolution, declaration or decision, such as an international political declaration espousing core principles, stating a norm against misappropriation and misuse, and establishing the needs and expectations of TCE/TK holders as a political priority.

(v) Strengthened international coordination through guidelines or model laws.

(vi) Coordination of national legislative developments.

(vii) Coordination and cooperation on capacity building and practical initiatives.[69]

This article will now consider the Australian legal landscape in dealing with both Indigenous or traditional knowledge and cultural expressions. It will demonstrate the continuing inadequacies of the multiple regimes in operation, thereby reinforcing the need for *sui generis* legislation to address those inadequacies.

***Copyright, Key Cases and Heritage***

Copyright and its neighbouring rights can protect individual Indigenous artists, authors, performers and the like but not Indigenous communities as "guardians of Indigenous culture and knowledge". A communal right over images or stories is not provided in copyright. An attempt to introduce such a communal right has been made through the *Copyright Amendment (Indigenous Communal Moral*

*Rights) Bill* 2003 (Cth). However, that legislation received little exposure and did not proceed even after a second attempt in 2006.

What must be remembered is that copyright protection is for a specified time only – it eventually comes to an end. Indigenous cultural expressions are ongoing. Further, there is no protection for ancient Indigenous cultural property that falls outside the copyright period, and moral rights are not retrospective. Meanwhile, cultural misappropriation is not dealt with in copyright – a non-Indigenous artist can copy the style of painting of an Indigenous group without infringing a specific work. Expressions of folklore, on the other hand, have received protection under the *Copyright Act* 1968 (Cth), albeit to a limited extent. These provisions were made available due to the Australia-United States Free Trade Agreement and were achieved through the definition of "live performance". The performer of the expression of folklore becomes a joint owner with maker of sound recording, acquires moral rights in his/her performance and is able to exercise performers' protection for a live performance.

While performances of folklore have attracted specific legislation, artistic works have had a long development in case law in Australia. Predating the art cases is a case directly dealing with sacred and secret knowledge and how the action for breach of confidence was able to be used to find a remedy, albeit only partial. The copyright cases are

- *Yumbulul v Reserve Bank of Australia* (1991).[70]
- *Milpurrurru v Indofurn Pty Ltd* (1994).[71]
- *BulunBulun v R & T Textiles Pty Ltd* (1998).[72]

The confidentiality case is the well-known case, *Foster v Mountford* (1976).[73]

(a) *Yumbulul v Reserve Bank of Australia*

Yumbulul, an Aboriginal artist, created the "Morning Star Pole" design that found its way onto the bicentennial $10 bank note. The artist had entered into an exclusive licence agreement with the Aboriginal Artists Agency which, in turn, had sub-licensed the Reserve Bank of Australia to reproduce the design on the $10 note. Yumbulul came under considerable scrutiny from his community for allowing such a reproduction of the work. However, the community did not have standing to try to revoke the licence as they were neither the copyright owner nor the exclusive licensee. Accordingly, Yumbulul brought an action on the basis of misrepresentation, deceptive conduct and mistake claiming that the director of the Aboriginal Artists Agency had misled him about the nature of the licence and the intended use of the work. The action failed as Yumbulul had legal representation at the time of executing the agreement.

(b) *Milpurrurru v Indofurn Pty Ltd*

With permission, the Australian National Gallery reproduced the works of a number of artists in an art portfolio. Indofurn Pty Ltd obtained access to the portfolio and imported carpets from Vietnam that reproduced these works comprising designs that depicted cultural stories handed down to the artists. As part of their cultural heritage, the artists were subject to customary rules, however, the works were held to be original due to their "intricate detail and complexity" and were accordingly protected under copyright law. The carpets were held to have substantially reproduced the artworks and accordingly, infringement was made out. However, the company went into receivership.

(c) *BulunBulun v R & T Textiles Pty Ltd*

With the permission of the senior members of the Ganalbingu people, BulunBulun painted the work known as *Magpie Geese and Water Lilies at the Waterhole*. A Queensland T-shirt manufacturer copied the artwork without consent, reproducing it on their T-shirts for sale. Proceedings were brought for breach of copyright but the matter was settled with the manufacturer withdrawing the offending fabric from sale. New proceedings were brought by Milpurrurru, as representative of the traditional Aboriginal owners of Ganalbingu country, claiming equitable ownership of the copyright work – an attempt at establishing a communal title. However, the argument for communal title in copyright was not accepted. Instead, Von Doussa J did consider express trust and fiduciary duty and found in the latter, but found that

BulunBulun had already been discharged his fiduciary duty.

(d) *Foster v Mountford*

Using the action of breach of confidence, members of the Pitjantjatjara Council obtained an interlocutory injunction to restrain the publication of a book entitled *Nomads of the Australian Desert.* The book contained information that the anthropologist Dr Mountford could only have obtained in confidence. The social and religious stability of the community was at risk should the secrets be revealed to the women, children and uninitiated men. Breach of confidence was made out and, accordingly, publication was restrained in the jurisdiction of the Court, namely, the Northern Territory. Copyright infringement could not have been employed by the Council to restrain all publications of the book as the book was not written by them and they had not acquired copyright in it.

What this series of cases demonstrates is a clear inability of either the laws of copyright or confidentiality to deal with the collective nature of traditional cultural expressions and knowledge, reinforcing the inability to accommodate customary law unless there is a specific provision to allow it. This clearly emphasises the need for *sui generis* legislation for the protection of such expressions and knowledge.

The following three pieces of legislation fall under the category of heritage protection, providing a different opportunity for cultural protection but very much associated with tangible space and objects and not necessarily directed to protecting the intangible nature of Indigenous knowledge and expression.

*(a) Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth) (ATSIHP Act)*

Each state and territory has their own heritage legislation but the ATSIHP Act was introduced to enable the Federal Government to "take legal action where state or territory laws were inadequate, not enforced or non-existent". It was "not intended to be an alternative to land claim procedures".[74]The purpose of the Act can be found in section 4:

> *The preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition.*

Ultimately, the focus is on dealing with developers who want to do things on the land that is significant to an Indigenous community. The ATSIHP Act recognises the connection between tradition and cultural identity and the land. Attempts to prevent the risk that Indigenous cultural heritage could be damaged by the activities of land users or developers through ignorance. Interested parties can seek a declaration from the Minister to protect or preserve a specified area from injury or desecration by proposed activity. However, scope is limited to significant Indigenous areas or objects.

*(b) Protection of Movable Cultural Heritage Act 1986 (Cth)*

This legislation implements Australia's obligations under the 1970 *UNESCO Convention on the Means of Prohibiting and preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property*. It regulates the movement in and out of Australia of culturally significant objects. To qualify, the object must be either: an object of cultural significance to Aboriginal and Torres Strait Islander people; be made by Aboriginal and Torres Strait Islander people; and not created specifically for sale; be at least 30 years old and not be adequately represented in Aboriginal and Torres Strait Islander community collections or public collections in Australia.

*(c) Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)*

In addition to the access provisions that the EPBC Act provides, this legislation establishes the National Heritage List and the Commonwealth Heritage List. Both include natural, Indigenous and historic places identified as having heritage values. The Australian Heritage Council was established, including Indigenous members, and with one task being to identify Indigenous people with rights and interests in relation to a place being considered for listing. There is also an Indigenous Advisory Committee to assist the Minister on the EPBC generally. The Indigenous Heritage Program promotes Indigenous heritage values important to Aboriginal and Torres Strait Islander people through projects that teach traditional knowledge and customary responsibilities in relation to land and waters, including heritage places, and

promotes the development of traditional knowledge databases.

***Patents, Non-Disclosure, Biodiversity and Contracts***

Article 27 of TRIPs acknowledges the patentability of:

> *Any inventions, whether products or processes, in all fields of technology, provided they are new, involve an inventive step and are capable of industrial application.*

Two perspectives are relevant here. Can Indigenous knowledge about biological resources be protected under patent law? In other words, does Indigenous knowledge satisfy the international requirements of novelty, inventiveness and industrial applicability? Or does Indigenous knowledge prevent patentability on the basis that the information forms part of the prior art base from which the criteria of novelty is judged?

Further, there has been much international discussion on the introduction of a disclosure provision in the patent legislation and even in relation to plant varieties. Such a disclosure would require patent applicants to disclose from where they obtained the biological material and associated traditional knowledge used in their invention, including whether prior informed consent for access and use was obtained.[75] While a number of countries have introduced such a provision, Australia is yet to do so.

If the Indigenous knowledge is secret and complies with the rules of confidentiality then it may not form part of the prior art base and thereby novelty is maintained. If the knowledge also forms a significant component(s) of the invention developed from the biological resource, then the providers of that knowledge may have a claim as joint owners of the ensuing patent. Examples include the Jarlmadangah Burru Community Research Partnership with Griffith University,[76] and the Chuulangun Aboriginal Corporation joint venture with the University of South Australia.[77] On the other hand, if the Indigenous knowledge is not secret but a common practice and in the public domain, then it will form part of the prior art base against which the purported biological invention is tested, such as the Indian Traditional Knowledge Digital Library. This then becomes a question as to whether such knowledge discloses the invention or whether the invention is more than the Indigenous knowledge.

Despite this, Vandana Shiva has expressed the following view:

> *Biopiracy refers to the use of intellectual property systems to legitimise the exclusive ownership and control over biological resources and biological products and processes that have been used over centuries in non-industrialized cultures. Patent claims over biodiversity and indigenous knowledge that are based on the innovation, creativity and genius of the people of the Third World are acts of "biopiracy".*[79]

Here, Shiva is analysing the situation from a proprietary perspective arguing that the "North" has created an artificial right, the patent monopoly, resulting in the privatisation of natural resources found predominantly in the "South" in much the same way as Europe engaged in the enclosure of the commons in the 17th century.[79] But the first statement in the quotation above is flawed. If the products and processes have been used for centuries then, under patent law, there would be a lack of novelty and consequently no patent would issue. Something more is required than the mere disclosure of traditional knowledge. And if this "something more" satisfies the requirements of patentability, the scope of the patent protection needs to be limited to that "something more", and that is an issue of drafting proper claims.

As to the second of Shiva's statements, again clarification is needed. Perhaps John Locke's theory of property may be of assistance here. In his *Two Treatises on Government*, Locke states the premise that a man's body is his own property. Consequently:

> *The labour of his body and the work of his hands we may say are properly his. Whatsoever, then, he removes out of the state that nature hath provided and left it in, he hath mixed his own labour with and joined to it something that is his own, and thereby makes it his property.*[80]

Certainly, this is an argument in favour of proprietary rights of Indigenous peoples over their traditional knowledge. But it does not necessarily exclude the rights of subsequent researchers. If the traditional knowledge only goes so far as to identify a plant for a particular purpose, it is not the same as identifying the active chemical in the plant, isolating it and synthesising it. The researcher, by identifying the active chemical and synthesising it, has removed the plant from nature and, through the labour of the research, made the active chemical his or her own. However, this may not have taken place but for the traditional knowledge used to

identify the relevant plant for investigation. How then, can the holders of such traditional knowledge be compensated? If there is no joint ownership what are the possibilities? There is yet to be a form of *sui generis* legislation for the protection of Indigenous knowledge in Australia, and as noted above, Australia is yet to have a disclosure of origin requirement in its patent regime. This then leaves mechanisms employing prior informed consent and access and benefit-sharing agreements. Such mechanisms have been introduced in Australia, although not in a uniform manner.

*(a) Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)*

Regulations for the access provisions in section 301 of the EPBC Act were implemented on 1 December 2005 and form Part 8A of the *Environment Protection and Biodiversity Conservation Regulations* 2000 (EPBC Regulations). The purpose of these Regulations is clearly stated in regulation 8A.01, emphasising the nationally consistent approach to accessing biological resources in Australia, "ensuring the equitable sharing of the benefits arising from the use of biological resources"[81] in Commonwealth areas and "recognising the special knowledge held by Indigenous persons about biological resources".[82]

Access requires a permit[83] but only access for commercial or potentially commercial purposes will require a benefit-sharing agreement and then it must be obtained with the prior informed consent of the owner of the land where that land is Indigenous people's land and the access provider is the owner of that land.[84] Regulation 8A.08 requires that benefit-sharing agreements provide for the recognition, protection and valuing of any Indigenous people's knowledge that will be used as part of the access. Among the other details, the benefit-sharing agreement must include:

- A statement regarding any use of Indigenous people's knowledge, including details of the source of the knowledge.
- A statement regarding benefits to be provided or any agreed commitments given in return for the use of the Indigenous people's knowledge.
- If any indigenous people's knowledge of the access provider, or other group of indigenous persons, is to be used, a copy of the agreement regarding use of the knowledge (if there is a written document), or the terms of any oral agreement, regarding the use of the knowledge.[85]

This means that the applicant for the access permit must recognise and provide evidence of agreements to use the traditional knowledge of not only an access provider but also other groups of Indigenous persons providing information in relation to the biological resource for which access is being sought. This is clearly in line with Australia's obligations under articles 8(j), 10(c) and 18(4) of the CBD. However, a quick glance at the Parks Australia website shows a relatively small number of permits being granted for commercial purposes – the majority are for non-commercial purposes and, accordingly, do not require a benefit-sharing agreement. It should also be noted that this regime only covers Commonwealth areas. This means that State areas and privately held land are the subject of different regulations, if any.

*(b) Queensland Code of Ethical Practice for Biotechnology 2001*

While the state of Queensland has its own access and benefit sharing regime, the *Biodiscovery Act* 2004, this legislation does not consider the use of traditional or Indigenous knowledge in its access or benefit sharing provisions. This has been left to the Queensland Code of Ethical Practice for Biotechnology 2001 (the Code). The Code is mandatory for three types of organisations:

(a) Queensland Government agencies, research centres, laboratories and public hospitals that conduct biotechnological activities.

(b) Private sector companies, academic institutions and research bodies that receive financial assistance from the Queensland Government to undertake biotechnological activities.

(c) Co-operative research centres (CRCs) that receive financial assistance from the Queensland Government to undertake biotechnological activities, and all CRCs that conduct biotechnological activities that have a Queensland Government body or officer as a participating member.[86]

These organisations are defined as "Queensland Biotechnology Organisations". All other organisations undertaking biotechnological activities without Queensland Government involvement can voluntarily subscribe to the Code. However, in a recent review of the Public Register, not one major pharmaceutical corporation has subscribed to the Code.[87]

In any event, in relation to those organisations to which the Code applies, Article 11 provides the arrangements necessary where access to Queensland's biological resources is concerned. It is here that access from private land and land subject to native title rights is considered. The prior informed consent of the landowner is to be obtained before samples are collected from such privately owned land. Further, a reasonable benefit sharing arrangement is to be negotiated with that landowner in return for access to those samples. Similarly, compliance with the *Native Title Act* 1993 (Cth) is required where samples are to be collected from areas subject to native title rights and interests. As for traditional knowledge obtained and used in the course of biodiscovery and research, reasonable benefit-sharing arrangements are to be negotiated with those Indigenous persons and communities providing such knowledge. While this goes someway to address the gap in the *Biodiscovery Act* 2004, it does not provide a mechanism for review of such arrangements nor does it provide any way of determining what is "prior informed consent" and what constitutes a "reasonable benefit-sharing arrangement".

*(c) Participating in Research*

There are two shining examples of Indigenous community engagement with biodiversity research that has led to patents for medicinal inventions: the Chuulangun Aboriginal Corporation in Cape York, Queensland, and the Jarlmadangah Burru Aboriginal Corporation in the Kimberley Region, Western Australia. The first has developed both informal and formal collaborative arrangements with a range of individuals, businesses and organisations. Specifically, Chuulangun Aboriginal Corporation has a collaborative research project with researchers from the Quality Use of Medicines and Pharmacy Research Centre at the University of South Australia, examining the pharmacological activities of some traditional medicinal plants. In addition to joint academic publications, there are two International Patent Co-operation Treaty Applications, one in relation to anti-inflammatory compounds[88] and the other for an anti-inflammatory extract.[89] The inventors listed include the Indigenous elder from the community.

The Jarlmadangah Burru Aboriginal Corporation is equally a proactive community with a goal of working towards community self-sufficiency utilising cultural knowledge of their land to operate tours of the region and to operate a Cultural Centre which is interested in educating visitors. The community runs its own cattle station of 130,000 hectares, utilising Indigenous knowledge to improve environmental management of the farming land. Another key focus is the maintaining of culture through the Cultural Mapping Program. The community decided to make a record of stories, dances and songs which are effective records of Nyikina-Mangala history, language and culture. Consequently, the Cultural Centre is able to provide products that educate visitors through the selling of books, DVDs, cards, boomerangs, clapping sticks, postcards and carved boab nuts; the publishing of books such as *Balkayi* and *Boorroo*, which describe initiation rites and appropriate behaviour and explain the ceremonies concerning the passing away of a fellow skin-group member; and a "Nyikina Wordlist". The Women's Centre also contributes with many women making pottery, beadwork and cotton bags and tea towels printed with traditional designs.

The Jarlmadangah Burru Community also has a research partnership and utilises knowledge of native plants in the treatment of pain. Specifically, the juice from the bark of the Marjala plant is used to produce an ointment for wounds or is ingested in liquid form to treat joint pains.[90] The Community formed an equal partnership with Griffith University to determine the bioactive chemical and its pain relief qualities culminating in a successful application for a patent.[91]

*(d) Analysis of the Australian Context.*

Not all Indigenous communities have had the same success as the two examples given. In fact, representatives from the Jarlmadangah Burru Community addressed the recent Indigenous Knowledge Forum held at the Faculty of Law at the University of Technology Sydney and advised that, despite having been successful with the partnership and obtaining patent protection, the issue of commercialisation is the next hurdle to overcome given current economic circumstances.[92] At least there is an equal partnership established between the parties for that purpose and that reinforces the importance of the elements of prior informed consent and adequate benefit sharing arrangements. However, it is arguable that the resultant partnership was due to good legal representation and negotiation rather than due to any regulatory regime in operation in Australia. But that may well be due to the inadequate benefit-sharing regimes over traditional or Indigenous knowledge in operation around Australia from the binding obligations found in the Commonwealth[93]

and Northern Territory[94] legislation to the Codes of Conduct as in Queensland. This does not provide for a consistent approach, and allows for forum shopping to take place to the benefit of the bioprospector.

The secondary nature in the way Indigenous knowledge is protected through the biodiversity legislation brings home the need to establish *sui generis* legislation that will have as its primary goal the protection of that Indigenous knowledge and cultural expressions. This is reinforced by Australia's international obligations and has been the focus of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore in WIPO. While it is almost 20 years since the coming into force of the CBD and 12 years from the time the WIPO took on the task of investigating how traditional knowledge could be protected, there is a critical mass of international instruments pointing in the same way toward a *sui generis* regime that builds on the past model laws and regional pacts.

The key elements have already been identified: the need to satisfy the meaning of traditional knowledge and its scope; the identification of the beneficiaries; the scope of protection encompassing elements of confidentiality and moral rights in the protection against misappropriation and misuse; the nature of sanctions and remedies not too dissimilar to those used in intellectual property law; the need for disclosure in the patent and plant variety rights regimes; the establishment of an administrative body or competent authority to manage the data, or the rights conferred or the enforcement, dispute resolution and national treatment; the creation of databases and accommodating trans-boundary co-operations where knowledge and biodiversity extend across artificial borders.[95]

While there are many examples of Indigenous communities starting their own databases to stave off intergenerational loss of knowledge and culture, such recording is limited due to lack of funds, and one has to recognise that there will be varying quality and comprehensiveness of such databases unless a degree of co-ordination is employed in addition to the funding. A competent authority could provide such co-ordination. To achieve the Indian feat of the Traditional Knowledge Digital Library will require many years and significant resources but that should not be a deterrent to embarking upon such a venture.

## Conclusions

This article has addressed the meaning of Indigenous knowledge, traditional knowledge, and many variations in between. The consistent elements identified include: communal rights and interests in the knowledge; a close interdependence between knowledge, land, cultural expression and spirituality in Indigenous societies; the intergenerational nature governed by customary principles and often transmitted orally in secrecy and with sacredness. These elements also have implications on the way Indigenous knowledge can be protected and utilised in accordance with international obligations to respect, preserve and maintain the knowledge of Australia's Aboriginal and Torres Strait Islander peoples.

The shortcomings of intellectual property laws to deal adequately with Indigenous knowledge and cultural expressions have been analysed. What needs to be kept in mind is that Australia's obligations under the *Convention on Biological Diversity* provide alternative mechanisms for respecting, preserving and maintaining Indigenous or traditional knowledge. However, what began as an attempt to establish a national approach became a "nationally consistent" approach, which is yet to be achieved and creates gaps in the national protection of this significant resource.

Codes of conduct and protocols, while useful, are often not binding and reinforce the need for alternative mechanisms to be developed. Despite this, business models already in place demonstrate progress made by Indigenous communities to take charge of their own destiny and to utilise "Western" legal principles to their advantage. Reference has been made to already operational national and regional regimes employing competent authorities and establishing comprehensive databases that may serve as models for Australia to adopt. Of those, the best option by far is the model of a *sui generis* national regime – there just needs to be the political will to initiate it.

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2 ibid, p.25.

3 ibid.

4 ibid.

5 ibid, p. 23.

6 ibid.

7 ibid, p. 24.

8 Janke, T. *Biodiversity, Patents and Indigenous Peoples*, June 2000, p.1, at http://sedosmission.org/old/eng/JankeTerry.htm, accessed 17 August 2012.

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12 Secretariat of the Convention on Biological Diversity, Traditional Knowledge Information Portal, Background Material, at www.cbd.int/tk/material.shtml, accessed 17 August 2012.

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15 Commonwealth of Australia, *Caring for Our Country – Outcomes 2008-2013*, pp. 21, 31, 36-37, 39.

16 See the Parks Australia page on Uluru-Kata Tjuta National Park's Fire Management at www.environment.gov.au/parks/uluru/management/programs/fire.html, accessed 18 August 2012.

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21 ibid.

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24 Janke, T. n.8, p.3.

25 Prime Minister's Science Engineering and Innovation Council (PMEIC), *Biodiscovery*, 2 December 2005.

26 "Biodiscovery" was defined as "[t]he extraction and testing of molecules for biological activity, identification of compounds with promise for further development, and research on the molecular basis for the biological activity", Standing Committee on Primary Industries and Regional Services, House of Representatives, *Bioprospecting: Discoveries Changing the Future: Inquiry into Development of High Technology Industries in Regional Australia Based on Bioprospecting*, August 2001 (PIRS SC, Bioprospecting), p. xxi, at www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=primind/bioinq/report/contents.htm, accessed 17 August 2012.

27 Prime Minister's Science Engineering and Innovation Council (PMEIC), *Biodiscovery*, 2 December 2005, pp.4, 7.

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29 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation was adopted by the Conference of the Parties to the Convention on Biological Diversity at its 10th meeting on 29 October 2010 in Nagoya, Japan, but is yet to come into force , at www.cbd.int/abs/about, accessed 18 August 2012.

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78 Shiva, V., *Protect or Plunder: Understanding Intellectual Property Rights*, London: Zed Books Ltd, 2001, p.49.

79 ibid, 44.

80 Locke, John. *Two Treatises on Government*. London: Butler, 1821. Ch.5, §27.

81 *Environment Protection and Biodiversity Conservation Regulations* 2000, r. 8A.01(b).

82 *Environment Protection and Biodiversity Conservation Regulations* 2000, r. 8A.01(c).

83 *Environment Protection and Biodiversity Conservation Regulations* 2000, r. 8A.06.

84 *Environment Protection and Biodiversity Conservation Regulations* 2000, r. 8A.07(1) and r. 17.03A(6)(a). This addresses one of the suggestions made by AFFA, namely, that benefit-sharing agreements be contingent on commercialisation of the material accessed.

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86 *Code of Ethical Practice for Biotechnology in Queensland*, Pt 1, The Preamble, Article 2.

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