

UNIVERSITY OF THE WESTERN CAPE

FACULTY OF LAW

TOWARDS EFFECTIVE MULTILATERAL PROTECTION OF TRADITIONAL
KNOWLEDGE WITHIN THE GLOBAL INTELLECTUAL PROPERTY FRAMEWORK



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**Mini-thesis submitted in partial fulfillment of the requirements for the degree LLM in
International Trade, Business and Investment Law**

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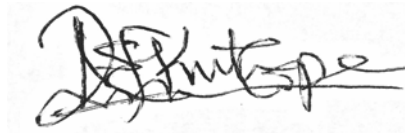


DECLARATION

I declare that,

‘Towards Effective Multilateral Protection of Traditional Knowledge within the global Intellectual Property Framework’

is my own work and that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.



Temitope Babatunde Kuti



Professor Riekie Wandrag

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DEDICATION

To the Lord Jesus Christ, the ultimate source of all knowledge and inspiration, who conferred on humanity the capability to intuitively discern the use of all of earth's resources for the advancement of the human race.



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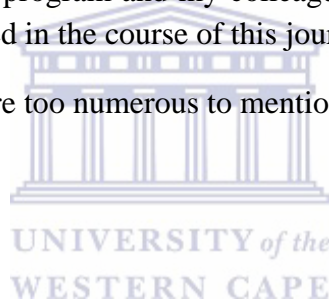
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LIST OF ABBREVIATIONS

ARIPO	-	African Regional Intellectual Property Organisation
CBD	-	Convention on Biological Diversity
CSIR	-	Indian Council of Scientific and Industrial Research
GATT	-	General Agreement on Tariffs and Trade
GI	-	Geographical Indication
GR	-	Genetic Resource
IGC	-	Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore
ILC	-	Indigenous and Local Community
IP	-	Intellectual Property
IPLAA	-	Intellectual Property Laws Amendment Act
ITPGRFA	-	International Treaty on Plant Genetic Resources for Food and Agriculture
PIC	-	Prior Informed Consent
TCE	-	Traditional Cultural Expression
TK	-	Traditional Knowledge
TRIPs	-	Agreement on Trade-Related Aspects of Intellectual Property Rights
UN	-	United Nations
UNDRIP	-	United Nations' Declaration on the Rights of Indigenous Peoples
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
WIPO	-	World Intellectual Property Organisation
WTO	-	World Trade Organisation



KEY WORDS

Benefit-sharing

Biopiracy

Convention on Biological Diversity

Customary law

Genetic resources

Indigenous communities

Indigenous peoples

Intellectual property

Misappropriation

Prior informed consent

Protection

Traditional cultural expressions

Traditional knowledge

Trans-boundary



ABSTRACT

Traditional Knowledge (TK) has previously been considered a 'subject' in the public domain, unworthy of legal protection. However, the last few decades have witnessed increased discussions on the need to protect the knowledge of indigenous peoples for their economic sustenance, the conservation of biodiversity and modern scientific innovation. Questions remain as to how TK can best be protected through existing, adapted or *sui generis* legal frameworks.

Based on an examination of the formal knowledge-protection mechanisms (i.e. the existing intellectual property system), this mini-thesis contends that these existing systems are inadequate for protecting TK. As a matter of fact, they serve as veritable platforms for incidences of biopiracy. It further argues that the many international initiatives designed to protect TK have so far failed owing to inherent shortcomings embedded in them. Furthermore, a comparative assessment of several national initiatives (in New Zealand, South Africa and Kenya) supports an understanding that several domestic efforts to protect TK have been rendered ineffective due to the insurmountable challenge of dealing with the international violations of local TK rights. It is therefore important that on-going international negotiations for the protection of TK, including the negotiations within the World Intellectual Property Organisation's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC), do not adopt similar approaches to those employed in previous initiatives if TK must be efficiently and effectively protected.

This mini-thesis concludes that indigenous peoples possess peculiar protection mechanisms for their TK within the ambit of their customary legal systems and that these indigenous mechanisms are the required anchors for effective global protections.

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1.0 Introduction/Research Background

Traditional knowledge is often used as an umbrella term covering three interrelated concepts: traditional knowledge (TK) as such, traditional cultural expressions (TCEs) and genetic resources (GRs). However, these distinctions are made for convenience from a Western perspective. Amongst indigenous peoples, these all fall within a single broad conception of TK as bio-cultural heritage.¹ This research however focuses primarily on TK and TCEs, with occasional references to GRs, when necessary.

The protection of TK has attracted much attention and discussion in the international community and the question among national and international policy makers, has been how to protect it.² The World Trade Organisation's (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs Agreement)³ represents a huge step in the globalisation of intellectual property (IP).⁴ It introduced IP rules into the multilateral trading system as well as global minimum IP protection standards. How such a global framework responds to the needs and concerns of indigenous communities regarding TK and TCEs is increasingly discussed in the post-TRIPs era.⁵

The TRIPs Agreement is frequently criticised. It is believed by some that it merely protects the economic interests of the developed world and their rich corporations.⁶ Others argue that the TRIPs Agreement has weakened the utilitarian understanding of IP as a vehicle to incentivise and encourage (more) innovation. It is said that the TRIPs Agreement does not incentivise significant inventions in local and indigenous communities who do not possess the infrastructure and resources to commercialise their knowledge.⁷ The TRIPs Agreement conspicuously omits to provide any specific form of protection for TK and TCEs.⁸

¹ Anderson J *Indigenous/Traditional Knowledge and Intellectual Property* (2010) 5.

² Zographos D 'The Legal Protection of TCEs: The Tunisian Example' (2004) 7 *Journal of World Intellectual Property* 229.

³ 15 April 1994, 1869 U.N.T.S. 299 available at www.wto.org (accessed on 3 October 2016).

⁴ The Marrakesh Agreement establishing the WTO became operational on 1 January 1995 and increased the scope of the General Agreement on Tariffs and Trade (GATT) 1947 to include IP.

⁵ Arewa OB 'TRIPs and Traditional Knowledge: Local Communities, Local Knowledge, and Global Intellectual Property Frameworks' (2006) 10 *Marquette Intellectual Property Law Review* 156.

⁶ Sunder M 'The Invention of Traditional Knowledge' (2007) 70 *Law & Contemporary Problems* 97; developing countries argue that Article 27(3) b of the TRIPs Agreement, which fails to mandate disclosure of origin for patent applications or include 'prior informed consent' contributes to the incidences of biopiracy.

⁷ Sunder M (2007) 120.

⁸ Milius D 'Justifying Intellectual Property in Traditional Knowledge' (2009) 2 *IPQ* 200.

Heitinger states that the TRIPs Agreement represents an imposition of the interests of 'Northern' transnational corporations on the diverse cultures of the world.⁹ He argues that the TRIPs Agreement created at least three limitations on IP ownership; it creates a shift from common to private rights, because it privatises the intellectual commons and de-intellectualise civil society; it emphasises a solely capitalistic view of IP generation as IP rights are recognised only when knowledge and innovation generate profits and not when they meet social needs; and it accentuates a monopolisation of production profits by transnational companies through the use of the prefix "Trade-Related" as many innovations in indigenous communities are for domestic, local and/or public use and not for trade.¹⁰

The existing IP treaties: the Berne Convention for the Protection of Literary and Artistic Works 1886, the Paris Convention for the Protection of Industrial Property 1883, the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations 1961 and the Treaty on Intellectual Property in Respect of Integrated Circuits 1989, all incorporated into the TRIPs Agreement, do not provide any form of protection for TK and TCEs but rather provide avenues for 'biopiracy'¹¹ by transnational corporations, pharmaceutical companies, artists, etc.¹²

In recent years, indigenous peoples and governments- mostly in developing countries- have been demanding protection for traditional forms of creativity and innovation, generally regarded as being in the 'public domain' under conventional IP regimes and thus free for exploitation. However, indigenous peoples, local communities and many countries reject the public domain status of these forms of innovation, principally TK and TCEs, arguing that such status opens them up for unwanted misappropriation.¹³ As a result of the debate, the World Intellectual Property Organisation (WIPO) together with the United Nations Environment Program jointly commissioned a study on the role of IP rights in the sharing of benefits arising from the use of biological resources and associated TK. WIPO had also

⁹ Heitinger EC 'The TNC Bias in TRIPs' in Drahos P (ed.) *Intellectual Property (The International Library of Essays in Law and Legal Theory: Second Series)* (1999) 158-9.

¹⁰ Heitinger EC (1999) 159-160.

¹¹ 'Biopiracy' describes circumstances in which developed countries use biotechnology patents to expropriate the biological heritage of less developed countries. Biopiracy typically involves the theft of indigenous people's TK. Example involves valuable uses of local plants or animals within a particular indigenous community which corporations may become aware of and then seek to patent and commercialise for their own gain. Companies often attempt to patent rights in TK or the products derived therefrom. As such, the patentee may receive significant financial compensation for the patent while leaving the indigenous community with no gain: Levy R & Green S, 'Pharmaceuticals and Biopiracy: How the America Invents Act May Reduce the Misappropriation of Traditional Medicine' (2015) 23 *University of Miami Business Law Review* 406. 'Misappropriation' is the term that expresses similar problems in relation to TCEs. See further discussions at footnote 108 below.

¹² Arewa OB (2006) 170.

¹³ World Intellectual Property Organisation *Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions* (2015) 10 (hereafter WIPO (2015)).

conducted a series of studies with UNESCO on expressions of folklore starting in 1978. Three of those studies recommended the setting up of an independent committee to look into issues regarding the protection of TK and this was why the WIPO General Assembly established the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) in 2000.¹⁴ The extensive work undertaken by the IGC has resulted in a range of information and policy resources including a Gap Analysis in 2008 which identified the shortcomings of existing IP regimes in providing protection for TK.¹⁵

Till date, the IGC is still at work discussing an acceptable mechanism for the protection of TK, TCEs and GRs. Through the IGC, WIPO Member States are negotiating international instruments for the protection of these subjects.¹⁶ The latest IGC mandate for 2018/19 principally requires the Committee to, among other things,

‘continue to expedite its work, with the objective of reaching an agreement on an international legal instrument(s), without prejudging the nature of outcome(s), relating to intellectual property which will ensure the balanced and effective protection of genetic resources (GRs), traditional knowledge (TK) and traditional cultural expressions (TCEs)’. and ‘build on the existing work carried out by the Committee, including text-based negotiations, with a primary focus on narrowing existing gaps and reaching a common understanding on core issues...’¹⁷

Also, the WTO, at the 2001 Doha Ministerial Conference, reiterated its commitment to the implementation of the TRIPs Agreement in a ‘... manner supportive of public health, by promoting both access to existing medicines and research and development into new medicines...’¹⁸ Paragraph 19 of the Doha Declaration made the protection of TK and TCEs a part of the Doha Round of Negotiations stating:

¹⁴ WIPO ‘Matters concerning Intellectual Property, Genetic Resources, Traditional Knowledge and Folklore’ WIPO General Assembly 12th Extra-Ordinary Session October 2000, paragraph 12 available at http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=1460 (accessed on 18 October 2016).

¹⁵ Stoianoff N ‘The World Intellectual Property Organisation (WIPO) and the Intergovernmental Committee: Developments on Traditional Knowledge and Cultural Expressions’ (2014) 2014/4 *UTS Faculty of Law Research Paper Series* 37.

¹⁶ Stoianoff N (2014) 38.

¹⁷ WIPO, Agenda Item 18: Matters Concerning the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, 2-11 October 2017 available at http://www.wipo.int/export/sites/www/tk/en/igc/pdf/igc_mandate_2018-2019.pdf (accessed on 28 November 2017).

¹⁸ Paragraph 17 of the WTO Doha Ministerial Declaration (Doha Declaration) available at <https://www.wto.org/> (accessed on 18 November 2016).

‘We instruct the Council for TRIPS, in pursuing its work programme including under the review of Article 27.3(b), the review of the implementation of the TRIPS Agreement under Article 71.1 and the work foreseen pursuant to paragraph 12 of this Declaration, to examine, *inter alia*, the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the protection of traditional knowledge and folklore, and other relevant new developments raised by Members pursuant to Article 71.1.’¹⁹

This research is thus undertaken in the context of the on-going IGC negotiations and the lack of a universally-acceptable framework as yet. It does not seek to proffer a jurisprudential argument regarding the justification for the protection of TK and TCEs. Rather, it seeks to recommend an appropriate mechanism for the effective protection of TK and TCEs.

1.1 Research Objectives and Questions

In light of the foregoing, this research seeks to determine what mechanism will best provide effective protection for TK and TCEs, the conditions for such protection and what multilateral disciplines should be the foundation for such a mechanism.

To answer this question, the research addresses the following objectives:

- (a) To establish the suitability of existing IP regimes for the protection of TK and TCEs;
- (b) To examine selected previous international and regional initiatives for TK protection with a view to establishing the shortcomings which render them ineffective for TK protection;
- (c) To undertake an analysis of selected national legislation enacted for protection of TK and TCEs and ascertain to what extent they effectively protect TK and TCEs. The research also seeks to establish that indigenous peoples possess efficient knowledge-management systems within the framework of their customary laws and identify other problems which could render a TK protection mechanism ineffective; and

¹⁹ The TRIPS Council has been considering reviewing the provisions of Article 27.3(b) of the TRIPS Agreement which gives Members the right to exclude plants, animals as well as biological processes from patentability. It however permits microorganisms, a category in which GRs fall, to be patented. Developing countries have consistently alleged that the TRIPS Agreement promotes biopiracy. Other related issues include the relationship between the TRIPS Agreement and the CBD; and the protection of TK and folklore. See WTO, Council for Trade-Related Aspects of Intellectual Property Rights Working Paper *Review of the Provisions of Article 27.3(b); Summary of Issues Raised and Points Made* IP/C/W/369/Rev.1, 9/03/2006 available at https://www.wto.org/english/tratop_e/trips_e/trips_e.htm (accessed on 19 September 2017).

- (d) To make recommendations on the most effective protection mechanism, the conditions for such protection and the disciplines that should be the foundation of such mechanism.

1.2 Problem Statement

Corporate organisations and individuals across the world continue to seek increased avenues to exploit the earth's resources. This is even more the case considering that biological resources are not evenly-distributed across the world and the use of a particular biological resource is usually better known by the communities where it is found. In other circumstances, different communities have acquired other types of knowledge relating to different facets of human existence and which modern corporations now find very useful in their quest for improved production (capacities). Most times, these corporations require the knowledge of the local communities where biological resources are found in order to adequately exploit such resources. In other circumstances, corporations simply 'copy' the knowledge manifestations in such communities and exploit them commercially without any acknowledgement of the source (community) from which they 'took' such knowledge or even compensating them financially.²⁰

Yet, in other instances, modern artists and musicians use the traditional works of indigenous communities without giving any credit to the communities whose works have been 'incorporated' into their modern works.²¹

Even where appropriate benefit-sharing arrangements are made by corporations, many communities are unable to access the proceeds as national governments often fail to institute adequate benefit-sharing mechanisms. In other instances, communities are given very insignificant benefits in exchange for TK leads that inform major manufactured products, or for the exploitation of cultural expressions by famous artists. This results in a worsening of the incidence of poverty among indigenous and local communities of the South (but boosting

²⁰ These communities can be called owners of TK and TCEs as they have guarded, innovated and developed them over several generations: Nadkarni A & Rajam S, 'Capitalising the Benefits of Traditional Knowledge Digital Library (TKDL) in Favour of Indigenous Communities' (2016) 9(1) *National University of Juridical Sciences Law Review* 198.

²¹ For example, in 2017, British artist, Damien Hirst copied the bust of the well-known Ife terracotta head sculpted by Ile-Ife, Nigerian artists between the 12th and 14th centuries, without giving attribution to the original work. Hirst's work titled, 'Golden Heads', displayed at his Venice show is an exact replica of Ife sculpture. See 'Nigerians Express Outrage as British Artist, Damien Hirst, copies Ife Sculpture without Giving Credit' *ThisDay* 10 May 2017 available at <https://www.thisdaylive.com/index.php/2017/05/10/nigerians-express-outrage-as-british-artist-damien-hirst-copies-ife-sculpture-without-giving-credit/> (accessed on 12 May 2017).

the wealth of the rich countries of the North).²² This exploitation is made possible by the combined effects of the weak internal legislative frameworks of these exploited regions as well as the ineffectiveness of existing intergovernmental and multilateral agreements.²³ An important question flowing from the above then is, 'how can the international community provide an effective mechanism for preventing such continuing misappropriation of TK and TCEs?'

Against this background, this research seeks to answer the questions:

What mechanism will best protect the TK and TCEs of indigenous communities? On what conditions should such protection be offered? What multilateral disciplines will render the mechanism effective?

1.3 Significance of the Research

The debate on whether and how to protect TK, TCEs (and GRs) is a continuing one. As a matter of fact, there is continued misappropriation of TK and TCEs which manifests itself in the use of TK and TCEs in musical videos, the exploitation of TK associated with GRs for inventions by pharmaceuticals, etc.²⁴

Also, IP law is largely Western in its origin and promotes particular interpretations of knowledge, ownership and monopoly privileges. Indigenous communities do not necessarily conceptualise their knowledge systems the same way. While existing IP regimes place emphasis on the commercial value of innovations, indigenous communities' TK may not necessarily be commercial (but may still require protection from misappropriation). For example, inappropriate use of sacred cultural artefacts may not cause financial loss but can cause considerable offense to the relevant community responsible for the use and circulation of such artefact.²⁵ The absence of effective protection for TK and TCEs affects the cultural and economic lives of about 370 million people globally.²⁶

²² Sharma D 'Selling Biodiversity: Benefit sharing is a dead concept' in Burrows B. "(ed)" *The Catch: Perspectives in Benefit Sharing* (2005) 1-3 observed that the Tropical Botanic Garden and Research Institute in India had encouraged 50 Kani families to undertake cultivation of *arogyapacha* plant species. The benefit every year was expected to be in the range of US\$466 per acre. The Kani tribes only received about US \$12,000 as one-time payment when the product was licensed and a royalty of US\$5. The TK that the Kani tribe provided led to the development of India's wonder drug, Jeevani. Jeevani has a commercial value in the range of at least US\$50 million to 1 billion. A US-based company, NutriScience Innovations, markets the drug online. The end result is an undermining of local communities' capacity to maintain their own biodiversity-based livelihood.

²³ Moody OO *The Nagoya Protocol: A Possible Solution to the Protection of Traditional Knowledge in Biodiverse Societies of Africa* (unpublished LL.M Thesis, UWC 2011) 24-5.

²⁴ Dutfield G 'TRIPS-Related Aspects of Traditional Knowledge' (2001) 33 *Case Western Reserve Journal of International Law* 249.

²⁵ Anderson J (2010) 2.

²⁶ Anderson J (2010) 5.

The World Health Organisation estimates that traditional medicine (produced by TK) is the primary healthcare source of eighty per cent of the population in Africa, Asia and Latin America. For modern pharmaceutical research, TK usually provides major leads for new chemical structures in medicine and even yield ready-made drugs.²⁷

1.4 Methodology

The objectives of this research have been accomplished by:

- a. A theoretical library-based review of relevant literature and a discussion of the limitations of protecting TK and TCEs with existing IP regimes;²⁸
- b. An examination of existing international instruments (the Convention on Biological Diversity (CBD), the Nagoya Protocol, the Swakopmund Protocol and the International Treaty on Plant Genetic Resources for Food and Agriculture) for protecting TK and TCEs and their shortcomings;²⁹ and
- c. An analysis of select national legislation for the protection of TK and TCEs i.e. New Zealand's Patents Act 2013 and Trade Marks Act 2002, the South African Patents Amendment Act 2005 and Intellectual Property Laws Amendment Act 2013 and the Kenyan Protection of Traditional Knowledge and Cultural Expressions Act 2016 (these specific nations have been chosen considering the presence of significant indigenous populations and their global economic status: the World Bank classifies New Zealand as a 'developed' country and it has a significant indigenous population in the *Maori*. New Zealand's initiatives in particular show that TK debates are not necessarily a 'North-South' debacle as highlighted in Chapter 3. South Africa is a developing country which has several indigenous communities and its legislation discussed in this research were chosen because one attempts to incorporate the disclosure mechanism once suggested as a solution to biopiracy while the other represents an attempt to overhaul existing IP regimes for the protection of TK and TCEs. Kenya, on its part, is a developing country which employs a *sui generis* mechanism to protect TK and TCEs under its obligation to implement the Swakopmund Protocol discussed in Chapter Three. These three nations' initiatives illustrate three approaches to TK protection: protecting only certain manifestations of TK, protecting all manifestations of TK with existing IP regimes and protecting all

²⁷ Klein C 'New Leadership Needed: The Convention on Biological Diversity' (2016) 31 *Emory International Law Review* 150.

²⁸ Chapter Two.

²⁹ Chapter Three.

manifestations of TK with *sui generis* regimes);³⁰ an examination of the challenges which may hinder the effective protection of TK and TCEs and TK protection mechanisms within indigenous communities' legal systems.³¹

1.5 Chapter outline

This research comprises five chapters.

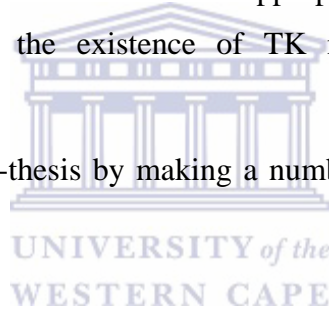
Chapter One has introduced the mini-thesis.

Chapter Two examines existing IP regimes and the extent to which they can be employed to protect TK and TCEs.

Chapter Three examines selected international initiatives for the protection of TK and TCEs, and the inadequacies inherent in them.

Chapter Four discusses selected national legislative interventions designed for TK and TCE protection and the pitfalls that render them ineffective. It also establishes the limitation of national legislation in international TK and TCE misappropriation. The chapter also examines indigenous customary law and the existence of TK management systems present in indigenous communities.

Chapter Five concludes the mini-thesis by making a number of recommendations based on the research findings.



³⁰ Other national legislation could also have been discussed but for constraint imposed by space.

³¹ Chapter Four below.

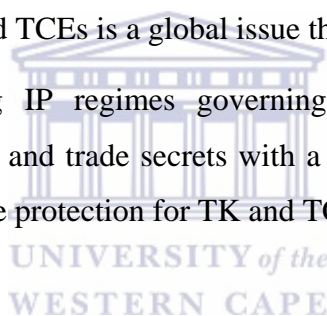
CHAPTER TWO

EXISTING INTELLECTUAL PROPERTY REGIMES AND THEIR APPLICABILITY TO THE PROTECTION OF TRADITIONAL KNOWLEDGE AND TRADITIONAL CULTURAL EXPRESSIONS

2.0 Introduction

Since the adoption of the Paris Convention for the Protection of Industrial Property 1883 (Paris Convention),³² and the Berne Convention for the Protection of Literary and Artistic Works 1886 (Berne Convention),³³ including their respective revisions,³⁴ the international protection of creativity has been established with defined rules and standards. Those rules were reinforced by the TRIPs Agreement. However, these rules are seen as non-responsive to the demand of indigenous communities that innovation and creativity in the forms of TK, TCEs and GRs³⁵ be accorded international legal protection. Some argue³⁶ that there are several elements of IP which could and should be applied to give legal protection to TK and TCEs. Some others contend that there is a need to create a *sui generis* system for them.³⁷ In any case, the protection of TK and TCEs is a global issue that is here to stay.³⁸

This chapter examines existing IP regimes governing copyright, patents, trademarks, geographical indications, designs and trade secrets with a view to determining the extent to which they (can) provide effective protection for TK and TCEs.



³² 19 July 1967, 21 U.S.T. 1583, 828 U.N.T.S. 305 available at <http://www.wipo.int/treaties/en/ip/paris/> (accessed on 20 September 2016).

³³ Available at <http://www.wipo.int/treaties/en/ip/berne/> (accessed on 20 September 2016).

³⁴ The Paris Convention was revised at Brussels in 1900, Washington in 1911, The Hague in 1925, London in 1934, Lisbon in 1958 and Stockholm in 1967, and was amended in 1979.; the Berne Convention was revised at Paris in 1896 and Berlin in 1908, completed at Berne in 1914, revised at Rome in 1928, Brussels in 1948, Stockholm in 1967 and Paris in 1971, and was amended in 1979. See <http://www.wipo.int/treaties> (accessed on 25 April 2017).

³⁵ GRs refer to genetic material of actual or potential value. Genetic material is any material of plant, animal, microbial or other origin containing functional units of heredity: 'Genetic resources' available at <http://www.wipo.int/tk/en/genetic/> (accessed on 12 October 2016). GRs, as encountered in nature, are not 'innovation' in the IP sense. Traditionally, GRs are outside the scope of the IP system, and are rather regulated by the international access and benefit-sharing regime. From an IP perspective, they are not creations of the human mind. However, they are often mentioned in TK discussions because so much TK is associated with GRs and so many 'inventions' are based on TK. An example is the patenting of life forms, based on biological sequencing: WIPO (2015) 24.

³⁶ OseiTutu JJ 'Traditional Knowledge: Is Perpetual Protection a Good Idea?' (2010) 50 *IDEA: Intellectual Property Law Review* 703.

³⁷ van der Merwe A 'South and Southern Africa- recent developments in the legal protection of traditional knowledge and traditional cultural expressions' (2014) 9(5) *Journal of Intellectual Property Law & Practice* 416.

³⁸ Weeraworawit W, 'Formulating an International Legal Protection for Genetic Resources, Traditional Knowledge and Folklore: Challenges for the Intellectual Property System' (2003-2004) 11 *Cardozo Journal of International Comp. Law* 769.

2.1 Conceptual issues

Before proceeding to examine the existing IP regimes, it is important to state that there is an absence of consensus on the meaning of TK and TCEs.³⁹ However, for purposes of this research, the following definitions are employed:

TK is a body of knowledge built by a group of people through generations of living together in close contact with nature, including systems of classification, sets of empirical observations about the local environment and systems of self-management that govern resource use.⁴⁰

TCEs are the forms in which traditional culture is expressed forming part of the identity and heritage of an indigenous community and are passed down from generation to generation.⁴¹ These may be tangible or intangible or a combination of both which may be dances, songs, handicraft, designs, ceremonies, tales or many other artistic or cultural expressions. They are sometimes referred to as folklore.⁴²

Having stated the working definitions, this research will now proceed to examine existing IP regimes and their compatibility with TK and TCEs.

2.2 Copyright

The Berne Convention was a catalyst in the development of international copyright law.⁴³ According to Article 2 of the Berne Convention, copyright protection is available for 'literary and artistic works' as well as adaptations, translations, arrangements of music and other alterations of literary or artistic works which shall be protected as original works without any prejudice to the copyright in the original work. Copyright is an IP right and IP rights are property rights. Since these property rights are monopoly rights over innovations, such rights must not be extended to the basic building blocks necessary to promote creativity such as ideas, abstract knowledge, facts, etc., which are all regarded as being in the public domain.

³⁹ Milius D 'Justifying Intellectual Property in Traditional Knowledge' (2009) 2 *IPQ* 193.

⁴⁰ Johnson M 'Research on Traditional Environmental Knowledge: Its Development and its Role', in Johnson M (ed) *Lore: Capturing Traditional Environmental Knowledge* (1992) 3–4; more expansively, TK refers to knowledge that is created, maintained and developed by indigenous peoples and local communities, and that is linked with, or is an integral part of, their social identity and/or cultural heritage; whether widely-known or kept as secret (sacred); that is transmitted through generations and which subsists in tangible or intangible form. It may take the form of know-how, skills, innovations, practices or teachings and may be dynamic and evolving.

⁴¹ WIPO 'Traditional Cultural Expressions' available at <http://www.wipo.int/tk/en/folklore/> (accessed on 06 April 2017).

⁴² WIPO (2015) 15.

⁴³ Law LK, 'National Copyright Law v. Community Law: Which Law is Controlling in Intellectual Property Derivative Market Products?' (1991-1992) 10(2) *Dickinson Journal of International Law* 352.

To achieve this, different levels of minimum standards are prescribed for different IP regimes (including copyright).⁴⁴

A copyright gives its owner the exclusive right to reproduce, distribute, perform or display the work publicly. Copyright is, therefore, a guarantee that a creator has legal rights to prevent the use of his material without fair reward.⁴⁵ Copyright does not protect ideas themselves but the expression of ideas in a particular form.⁴⁶

Unlike TK, many TCEs⁴⁷ are literary, scientific and artistic productions, and therefore, in principle, constitute actual or potential subject matter of copyright law. However, it must be noted that not all TCEs are copyrightable. For example, folk dances performed at community gatherings may not meet the criteria for copyright protection.⁴⁸

For a work to enjoy copyright protection, it must be an original expression of ideas and be fixed in a tangible medium of expression.⁴⁹ These requirements and other copyright-related concepts will be examined in the following sub-paragraphs in relation to how they affect the protection of TK and TCEs.

a. Originality

This implies originality of the *expression* of ideas. The originality requirement is designed to prevent existing works from being the subject matter of further copyright protection in the absence of additional contributions. Originality ensures that, as the price for copyright, consumers get something more than just copies of existing works.⁵⁰ Thus, authors may use ideas that are already in existence, but must express such ideas in their own unique way.

It must be borne in mind that though originality is not a requirement of the Berne Convention, it is universally accepted as a mandatory standard for copyright protection.⁵¹ National laws usually demand that a work, to be protected by copyright, must be original. For example, Section 1(2)(a) of the Nigerian Copyright Act⁵² provides:

‘A literary, musical or artistic work shall not be eligible for copyright unless-

⁴⁴ Gopalakrishnan NS & Agitha TG *Principles of Intellectual Property* 2 ed (2014) 1.

⁴⁵ Darkey EM & Akussah ‘H Academic Libraries and Copyright Issues in Ghana: University of Ghana in Focus’ (2009) 36 *International Journal of Legal Information* 434.

⁴⁶ Bird RC & Jain SC *The Global Challenge of Intellectual Property Rights* (2008) 5.

⁴⁷ In Chapter 1 of this work, it was mentioned that TK is often used as an umbrella term for TK, TCEs and GRs. However, for purposes of this research, the focus is restricted to TK and TCEs.

⁴⁸ Zographos D *Intellectual Property and Traditional Cultural Expressions* (2010) 17.

⁴⁹ Gopalakrishnan NS & Agitha TG (2014) 1.

⁵⁰ Gopalakrishnan NS & Agitha TG (2014) 2.

⁵¹ Nordell PJ, ‘The Notion of Originality- Redundant or Not’ (2002) 42 *Scandinavian Studies in Law* 97.

⁵² Available at www.wipo.int (accessed on 28 March 2017); Section 1 Copyright Act of Ghana available at <http://www.heinonline.org.ezproxy.uwc.ac.za/> (accessed on 30 March 2017) has similar provision.

(a) sufficient effort has been expended on the work to give it an original character.’

The foregoing provision mirrors common ‘originality’ provisions in copyright legislation across the world. However, there are no guidelines on the degree of originality required thereby causing discrepancies across jurisdictions. In *University of London Press Limited v. University Tutorial Press Limited*,⁵³ it was held that ‘original’ does not mean that the work must be the expression of original or inventive thought. Copyright Acts are not concerned with the originality of ideas, but with the expression of thought. In *Feist Publications Inc. v. Rural Telephone Service Co. Inc.*,⁵⁴ it was held that the *foundation* of copyright is originality. To qualify for copyright protection, a work must be original to the author. Original as the term is used means only that the work was independently created by the author. Zographos observes that, in common law jurisdictions, the level of creativity required is usually lower than in civil law countries.⁵⁵ It must be noted, however, that originality does not signify novelty; a work may be original even though it closely resembles other works as long as it is not the result of copying.⁵⁶ Therefore, copyright law does not require that a work be innovative, only that it be original in presentation.⁵⁷

Considering that, by their nature, TK and TCEs are transmitted by traditional means through generations, works that are unoriginal imitations are reproductions of pre-existing TCEs and are unlikely to meet the originality requirement. Since much TK and TCEs have been in existence for generations, their originality in relation to the acclaimed author or indigenous community is perceived as questionable. This is because the bulk of TK is seen as inherited. On the other hand, contemporary works inspired by TCEs may meet the originality requirement.⁵⁸ But such will be protected as derivative works.⁵⁹ The existing copyright system sees TK and much of the intergenerational TCEs as being in the public domain as it does not view them as original but rather as trans-generational heritage bequeathed to indigenous

⁵³ (1916) 2 Ch 601.

⁵⁴ 499 US 340 (1991).

⁵⁵ Zographos D (2004) 45.

⁵⁶ Gopalakrishnan NS & Agitha TG (2014) 8.

⁵⁷ OseiTutu JJ ‘A Sui Generis Regime for Traditional Knowledge: The Cultural Divide in Intellectual Property Law’ (2011) 15 *Marquette Intellectual Property Law Review* 185.

⁵⁸ Zographos D (2010) 46.

⁵⁹ A derivative work is a variation or adaptation of a copyrighted work. It manifests itself in such forms as a movie produced from a novel; a music album from lyrics contained in a book; etc. See Hsiao JIH & Wang W ‘Originality as Sine Qua Non for Derivative Works: The Basis for Copyright Protection and Avoiding Infringement Liability’ (2014) 24(2) *Albany Law Journal of Science & Technology* 263.

communities.⁶⁰ This view is premised on the thinking that if copyright were to be granted at all it would be granted to the progenitors who generated the knowledge and the term of protection would have long expired. However, TK is neither old nor obsolete but is rather dynamic and constantly evolving.⁶¹

Yet, under existing copyright regimes, a contemporary work derived from pre-existing traditional material and which incorporates new elements may be sufficiently original to qualify for copyright. However, the protection offered to such ‘derivative’ work is only in the new materials.⁶²

b. Fixation

Copyright laws usually require that a work be fixed in a tangible medium of expression for it to be copyrightable. Indeed, this was neither a mandatory requirement of the Berne Convention nor of the TRIPs Agreement. Article 2(2) of the Berne Convention states:

‘It shall, however, be a matter for legislation in the countries of the Union to prescribe that works in general or any specified categories of works shall not be protected unless they have been fixed in some material form.’

The provision shows that the Berne Convention left ‘fixation’ to national legislative discretion as it sought to offer copyright protection without formalities.⁶³ Subsequent to this, most countries enacted copyright laws making fixation a mandatory copyright requirement. For example, section 1(1)(b) of the Ghanaian Copyright Act 2005 provides that a work is not eligible for copyright protection unless ‘it has been fixed in a definite medium of expression’.. Many national laws,⁶⁴ particularly those of common law countries, require fixation, because this proves the existence of the work. This is aimed at ensuring that such work can be perceived, reproduced or otherwise communicated with the aid of a device.

⁶⁰ Munzer SR & Raustiala K ‘The Uneasy Case for Intellectual Property Rights in Traditional Knowledge’ (2009) 27 *Cardozo Arts & Entertainment Law Journal* 53.

⁶¹ Gervais D ‘TK and Intellectual Property: A TRIPS Compatible Approach’ 2005 *Michigan State Law Review* 140.

⁶² WIPO (2015) 31.

⁶³ Bird RC & Jain SC (2008) 7.

⁶⁴ Fixation is mandatory in the United States and UK. However; Switzerland, Spain, France and Germany do not require fixation: Torsen M ‘Intellectual Property and Traditional Cultural Expressions: A Synopsis of Current Issues (2008) 3 *Intercultural Human Rights Law Review* 204; World Intellectual Property Organisation ‘Traditional Cultural Expressions/Expressions of Folklore: Legal and Policy Options’ (2003) 20-1 available at <http://www.wipo.int/tools/en/> (accessed on 03 April 2017).

Fixation may not be a problem for tangible TCEs such as paintings, sculptures or handicrafts but TCEs like folk dances, or songs are not fixed in tangible media and are transmitted orally. However it is more problematic for TK which majorly exists in oral accounts.⁶⁵

Theoretically, however, communities may document their TK in some tangible medium to obtain copyright protection.⁶⁶

c. Authorship

For copyright law to apply to a work, its author must be identifiable.⁶⁷ However, it is worth noting that the Berne Convention does not define ‘author’ but instead provides that in the absence of contrary proof, the person under whose name the work is disclosed be regarded as the author.⁶⁸ This leaves it to national legislation to determine authorship. This is why there is often conflict between the common law and civil law systems. In the civil law system, ‘author’ denotes the individual creator of the work whereas in most common law countries, it is used in a broader sense to include the legal entity responsible for the work.⁶⁹

Though copyright law requires identifiable author, Article 7(3) of the Berne Convention provides protection for anonymous or pseudonymous works for fifty years after the work has been published. However, countries have no obligation to protect anonymous or pseudonymous works where there is reasonable presumption that the author has been dead for fifty years. Considering that TK and TCEs are the result of an evolutionary process and are often communal in nature, it will be difficult, if not impossible in the case of pre-existing TK and TCEs, to identify a specific individual or group as author(s).⁷⁰ The ‘author’ is usually a large and dispersed group of people and the work itself may have several versions and incarnations.⁷¹

However, indigenous communities who own TK and TCEs consistently refuse to claim individual ownership. They generally believe that such knowledge cannot be privately owned and must be freely shared. This cultural refusal to claim individual ownership is a major obstacle that bars the use of IP laws to protect TK and TCEs.⁷² Thus, unlike individual

⁶⁵ Zographos D (2010) 46.

⁶⁶ La Vina AGM ‘Intellectual Property Rights and Indigenous Knowledge of Biodiversity in Asia’ (1997) *Asia Pacific Journal of Environmental Law* 42.

⁶⁷ Zographos D (2010) 47.

⁶⁸ Article 15(1) Berne Convention.

⁶⁹ Gopalakrishnan NS & Agitha TG (2014) 305.

⁷⁰ Zographos D (2010) 47.

⁷¹ Gervais DJ ‘Traditional Knowledge: A Challenge to the International Intellectual Property System’ (2002) 7 *Intellectual Property Law and Policy* 76-2.

⁷² La Vina AGM (1997) 232.

ownership which copyright law and other IP regimes are anchored upon, TK and TCEs are predominantly owned by the community as a collective.

However, copyright does not only protect individual creators. Copyright can protect groups of creators as joint authors. However, it is necessary for the creator(s) to be identifiable. In respect of contemporary TCEs, it is easier to find (an) identifiable creator(s) and this requirement is generally met.⁷³ However, where there is no identifiable creator (or where the notion of ‘authorship’ may not even apply) such as in the case of pre-existing TCEs communally-developed this is more difficult and copyright protection is unlikely. Although copyright law has been reasonably creative in overcoming the ‘identifiable author’ requirement through provisions for the protection of anonymous and pseudonymous works, these do not assist in the case of collective TCEs.⁷⁴

This concept of communal ownership of all cultural heritage including TK and most TCEs is inimical to the fundamentals of copyright and limits copyright law in protecting TK and TCEs.

d. Term of protection

Copyright protection is limited in time.⁷⁵ Article 7 of the Berne Convention offers minimum copyright protection for the ‘life of the author and fifty years after his death’.⁷⁶ Some countries offer a longer term of protection.⁷⁷ As established by the WIPO Fact-Finding Report,⁷⁸ TK and TCE holders desire indefinite protection.⁷⁹ Besides, reference to ‘life of the author’ is equally not helpful to TK and TCE⁸⁰ owners considering their nature of trans-generational evolution.

It is integral to the copyright system that the term of protection be limited because works should ultimately enter the public domain. Yet, there are few exceptions. Rights to the famous work ‘Peter Pan’ vest in perpetuity under United Kingdom copyright law for the benefit of a charitable cause. A proposal has been put forward in Australia to grant perpetual

⁷³ Spangler S ‘When Indigenous Communities go Digital: Protecting Traditional Cultural Expressions through Integration of IP and Customary Law (2010) *Cardozo Arts & Entertainment Law Journal* 720.

⁷⁴ WIPO (2003) 20-1.

⁷⁵ Zographos D (2010) 47.

⁷⁶ Similar provision is found in Article 12 TRIPs Agreement.

⁷⁷ For example, Section 2 of the Nigerian Copyright Act 1988 offers protection for 70 years in respect of literary, musical and artistic works. Section 3 of the South African Copyright Act offers the minimum fifty years.

⁷⁸ WIPO, Intellectual Property Needs and Expectations of Traditional Knowledge Holders: WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge (1998-1999) (WIPO: Geneva) available at <http://www.wipo.int/tk/en/> (accessed on 05 April 2017).

⁷⁹ Zographos D (2010) 47.

⁸⁰ Munzer SR & Raustiala K (2009) 86.

protection to the art works of some renowned indigenous artists for the benefit of their descendants.⁸¹ Indigenous communities desire indefinite (and retroactive) protection for several aspects of TK and TCEs and in this respect,⁸² the copyright system does not meet their needs.

e. Fair use (Exceptions)

Articles 9(2), 10 and 10^{bis} of the Berne Convention provide for exceptions to copyright thereby providing opportunities for others to use copyrighted work without seeking prior permission provided the copyright holders are acknowledged. On its part, Article 13 of the TRIPs Agreement confines copyright exceptions to ‘special cases which do not conflict with normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder.’ Copyright is not an absolute right. The principle of ‘permitted use’ enables people, within limits, to use freely the works of others.⁸³

Thus, where copyright subsists in TK or TCEs, the allowed exceptions may undermine the customary knowledge-management systems of indigenous communities. This is more so in relation to sacred TK or TCEs which are often undisclosed and the possibility of dispensing with prior authorisation may not be in indigenous communities’ interest.⁸⁴ In fact, in relation to TCEs which are held to be sacred (spiritual), use as a teaching tool may amount to improper use to the TK-owning communities. Also, any disclosure of certain TK or TCEs to outsiders is often a punishable conduct.⁸⁵

f. Defensive protection

Copyright offers no system by which third parties can be prevented from acquiring copyright over TK or TCEs incorporated into derivative works.⁸⁶ Defensive protection is a mechanism by which the unauthorised use of TK and TCEs by third parties to obtain IP rights may be prevented.⁸⁷ Thus, defensive protection confers no rights on TK holders that can be enforced. Rather, it prevents a third party from obtaining IP rights on a knowledge, product or process that is neither novel/original because it is TK.⁸⁸

⁸¹ WIPO (2003) 22-3.

⁸² WIPO (2003) 23.

⁸³ Darkey EM & Akussah H (2009) 438.

⁸⁴ Zographos D (2010) 48.

⁸⁵ Torsen M (2008) 208.

⁸⁶ Zographos D (2010) 48.

⁸⁷ Srinivas KR ‘Traditional Knowledge and Intellectual Property Rights: A Note on Issues, Some Solutions and Some Suggestions’ (2008) 3 *Asian Journal of WTO & International Health Law and Policy* 87.

⁸⁸ Feris L ‘Protecting Traditional Knowledge in Africa: Considering African Approaches’ (2004) 4 *African Human Rights Law Journal* 246.

Based on the foregoing analysis, it is obvious that while TK and TCE-owning communities can benefit from the copyright system, it does not offer the type of protection they desire. Besides, the nature of TK and most TCEs makes them unfit for the notions of copyright.

2.3 Patents

The Paris Convention is the major international treaty for the protection of inventions.⁸⁹ A patent is a government grant of certain rights to an inventor for a limited time in exchange for disclosing the invention. On obtaining a patent, the law provides the patent holder with an exclusive monopoly by protecting the ideas, design and inventions against commercial copying. That is, in exchange for disclosure of an invention, the inventor obtains the right to exclude others from making, using, copying or selling the invention.⁹⁰ This is in order to protect the property rights of the inventor and to encourage a society's inventiveness and technical progress.⁹¹

Governments award patents for inventions that are new, useful, non-obvious in light of previous knowledge, and sufficiently described to enable others skilled in the art to make them.⁹² These requirements will be examined in subsequent paragraphs in relation to TK.

a. Novelty

An invention is said to be new if it has not been anticipated by publication in any document or used anywhere in the world before the date of the patent application. In other words, the subject of the patent application must not form part of the 'state of the art'.⁹³ The 'state of the art' comprises all matter (whether a product, process, information about either, or anything else) which has, at any time before the date of the patent application been made available to the public by written or oral description, by use or in any other way.⁹⁴

By ensuring that patents are not granted for products and processes which are already known, the test of novelty seeks to ensure that patents do not become an obstacle to people doing what they were doing before the patent was granted.⁹⁵ In other words, no person should be

⁸⁹ Article 1(2) of the Paris Convention.

⁹⁰ Zimmerman CS & Godfrey FC 'Overview: Intellectual Property- The New Global Currency' in Simensky M, Bryer LG & Wilkof JN (eds) *Intellectual Property in the Global Marketplace (Electronic Commerce, Valuation and Protection)* 2 ed (1999) O.6.

⁹¹ Bird RC & Jain SC (2008) 5.

⁹² Article 27 of the TRIPs Agreement.

⁹³ Gopalakrishnan NS & Agitha TG (2014) 43.

⁹⁴ See Section 2(2) of the British Patents Act 1977 available at <https://www.gov.uk/government/publications/the-patents-act-1977> (accessed on 03 April 2017).

⁹⁵ Gopalakrishnan NS & Agitha TG (2014) 43.

allowed to obtain a patent for knowledge that is already in circulation, even if not widely-known. There is no doubt that TK constitutes an increasingly relevant body of prior art.⁹⁶

There have been instances where patents were granted over knowledge that was later found to have been in existence in some parts of the world prior to the said patents. An example of TK misappropriation was the patenting of *turmeric* by two Indian expatriates in the United States who obtained a patent on the use of turmeric in wound healing. The Indian Council of Scientific and Industrial Research (CSIR) challenged the validity of the patent, arguing that the use of turmeric was not novel because it had been used medicinally in India for centuries. The CSIR supported its claim with a printed publication from an Indian medical association and successfully got the patent revoked. However, the fact that the TK related to turmeric had previously been documented and published was the reason why the turmeric patent was revoked.⁹⁷

Examples of TK that come closest to patents involve innovations that arise through incremental and collective processes that span long periods of time. However, the know-how present in these innovations may never have been reduced to writing making it difficult to satisfy the ‘written description’ and ‘enablement’ requirements⁹⁸ of patent law. These collective innovations might not qualify as prior art, which in most patent systems could stop others from gaining patent rights, because much TK is unpublished. Even if reduced to writing and published, these incremental innovations may only be useful for ensuring that no patents are granted for ‘inventions’ which have been anticipated in the TK documentation but such documentation will not in itself confer such TK with patentability.⁹⁹

At the international level, the principal tool for locating technical information for patent purposes, the International Patent Classification (IPC),¹⁰⁰ was expanded to take better account of TK especially in relation to medicinal products based on plant germplasms.¹⁰¹ This increases the likelihood that patent examiners will find published TK that is relevant to claimed inventions in patent applications without adversely affecting the legal status of the TK within the relevant indigenous communities.¹⁰² The Patents Cooperation Treaty

⁹⁶ WIPO (2015) 23.

⁹⁷ OseiTutu JJ (2011) 165-6.

⁹⁸ Article 29 TRIPs Agreement.

⁹⁹ Munzer SR & Raustiala K (2009) 52.

¹⁰⁰ The IPC was established by the Strasbourg Agreement Concerning the International Patent Classification, 1971, 26 U.S.T. 1793, 1160 U.N.T.S 483 (amended on 28 September 1979) available at <http://www.wipo.int/treaties/en/classification/strasbourg> (accessed on 28 November 2017).

¹⁰¹ Khoury AH, ‘Differential Patent Terms and the Commercial Capacity of Innovation’ (2010) 18 *Texas Intellectual Property Law Journal* 412.

¹⁰² WIPO (2015) 34.

administered by WIPO for international cooperation in treating patent applications provides for an international search and examination which takes into account TK-related information thereby increasing the likelihood that relevant TK will be related at an early stage in the patent application process.¹⁰³

However, it is difficult to find the state of the art in TK as long as it is undocumented not to mention portions of TK held as sacred (secret).¹⁰⁴ As a matter of fact, (foreign) oral TK is not considered prior art under United States law, though if the TK is placed in a published registry it meets the prior art threshold.¹⁰⁵

Because patents emphasise novelty, protection is offered to something new without regard to the sources of research giving rise to such innovations and thereby giving rise to biopiracy.¹⁰⁶

b. Inventive step/non-obviousness

An invention is said to involve an inventive step if it is not obvious to a person skilled in the art. This is because the law seeks to reward only an inventive activity and that the public should not be prevented from doing anything which was merely an obvious extension or workshop variation of what was known at the date of the patent application.¹⁰⁷ Thus, if the invention is new, further enquiry is made to see if it is not obvious to a person with ordinary skill in the art.

As illustrated with the turmeric case above, TK related to GRs are commonly abused in patent applications. Instances in which TK and TCEs are abused and misappropriated are commonly referred to as 'biopiracy' and cases of biopiracy are well documented.¹⁰⁸ The use

¹⁰³ WIPO (2015) 36.

¹⁰⁴ Srinivas KR (2008) 84.

¹⁰⁵ Munzer SR & Raustiala K (2009) 52.

¹⁰⁶ Weeraworawit W (2003-2004) 772.

¹⁰⁷ Gopalakrishnan NS & Agitha TG (2014) 44.

¹⁰⁸ Dutfield G 'Traditional Knowledge, Intellectual Property and Pharmaceutical Innovations: What's Left to Discuss?' 655 in David M & Halbert D *The Sage Handbook of Intellectual Property* (2015) 657. The process of taking indigenous peoples' TK without compensation is referred to as biopiracy. Indigenous peoples feel this is theft of their property, arguing that they made the discovery but simply lacked the resources to patent the invention themselves. Biopiracy occurs when GRs and TK are taken from biodiverse countries without permission. This knowledge is then used to patent related inventions without sharing the resulting commercial profits. The original holder of the knowledge receives no gains from the use and is likely barred from obtaining a patent. Biopiracy has become a growing problem due to the soaring sales of pharmaceuticals. The value of the world market for medicinal plants found by following leads given by local communities has been estimated to be US\$43 billion. Without legal protection for indigenous communities, biopiracy is often a shortcut to massive profits without having to provide fair compensation to the original sources of the information. Due to the medicinal nature of much TK, pharmaceutical companies are among the most common perpetrators of biopiracy. As a result, the market for pharmaceutical products based on TK is growing. An example of pharmaceutical biopiracy is the pharmaceutical patent obtained for the use of the Thai herb *kwao krua* which had been used for over 100 years and its medicinal uses had been documented in Thai writings as early as 1931.:

of medicinal plants in indigenous communities forms the basis of most pharmaceutical patents. Patents offer no protection to the intellectual heritage of indigenous traditional medical practitioners because their systems are deemed not novel and of no industrial application.¹⁰⁹

c. Usefulness

It is fundamental in patent law that an invention must be useful.¹¹⁰ A core benefit of the requirement is to aid in the commercialisation of inventions.¹¹¹ First, it justifies a current but controversial doctrinal rule: that an invention must have practical usefulness to be patented. Second, it suggests a new rule, that inventions must have commercial usefulness to be patented.¹¹² The meaning of the word has been imprecise for generations.¹¹³ The *Oxford English Dictionary* defines the term simply as ‘beneficial’ or ‘fit for some desirable purpose or valuable end’. The abstract and imprecise nature of the term invites subjective interpretations because virtually *everything* can be used by someone for something. So it seems that a thing is useful as long as it can provide *some* benefit.¹¹⁴ There are three conceptions of usefulness applicable to inventions. Inventions must be *operable* (that is, they must achieve their disclosed purpose), be *practically useful* (possess a specific, substantial, and immediate benefit to the public) and be *commercially useful*.¹¹⁵

Usefulness refers generally to an invention’s benefits, which might vary by type, quantity, or timing. Usefulness means many things, such as how an invention operates, the practical benefits it provides to the public, or its effect on commercial markets, such as the supply or demand for a particular product.¹¹⁶

While there is no doubt that TK is useful for varying purposes, the commercial value of much TK is not yet ascertainable. Thus, TK holders may be able to establish that their TK is operable and practically useful but may fail to prove its commercial usefulness as highlighted

Smith SF, ‘All Hands on Deck: Biopiracy & the Available Protections for Traditional Knowledge’ (2014) 10 *Journal of Animal & Natural Resource Law* 273-276.

¹⁰⁹ Heitinger EC ‘The Inadequacy of Western Patent Regimes for Protection of Biodiversity and Indigenous Knowledge’ in Drahos P (ed.) *Intellectual Property (The International Library of Essays in Law and Legal Theory: Second Series)* (1999) 163.

¹¹⁰ Seymore SB, ‘Making Patents Useful’ (2014) 98 *Minnesota Law Review* 1046.

¹¹¹ Risch M, ‘Reinventing Usefulness’ 2010 *Brigham Young University Law Review* 1197.

¹¹² Risch M 2010 1198.

¹¹³ See Risch M 2010 1195.

¹¹⁴ Seymore SB(2014) 1047.

¹¹⁵ Risch M 2010 1198. Risch M, ‘A Surprisingly Useful Requirement’ (2011) 19 *George Mason Law Review* 58 observes that the level of usefulness an applicant must currently demonstrate to obtain a patent is extremely low: the invention need only operate as described and potentially provide some minimal public benefit.

¹¹⁶ Risch M (2011) 58.

in Chapter Four below. To that extent, TK will not be able to completely fit into the conceptualisation of usefulness in patent law.

d. Disclosure and Enablement

Article 29 of the TRIPs Agreement requires a patent applicant to disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art. This disclosure is the part of the patent (or patent application) that completely describes the invention.¹¹⁷ It serves three key functions: giving the public a meaningful disclosure in exchange for a patentee's limited monopoly over the invention, assuring that the inventor was indeed in *possession* of the claimed invention at the date of filing, and confirming that no new matter was added to go beyond the scope of the original application.¹¹⁸ The invention must be disclosed in enough detail that others can make and use it.¹¹⁹ The test is whether a person skilled in the art would think that the inventor had possession of the claimed subject matter, based on reading the specification.¹²⁰

Historically, the purposes of the two doctrines were different. Enablement helps to establish the initial patent scope, while written description helps in curtailing the expansion of the patent claim scope through later amendment.¹²¹

As was stated in paragraph 2.2(b) above, the bulk of TK exists in oral accounts and there is not so much that is found in writing. Therefore, it would be very difficult for TK to fit within the dynamics of patents. Even if efforts are made to record the various manifestations of TK, the dynamics of their evolution will most likely make TK to upset the entire patent system as they are known to be constantly evolving.¹²²

e. Term of protection

Similar to copyright, the term of protection offered by patent is limited to a minimum period of 20 years by Article 33 of the TRIPs Agreement for the patent holder to exclusively exploit his invention. Thus, in so far as TK holders desire indefinite protection, TK cannot fit in the patent system without up-ending it.¹²³

¹¹⁷ Seymore SB, 'Patent Asymmetries' (2016) 49 *University of California Davis, Law Review* 978.

¹¹⁸ MacDougall C, 'The Split over Enablement and Written Description: Losing Sight of the Purpose of the Patent System' (2010) 14 *Intellectual Property Law Bulletin* 127.

¹¹⁹ Chien CV, 'Contextualizing Patent Disclosure' (2016) 69 *Vanderbilt Law Review* 1851.

¹²⁰ Chien CV (2016) 1856-7.

¹²¹ Chiang T, 'Fixing Patent Boundaries' (2010) 108 *Michigan Law Review* 536.

¹²² See paragraph 2.2(a) above.

¹²³ Munzer SR & Raustiala K (2009) 58.

f. Other TK challenges to the patent regime

There are other problems in using patent laws to protect TK. First, apart from the cultural obstacle to claiming ownership over TK (and TCEs) as discussed above, the forms and expressions of TK are incompatible with the requirements of patentability. Second, applying for rights under patent laws as well as protecting and enforcing rights are impracticable for indigenous peoples owing majorly to the financial implications thereof.¹²⁴

Also, patents are conferred on individuals or corporations rather than communities. Indeed, the traditional concept of IP is that they grant private rights to individuals to the exclusion of others within a society. Under IP laws, the concept of community invention is not recognised. What is usually required is that an inventor is an individual or a group of named individuals. This bias in favour of individual ownership is however not insurmountable to employing patents to protect TK. Fundamentally, IP laws grant **private** rights and not necessarily individual rights and there is nothing in IP laws which prohibit communities from claiming ownership over ideas.¹²⁵

It is obvious, therefore, that the patent system offers limited protection to TK. Rather than protect TK, patents often violate TK. Many patent offices in countries such as the US and Japan allow the *written* prior art to be searched anywhere in the world, but they restrict the search of *oral* prior art to their national geographical boundaries. Yet, it is the *oral* prior art that provides the basis for most patent applications.¹²⁶

In view of the foregoing, TK cannot be effectively protected under the patent system. Modern inventions derived from TK may fit within the requirements of patent law but not the particular TK itself. This is more so considering that TK does not fit within the basic criteria for patentability.

2.4 Trademarks

A trademark is a symbol, word, device, name, design or combination of any of the foregoing which distinguishes the owner's goods and services from those of others. It is used in trade to differentiate a product or service (service mark) from another.¹²⁷ Only the trademark owner may use the protected mark or similar mark to avoid creating confusion in the minds of members of the public. Trademarks help secure the reputation of a manufacturer or service

¹²⁴ La Vina AGM (1997) 240.

¹²⁵ La Vina AGM (1997) 241.

¹²⁶ Munzer SR & Raustiala K (2009) 52.

¹²⁷ Bird RC & Jain SC (2008) 5.

provider and provide businesses with incentive to maintain and develop new goods and services.¹²⁸

a. Trademark's nexus with TK & TCEs

Although trademark rights can be enjoyed in perpetuity as long as the registered owner continues to renew his registration¹²⁹ and TK holders desire perpetual protection, TK often lacks associated words and symbols.¹³⁰ Furthermore, some indigenous groups may deem it utterly inappropriate to sell some items of TK, such as the groups' sacred objects.¹³¹

Considering that most TK and TCEs do not possess names or symbols with secondary meaning, trademark is not a plausible way of protecting TK.¹³² Within indigenous communities' context, names and symbols only have the meanings assigned to them. Few examples of TK have however recognised distinctive marks that carry secondary meaning and some nations are beginning to extend trademark protection to TK. Ethiopia did so with three single-origin heritage coffees: *Harar*, *Sigamo*, and *Yirgacheffe*. These examples suggest that trademark is most applicable to those TK-related products that are widely sold in markets, which is hardly the norm for TK. Considering that the underlying rationale for trademark is the prevention of consumer confusion, not the protection of producer interests, trademark infringement requires proof of likelihood of confusion on the part of consumers.¹³³ In other words, where a TK-related mark is infringed, the test is whether consumers have been misled rather than whether the reputation of the producer (in this case an indigenous community) has been tarnished.

With respect to trademark dilution, the law requires that the mark be 'distinctive' or 'famous'. Dilution involves the use of a mark sufficiently similar to a famous mark that by association reduces, or is likely to reduce, the public's perception that the famous mark signifies something unique or particular.¹³⁴ Dilution involves two principal harms: blurring and tarnishment.¹³⁵ Blurring occurs when the **distinctiveness** of a famous mark is impaired by association with another similar mark; tarnishment arises when the **reputation** of a

¹²⁸ Zimmerman CS & Godfrey FC (1999) O.6.

¹²⁹ For example, Section 23(1) of the Nigerian Trademarks Act available at http://www.wipo.int/wipolex/en/results.jsp?countries=NG&cat_id=4 (accessed on 28 April 2017) grants a seven year term to a registered trademark with the option to renew regularly.

¹³⁰ The registration of a trademark may be cancelled on grounds of non-use or for use in bad faith though. Section 31(2) Nigerian Trade Marks Act.

¹³¹ Munzer SR & Raustiala K (2009) 55.

¹³² Munzer SR & Raustiala K (2009) 86.

¹³³ Munzer SR & Raustiala K (2009) 79.

¹³⁴ Morin M & Jacoby J 'Trademark Dilution: Empirical Measures for an Elusive Concept (2010) *New York University Centre for Law and Business Working Paper CLB-00-005* 3.

¹³⁵ Morin M & Jacoby J (2010) 5.

famous mark is harmed through association with similar marks.¹³⁶ It will be hard for many TK holders to meet requirements of this kind. Conceptually, dilution rests on the idea that the mark is well-known (possesses secondary meaning or acquired distinctiveness) and capable of being ‘diluted’. The dilution that occurs must be in the eyes of the *public*, not of the mark holder.¹³⁷

Therefore, even if a tribe felt that its symbol/mark had been appropriated by an outsider and used for a profane purposes that argument would only fit the underlying basis for trademark dilution if the original symbol/mark was trademarked and widely known beyond the mark holders. Second, those outside the community would have to perceive dilution stemming from such appropriation. Only rarely are public perceptions well-formed regarding TK and TCEs. In most cases, it is only community members and perhaps their allies who possess the relevant perceptions. Conceptually and practically, trademark dilution applies poorly to most TK and TCEs.¹³⁸

The factors to be considered in determining whether a mark causes or is likely to cause dilution include: degree of similarity between the marks; degree of the famous mark’s distinctiveness; extent to which the owner of the famous mark is engaged in exclusive use of the mark; degree of recognition of the famous mark; and any actual association between the infringing mark and the famous mark.¹³⁹ However, unless indigenous communities have promoted some signs, marks or symbols, they cannot rely on trademark dilution to protect TK-related products manufactured by them.

b. Positive TK rights under trademarks

Indigenous peoples may secure positive protection for some marks that do not satisfy the usual conditions for trademarks through certification or collective marks. The former indicates that a particular product meets certain criteria- for example, the letters ‘UL’ signify that the product meets the safety requirements of Underwriters Laboratories.¹⁴⁰ The latter indicates that the provider of a product or a service belongs to an association that uses the mark to promote the quality of its members’ goods or services. Certification and collective

¹³⁶ Legal Information Institute, ‘Dilution (Trademark)’ available at https://www.law.cornell.edu/wex/dilution_trademark (accessed on 05 April 2017).

¹³⁷ Munzer SR & Raustiala K (2009) 80.

¹³⁸ Munzer SR & Raustiala K (2009) 80.

¹³⁹ Legal Information Institute, ‘Dilution (Trademark)’ available at https://www.law.cornell.edu/wex/dilution_trademark (accessed on 05 April 2017).

¹⁴⁰ Underwriters Laboratories Inc. is a global independent safety science with expertise in innovating safety solutions: <http://www.ul.com/aboutul/> (accessed on 05 April 2017).

marks for positive protection of TK are justified by the need to give incentives for those involved in commerce.¹⁴¹

Also, communities often complain of use of false and misleading claims of authenticity and/or origin.¹⁴² Certification marks can be used to safeguard the authenticity and quality of indigenous arts. Examples of TK-inspired trademarks are the *Arte Seri* (to protect authentic ironwood products of the Seri people of Mexico). Also, in Mexico, *olinala* and *tequila* are used to protect lacquered wooden products and the traditional spirit derived from the blue agave plants (which are TK products derived from unique qualities of certain GRs in these localities).¹⁴³

TK holders can equally employ defensive protection of indigenous names, signs and symbols if trademarked, or when used by outsiders.¹⁴⁴

In conclusion, trademarks may be useful for the protection of products derived from TK but they cannot protect TK itself.¹⁴⁵

2.5 Geographical Indications¹⁴⁶

Article 22 of the TRIPs Agreement provides protection for Geographical Indications (GIs). Increasing attention is being given to GIs as a means of protecting TK given that both relate to communal rights as they TK both aim to protect localised traditions with accrued benefits to local communities.¹⁴⁷ Like trademarks, GIs help a consumer to identify products and ensure that they have a certain quality and reputation. GIs offer certain protections for TK, insofar as there is a product circulating within a market.¹⁴⁸

The advantage of GI protection for TK is that GIs can be held in perpetuity, as long as a community maintains the practices that guarantee the distinctive quality of a product. The possible extension of the TRIPS Agreement (Article 23) to include products other than wine and spirits as GIs may open the way for GIs to be used to protect TK manifestations since other IP regimes do not easily accommodate community ownership. In the absence of

¹⁴¹ Munzer SR & Raustiala K (2009) 87.

¹⁴² WIPO (2015) 32.

¹⁴³ WIPO (2015) 32-4.

¹⁴⁴ Munzer SR & Raustiala K (2009) 88.

¹⁴⁵ Dutfield G 'The Public and Private Domains' (2000) 21(3) *Sage Social Science Collections* 289.

¹⁴⁶ Article 22 TRIPs Agreement defines GIs as 'indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin'.

¹⁴⁷ Martens P 'Can Traditional Knowledge owners and producers in developing countries use Geographical Indications for protection and economic development gain? 2012 *Society for International Economic Law Online Proceedings: Working Paper* 3.

¹⁴⁸ Sunder M (2007) 113.

international agreements providing for the protection of TK and TCEs, GIs can provide protection to the unique cultural values embodied in traditional artisanal and agricultural skills of local communities.¹⁴⁹

TCEs often have a strong link to a specific region. This means that GIs can be used, in particular for tangible products such as handicrafts that have characteristics derived from their geographical origin.¹⁵⁰ Also, traditional know-how passed down through generations in localised regions can be protected by GI and used to enhance the sales potential of the product while GIs can equally provide economic recognition to unique and high quality products linked to their origin.¹⁵¹

Although it has been argued that GIs are TK because of the traditional and cultural heritage associated with the name and the region, GIs have tended to be associated with wines, spirits and special agricultural products. However, niche products based on high quality craftsmanship and TK products from specified regions, like Ecuadorean Panama hats, fulfill a number of legal definitions of GIs.¹⁵²

The structure of GIs makes them suited to TK. GIs recognise collective rights as artisans may be recognised as authorised users of a GI.¹⁵³ The amenability of GIs to collective production tradition is an important factor that does not allow for their categorisation as private property.¹⁵⁴ Also, the protection of GIs does not necessarily exclude other persons or groups from the use of the GIs. Rather, all producers in the area to which the GI refers have the right to use the indication for products that originate from the area (subject to relevant production standards).¹⁵⁵

However, regarding TK that spans communities, regions and even countries, care must be taken to ensure that GIs are not employed to grant monopoly rights over knowledge to one region to the exclusion of others.¹⁵⁶

In contrast to GIs, TK and TCEs, have broader meaning focusing on the content or substance of traditional innovations, environmental knowledge, medicinal knowledge as well as TCEs such as cultural heritage, handicrafts, art, songs, dances, narratives, and designs. In this sense,

¹⁴⁹ Martens P (2012) 3.

¹⁵⁰ WIPO (2015) 33.

¹⁵¹ Martens P (2012) 4.

¹⁵² Martens P (2012) 6.

¹⁵³ Sunder M (2007) 114.

¹⁵⁴ Dagne T 'The Identity of Geographical Indications and their relation to Traditional Knowledge in Intellectual Property Law (2013-2014) 54(2) *IDEA- Intellectual Property Law Review* 263-5.

¹⁵⁵ Dagne T (2013-2014) 265.

¹⁵⁶ Anderson J (2010) 40.

TK and TCEs when applied to traditional communities, may indeed refer to traditionally-made goods, but are also holistic and all-encompassing reflecting all aspects of life and society in such communities.¹⁵⁷

Although GIs hold promise for TK and TCEs, they have limits. A GI law protects only those goods or processes whose quality is shown to be due essentially to the geographical environment, and its inherent natural and human factors. To obtain GI protection, the applicant must give 'proof of origin' and a 'historical record' of continuous use of the goods or process.¹⁵⁸ A great deal of TK cannot be traced to a specific community or geographical area. Thus, no identifiable group of people may exist in which rights to such TK can be vested.¹⁵⁹

In sum, therefore, GIs may be useful for the protection of products derived from TK but they cannot protect the knowledge itself.¹⁶⁰

2.6 Trade Secrets

Article 39 of the TRIPs Agreement provides for the protection of undisclosed information. It requires that the information to be protected be secret,¹⁶¹ have commercial value based on its secrecy, and that reasonable steps have been taken to keep it secret.

Trade secrets are pieces of information that can be used in a commercial enterprise and that are sufficiently confidential and valuable to provide an economic advantage.¹⁶² The holder of a trade secret must make reasonable efforts to keep it confidential. Protection continues until the information becomes public knowledge through, for example, independent discovery or reverse engineering.¹⁶³ Hence trade secrets and TK both share the attribute of (potentially) unlimited protection and aim to keep some knowledge in private hands.

Trade secrets can be availed of to protect valuable knowledge which does not meet the requirements for patents. The owner of a trade secret may license, disclose, or assign the right to use the trade secret, subject to an agreement to hold the information in confidence.¹⁶⁴

¹⁵⁷ Martens P (2012) 6.

¹⁵⁸ Sunder M (2007) 114.

¹⁵⁹ Dutfield G (2000) 283.

¹⁶⁰ Dutfield G (2000) 289.

¹⁶¹ That is, it is not readily accessible to persons within the circles that normally deal with that kind of information.

¹⁶² Oguamanam C 'The Convention on Biological Diversity and Intellectual Property Rights: The Challenge of Indigenous Knowledge' (2003) 7 *Southern Cross University Law Review* 118.

¹⁶³ Sunder M (2007) 55-6.

¹⁶⁴ La Vina AGM (1997) 239.

Both TK and trade secrets have a lot in common but much of TK involves information that is not commercial in nature and thus, TK encompasses far more than trade secrets.¹⁶⁵ Therefore, trade secrets only protect some TK and TCEs that may be commercial in nature.

2.7 Designs

For a design to be registrable, it must be new or original. English Courts take the view that ‘new’ and ‘original’ mean different things.¹⁶⁶ However, in England, by the 1988 Copyright, Patents and Designs Act, the registration requirement of industrial designs is simply that they are ‘new’. For a design to be novel, it must be different from pre-existing designs in a way which is more than trifling. The question of novelty of the design is for the eye to determine.¹⁶⁷

The design, shape and visual characteristics of textiles, carvings, sculptures, pottery and other handicraft could be protected as industrial designs.¹⁶⁸ However, this only avails tangible TK most, especially contemporary TCEs.

It is noteworthy that the WIPO Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications is in the final phase of negotiating a Design Law Treaty but it is being held up by proposals from some delegations demanding the inclusion of a disclosure obligation relating to the use of TK or TCEs in designs.¹⁶⁹

Therefore, Designs are inefficient in protecting all categories of TK and TCEs.

2.8 Chapter conclusion

While small windows of opportunity are available in employing existing IP regimes, applying the conventional IP approaches to TK and TCEs may do more harm than good. To successfully use the IP system, indigenous peoples will have to fundamentally change their worldview and their customary knowledge management systems. Existing IP laws are incompatible with the cultural worldview of indigenous peoples and will require legal,

¹⁶⁵ Munzer SR & Raustiala K (2009) 55-6.

¹⁶⁶ Buckley LJ held in *Dover Ltd v. Nurnberger Celluloid Waren Fabrik Gebruder Wolff* (1910) 2 Ch 25 that the word ‘new’ referred to cases where the shape or pattern was new in itself while ‘original’ is where, though old in itself, the design was new in its application to the article in question.

¹⁶⁷ Gopalakrishnan NS & Agitha TG (2014) 81.

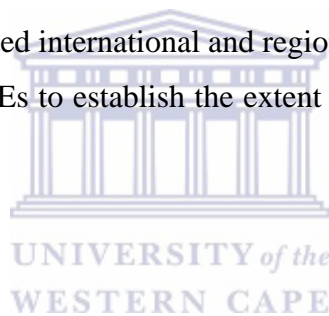
¹⁶⁸ WIPO (2015) 33.

¹⁶⁹ WIPO General Assembly ‘Matters Concerning the Convening of a Diplomatic Conference for the Adoption of a Design Law Treaty (DLT)’ 49th Session 2-11 October 2017 available at <http://www.wipo.int/policy/en/sct/> (accessed on 28 November 2017).

financial and administrative resources which indigenous groups may not possess owing to their economic predicaments.¹⁷⁰

This Chapter establishes that existing IP regimes are not suitable to protect TK and TCEs as they are founded on individual ownership, established on criteria that are not amenable to the dynamic manifestations of TK and TCEs and do not view TK and TCEs as knowledge or as novel/original. Also, the commercial focus of existing IP regimes makes them unfit for the protection of TK and TCEs which are predicated on fundamental principles of access and resource sharing amongst indigenous peoples.¹⁷¹ This then explains why different recommendations have been made for protecting TK and TCEs. Riley recommended a tiered system of laws- international, national, and tribal- to protect TK and TCEs but that tribal law must serve as the foundation.¹⁷² Others recommend the adoption of a *sui generis* mechanism,¹⁷³ or defensive protection through the use of databases, disclosure of origin, etc.¹⁷⁴ for protection of TK and TCEs.¹⁷⁵ These explain why the IGC was commissioned to devise a mechanism for the protection of TK and TCEs.

The next Chapter examines selected international and regional initiatives that have been taken to offer protection to TK and TCEs to establish the extent to which they protect the interests of TK and TCEs owners.



¹⁷⁰ La Vina AGM (1997) 243-8.

¹⁷¹ Swiderska K et al 'Protecting Traditional knowledge from the grassroots up' (2009) *IIED Briefing* 1.

¹⁷² Riley AR "'Straight Stealing': Towards an Indigenous System of Cultural Property Protection' (2005) 80:69 *Washington Law Review* 73-4. Tribal law implies customary law.

¹⁷³ '*Sui generis*' means of its own kind' and can be a modification of existing IP regimes to cover something previously unprotected or under-protected. It can also be an alternative to conventional IP regimes, which is specifically adapted to the peculiarities of TK: Swiderska K 'Traditional knowledge protection and recognition of customary law: Policy issues and challenges' 2004 IIED Background Paper 4, 20-21.

¹⁷⁴ Dutfield G 'Protecting Traditional Knowledge and Folklore: A Review of Progress in Diplomacy and Policy Formulation 2003 ICTSD-UNCTAD Project on IPRs & Sustainable Development 2-5.

¹⁷⁵ J. de Beer & D. Dylan, "Traditional Knowledge Governance Challenges in Canada," in M. Rimmer, ed, *Research Handbook on Indigenous Intellectual Property* 21.

CHAPTER THREE

AN EXAMINATION OF SELECTED INTERNATIONAL AND REGIONAL INITIATIVES FOR THE PROTECTION OF TRADITIONAL KNOWLEDGE AND TRADITIONAL CULTURAL EXPRESSIONS

3.0 Introduction

In the previous chapter, existing IP regimes and the extent to which they may be employed to protect TK and TCEs were examined. It was established that they offer limited protection for TK and TCEs. Their limitations give room for the misappropriation of TK and TCEs.¹⁷⁶ Attempting to curtail this trend, various international and regional initiatives have been implemented.

This chapter examines the following select international and regional initiatives for the protection of TK and TCEs: the Convention on Biological Diversity 1992,¹⁷⁷ 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 2010,¹⁷⁸ the International Treaty on Plant Genetic Resources for Food and Agriculture 2001,¹⁷⁹ and the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore 2010.¹⁸⁰ These are examined to ascertain the extent to which they protect TK and TCEs and the shortcomings inherent in them in order to demonstrate the pitfalls that a protection mechanism for TK and TCEs must avoid to be effective.

3.1 The Convention on Biological Diversity

The Convention on Biological Diversity (CBD) was opened for signature at the United Nations Conference on Environment and Development in Rio, Brazil in June 1992 and it entered into force in December 1993.¹⁸¹ The CBD fundamentally changed the legal status of the ownership of biological resources, which had previously been viewed as a common

¹⁷⁶ Feris L (2004) 244.

¹⁷⁷ Available at <https://www.cbd.int/convention/text/default.shtml> (accessed on 11 April 2017).

¹⁷⁸ Available at <https://www.cbd.int/abs/text/default.shtml> (accessed on 12 April 2017).

¹⁷⁹ Available at www.fao.org/in-action/search-results/en/ (accessed on 24 August 2017).

¹⁸⁰ Available at <http://www.aripo.org/resources/laws-protocols> (accessed on 25 October 2016). This research is constrained by space and the listed instruments are not exhaustive of relevant initiatives. Other significant initiatives include the UNESCO Convention on the Safeguarding of Intangible Cultural Heritage, the African Model Legislation for the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources 2000, the United Nations Declaration on the Rights of Indigenous Peoples 2007 (UNDRIP), etc. The instruments examined in this Chapter however represent the most notable initiatives towards the protection of TK and TCEs and apply to cross-cutting issues in TK discussions.

¹⁸¹ Ruiz RW, 'The Convention on Biological Diversity: An Affectionation of Ecological Conservation Exposed by the Interoceanic Chinese-Backed Nicaraguan Canal' (2015) 28 *Tulane Environmental Law Journal* 456.

heritage¹⁸² accessible to all without restrictions, by declaring such biological resources as sovereign possessions of the countries where they are found.¹⁸³ The CBD is one of the 'Rio Conventions', together with the UN Framework Convention on Climate Change and the UN Convention to Combat Desertification.¹⁸⁴

The objectives of the CBD are: the conservation of biological diversity (biodiversity), the sustainable exploitation of biodiversity, and the fair and equitable sharing of the benefits arising from its use.¹⁸⁵ The subject of fair and equitable benefit-sharing is designed to address the disparity between the ownership and the exploitation of biological resources.¹⁸⁶

The fact that most biological diversity is concentrated in developing countries had contributed to the coloration of the biodiversity debate as a 'North/South'¹⁸⁷ issue.¹⁸⁸ While the developed countries of the North are interested in securing freer access to GRs in the countries of the South, the developing countries are keen to share in the benefits arising from the commercial exploitation of their GRs and TK.

The CBD takes the view that if a product or process has existed in a culture for a long period of time, it is owned and should be protected.¹⁸⁹ Though not an IP instrument, the CBD endorses the use of IP for the protection of TK and the overall attainment of its objectives.¹⁹⁰

As revealed by its linguistic roots, the term 'biodiversity' describes the variety of life on earth. It includes all of the millions of animals, plants, fungi, microorganisms and the evolutionary variations of life. Thus, biodiversity is all life on earth¹⁹¹ and the CBD applies thereto.

¹⁸² Fowler C 'Protecting Farmer Innovation: The Convention on Biological Diversity and the Question of Origin' (2001) 41 *JURIMETRICS* 478.

¹⁸³ Miller JS 'The Realized Benefits from Bioprospecting in the Wake of the Convention on Biological Diversity' (2015) 47 *Washington Journal of Law & Policy* 52.

¹⁸⁴ In 1992, the Earth Summit established the three Conventions. See 'Rio Conventions Pavilion' available at <http://www.riopavilion.org/unccd-cop12-about/> (accessed on 25 April 2017).

¹⁸⁵ Article 1 CBD.

¹⁸⁶ 'Biological resources' include genetic resources: Article 2 CBD.

¹⁸⁷ Debates relating to TK, TCEs and GRs are often viewed as a 'contest' between developed countries and developing countries. Industrialised countries are characteristically located in biodiversity-poor regions in the North whilst developing countries are found in biodiversity-rich regions: Mudiwa M 'Global Commons: The Case of Indigenous Knowledge, Intellectual Property Rights and Biodiversity' available at www.dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/428/ (accessed on 25 April 2017).

¹⁸⁸ Fowler C (2001) 478.

¹⁸⁹ Bodeker G 'Traditional Medical Knowledge, Intellectual Property Rights & Benefit Sharing' (2003) 11 *Cardozo Journal of International & Comparative Law* 790.

¹⁹⁰ Arewa OB (2006) 174.

¹⁹¹ Snape WJ 'Joining the Convention on Biological Diversity: A Legal and Scientific Overview of why the United States must wake up' (2010) 10 *Sustainable Development Law & Policy* 7.

3.1.1 Relevance to TK

The protection of TK under the CBD is not a separate objective but it is rather supplementary to the regulation of access to GRs.¹⁹² Article 8(j) states:

‘Each contracting party shall, as far as possible and as appropriate:

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

There are other TK-related provisions. Article 10(c) requires contracting parties to, as far as possible and as appropriate, protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with sustainable use. These customary uses may be considered to be synonymous with the ‘practices’ mentioned in Article 8(j), when both are relevant to the conservation and sustainable use of biological resources.¹⁹³

Article 15(1) of the CBD reaffirmed national sovereignty over GRs.¹⁹⁴ Article 15.5 makes the subject of ‘prior informed consent’ (PIC) of the country providing GRs mandatory in accessing such GRs. The issue of access to GRs cannot be separated from the TK of the indigenous and local communities (ILCs) who nurture biodiversity. The implication of this, therefore, is that the TK of ILCs relating to biodiversity cannot be accessed without their PIC.¹⁹⁵

ILCs do not often receive any benefits from the commercialisation of GRs cultivated by them, despite the fact that TK of the uses of certain plants and animals often assist research into particular GRs. The CBD requires that access to such resources occur on mutually-

¹⁹² Moody OO (unpublished LL.M Thesis, UWC 2011) 55.

¹⁹³ Amiott J ‘Investigating the Convention on Biological Diversity’s Protections for Traditional Knowledge’ (2004) 11(1) *Missouri Environmental Law & Policy Review* 17.

¹⁹⁴ Prior to the CBD, access to plant GRs was formalised by the FAO Undertaking on Plant Genetic Resources, which was the sole legal instrument on GRs: Chen J ‘There is Nothing like Biopiracy... and It’s a Good Thing Too’ (2006) 37 *McGeorge Law Review* 11.

¹⁹⁵ Picart CJS & Fox M, ‘Beyond Unbridled Optimism and Fear: Indigenous Peoples, Intellectual Property, Human Rights and the Globalisation of Traditional Knowledge and Expressions of Folklore: Part II’ (2014) 16 *International Community Law Review* 9-10.

agreed terms.¹⁹⁶ The CBD grants a country the right to share in the benefits of products derived from its biodiversity or TK.¹⁹⁷ Article 15 of the CBD authorises Parties to place conditions on access to GRs. This could be achieved by export bans or licensing but Article 15 is subject to the disciplines of GATT and the TRIPs Agreement.¹⁹⁸ This is because, by reason of the WTO's trade liberalisation, any measures imposed by a State which appears to be a barrier to trade may be viewed as a breach of multilateral trading system obligations and may be challenged. It may, however, be argued that TK (and GRs) are not subject matters covered by any WTO agreement.

Pursuant to Article 16, parties are to facilitate access to and transfer of technologies 'under fair and most favourable terms', consistent with the adequate and effective protection of IP rights and 'in accordance with international law'.¹⁹⁹

3.1.2 Linkage with the IP framework

The CBD recognises that TK is relevant to biodiversity conservation.²⁰⁰ It links the sustainable development and commercial value of biodiversity with IP rights.²⁰¹ The CBD, therefore, upholds the use of IP as a policy instrument.²⁰² To achieve its objectives, the CBD considers international IP law as an important factor.²⁰³ Article 16.5 provides:

'The Contracting Parties, recognising that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall

¹⁹⁶ Lewis M 'Bioprospecting in the Wake of CBD COP10: The Adoption of the Nagoya Protocol' (2010) 19 *ILSA Quarterly* 19.

¹⁹⁷ Sunder M (2007) 105.

¹⁹⁸ Salako, SE 'Agrobiotechnology, Indigenous Peoples Rights and Traditional Knowledge' 2012 *African Journal of International and Comparative Law* 321.

¹⁹⁹ Wager H, 'Biodiversity, Traditional Knowledge and Folklore: Work on Related IP Matters in the WTO' (2008) 3 *Intercultural Human Rights Law Review* 219-220.

²⁰⁰ Paragraph 12 CBD Preamble.

²⁰¹ Article 16.5 CBD. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains two key concepts: the concept of needs and the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs: IISD 'Sustainable Development' available at <http://www.iisd.org/topic/sustainable-development> (accessed on 27 July 2017). It recognises that growth must be both inclusive and environmentally-sound to reduce poverty and build shared-prosperity for today's population without compromising the needs of future generations: The World Bank 'Sustainable Development' available at <http://www.worldbank.org/en/topic/sustainabledevelopment/overview> (accessed on 27 July 2017). The CBD in its preamble recognises that the conservation and sustainable 'use' of biodiversity is critical for meeting the food, health and other needs of the growing global population and to that extent, sustainable biodiversity utilisation is one of the three objectives of the CBD. Article 16.1-16.5 enjoins the transfer of relevant technology for achieving its objectives (including technology subject to patents and other IP rights) on mutually-agreed terms. To that extent, it intends that IP rights should not be a hindrance to the attainment of its objectives but that the IP system ought to be used for the protection of TK, which the CBD sees as integral to its objectives.

²⁰² Oguamanam C (2003) 96-7.

²⁰³ Articles 16, 17, 18 and 19 show the relevance of IP to the CBD's objectives.

cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives’

It is important to note that there are principally two sets of international IP frameworks: the WIPO-administered conventions²⁰⁴ and the WTO’s TRIPs Agreement. These two frameworks display some disparity in their vision of IP law. While the former emphasises a national approach, the latter is part of the WTO’s trade liberalisation which sets global minimum standards of IP protection. The WIPO framework empowers countries to determine, by national law, the nature and subject matter of IP protection while the TRIPs Agreement commends the IP regimes to the global arena limiting national discretion.²⁰⁵ The CBD therefore lays a foundation for a linkage between IP rights and biodiversity conservation, with a deliberate disposition towards TK protection.²⁰⁶ The CBD ideally should birth a rethink of how IP is construed. Thus, it has led to discussions on whether there are apparent conflicts between the various instruments.²⁰⁷ As a matter of fact, the WTO Secretariat maintains cooperation with the CBD Secretariat on the issues highlighted herein.

Because of the long-held (but erroneous) belief that indigenous ecological experiences are not ‘scientific’, such knowledge is not regarded as innovative within the orthodox IP evaluation criteria.²⁰⁸ However, this ‘rudimentary’ knowledge is associated with innovations in the fields of agriculture, genetics, medicine, pharmacology, etc. Credit for these endeavours is easily appropriated under established scientific paradigm, which is often employed in articulating IP rights.²⁰⁹

The CBD in Article 16.5 specifically mentions patents. The emphasis on patents, however, is not an exhaustive discussion of all aspects of that regime. The holistic range of TK cannot be fully appreciated in a delineated analysis of a specific IP regime like patents (as established in

²⁰⁴ WIPO administers 26 Conventions: <http://www.wipo.int/treaties/en/> (accessed on 26 April 2017).

²⁰⁵ Oguamanam C (2003) 93.

²⁰⁶ The provision of CBD Article 8(j) enables Contracting Parties to create regimes for protecting TK. This would include IP rights either in their conventional or *sui generis* forms or both in a manner similar to the provisions of Article 27.3(b) of the TRIPs Agreement.

²⁰⁷ Bratspies RM ‘The New Discovery Doctrine: Some Thoughts on Property Rights and Traditional Knowledge’ (2006-2007) 31 *American Indian Law Review* 331.

²⁰⁸ The moral, socio-cultural, economic and spiritual strings attaching indigenous peoples to their TK and ecological experience constitute a complete way of life and a unique feature of their identity. Their TK is a product of indigenous socio-cultural, economic and historical experiences, which approximates to the loose concept of intellectual creation: Oguamanam C (2003) 99-100.

²⁰⁹ By using TK, the efficacy of screening plants for medicinal properties increased more than 400 per cent: Balick M, ‘Ethnobotany and Identification of Therapeutic Agents from the Rainforests’ in Chadwick PJ and Marsh J (eds), *Bioactive Compounds from Plants* (1990) 28-9.

Chapter two). Different aspects of TK fit within different IP regimes concurrently.²¹⁰ However, compared to patents, other IP regimes appear to have marginal appeal in terms of their practical relevance to indigenous ecological (rather than artistic) experiences.²¹¹

The coexistence of two substantive international IP frameworks with apparently varying emphases²¹² requires clarification. Though the TRIPs Agreement did not abolish the WIPO-administered conventions,²¹³ it tinkered with subjects covered in WIPO-administered conventions.²¹⁴ Also, following the principles of interpretation, as an instrument later in time, TRIPs Agreement provisions prevail in areas of conflict with the provisions of pre-existing WIPO-administered conventions, where both instruments were acceded to by the same parties.²¹⁵ To that extent, it can be asserted that the TRIPs Agreement represents the framework of IP policy tool to be employed in implementing the CBD, especially amongst countries signatory to both frameworks.

3.1.3 Inadequacies of the CBD

First, the CBD was primarily negotiated for the protection of GRs and not for TK protection.²¹⁶ Thus, it was not designed to protect TK as TK is only mentioned for its usefulness in biodiversity conservation.

Second, the CBD's intent on benefit-sharing is undermined by the absence of a global enforcement mechanism. The enforcement is left to individual States, and this has proven unsatisfactory over the years. Compliance is arguably the CBD's greatest weakness.²¹⁷ While it provides that interpretation disputes be resolved through negotiation and allows for

²¹⁰ For instance, a traditional medical practitioner's knowledge of medicinal plants' therapeutic properties is a patentable resource; his poetic incantations during therapeutic rituals, in fixed forms, are copyrightable.

²¹¹ *Oguamanam C* (2003) 101.

²¹² Although TRIPs purports to regulate trade aspects of IP, it ended up *covering the field* to a degree that had never happened in international IP regulation. It radically modified the context in which IP rights are considered internationally and their enforcement methods.

²¹³ However, Article 70 of the TRIPs Agreement makes provisions on pre-existing obligations of members under different conventions including particularly copyright obligation with respect to existing works pursuant to Article 18 of Berne Convention. Article 70 gradually eases out the conflicting obligations of members in pre-existing conventions so as to bring the TRIPs framework into full operation. Article 2 of TRIPs makes specific provision regarding particular provisions of the Paris Convention and other WIPO administered treaties.

²¹⁴ For example, the duration of patent, patentable subject matter, compulsory license under the Paris Convention were essentially within the discretion of Member States. TRIPs not only provides for 20 years patent life but also leaves little room for States' discretion on most matters.

²¹⁵ Article 28 of the Vienna Convention on the Law of Treaties (1969) 8 ILM 679 states: 'Unless a different intention appears from the treaty or is otherwise established, its provisions do not bind a party in relation to any act or fact which took place or any situation which ceased to exist before the date of the entry into force of the treaty with respect to that party'.

²¹⁶ Chakrabarti G 'Vulnerable Position of Traditional Knowledge under IPR: Concern for Sustainable Development' (2014) 07 *OIDA International Journal of Sustainable Development* 82.

²¹⁷ Mueller TM, 'Because I asked you nicely: Defining Prior Informed Consent under the Convention on Biological Diversity' (2011) 18 *Southwestern Journal of International Law* 403.

mediation, arbitration or submission to the International Court of Justice, it provides no remedy for compliance breaches.²¹⁸ Parties can bring enforcement actions against other Parties but citizens cannot require Parties to comply with the CBD, unless the CBD has been domesticated in the particular State.²¹⁹

Also, it is indigenous communities and not States who cultivate GRs and their associated TK. The conferral of ownership of GRs on States works against the interests of ILCs who own the TK with which the GRs have been cultivated for generations.²²⁰ The CBD's reliance on State sovereignty over biological resources and the inadequacy of State efforts to effectively protect TK frustrates the CBD from safeguarding the knowledge, innovations, and practices of ILCs.²²¹ Moreover, States sometimes fail to fight biopiracy by transnational corporations because they provide States with financial resources. Therefore, the CBD's reliance on States does not necessarily enhance TK holders' interests.²²²

While provisions are made for ILCs' participation in the implementation of States' obligations, these provisions are 'subject to...national legislation' and only 'as far as possible and as appropriate'.²²³ The same conditions apply to the provisions requiring that the use of TK be with the PIC of ILCs.²²⁴ It would be subject to the PIC of the Party providing such resources, unless otherwise determined by that Party.²²⁵ The term 'Party' refers to sovereign nations, parties to the CBD, and not ILCs. Thus, the State decides whether or not to consult with ILCs, which does not seem very likely for fear of losing revenue if such 'hurdle' to access is put in place.²²⁶ Thus, the CBD fails to define 'consent' in precise terms.

Furthermore, existing IP regimes do not recognise the merits of TK in a manner that could advance the CBD's objective of equitable benefit-sharing. This negates the economic incentive imperative as a basis for supporting TK contribution to biodiversity conservation. The existing IP frameworks operate at cross-purposes with the objectives of the CBD and may not provide effective policy tools in protecting TK. Besides, the CBD lacks an effective

²¹⁸ Srinivas KR (2008) 91.

²¹⁹ Amiot J (2004) 31-2.

²²⁰ Etemire U 'The Convention on Biological Diversity Regime and Indigenous Peoples: Issues Concerning Participatory Rights and Impact Assessment' (2013) 4 *City University of Hong Kong Law Review* 9.

²²¹ Amiot J (2004) 6.

²²² Dutfield G *IP Rights, Trade and Biodiversity (Seeds, Plants and Varieties)* (2000) 38-9. However, as shown by the next Chapter, States are gradually taking measures through national legislation to protect indigenous peoples' interests and combat biopiracy.

²²³ Etemire U (2013) 8.

²²⁴ Picart CJS & Fox M (2014) 9-10.

²²⁵ Article 15(5) CBD.

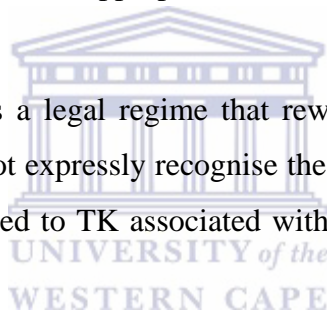
²²⁶ It is, however, noteworthy that the UNDRIP provides guarantees for indigenous peoples' participation in decision-making affecting them. Therefore, the likelihood of Parties not consulting with ILCs is minimised.

mechanism to prevent the utilisation of existing IP regimes for exploiting indigenous people's TK.²²⁷

It is notable that the CBD uses the term 'indigenous' and 'local' communities rather than indigenous peoples. By including local communities, the CBD expands the net to include local farmers who have lived on the land for generations. Like many provisions in the CBD, However, by limiting its protections to 'communities' and ignoring the generally-accepted term 'indigenous peoples', the CBD fails to protect the TK of indigenous individuals who live outside indigenous communities.²²⁸ The CBD also narrows the definition of ILCs by including the phrase 'embodying traditional lifestyles'. This modifying phrase promotes the notion that indigenous cultures must remain primitive to warrant the CBD's protections, rather than respecting the right to cultural evolution.²²⁹

From a legal point of view, the CBD consists of general principles, many of which challenge the current legal doctrines and have complex interactions with pre-existing legal regimes. However, it does not address TK misappropriations that occurred prior to its entry into force.²³⁰

Hence, while the CBD promotes a legal regime that rewards TK holders for their role in preserving biodiversity, it does not expressly recognise the inventiveness of TK. Besides, the CBD's protection for TK is limited to TK associated with GRs but not all TK is associated with GRs.



²²⁷ Blackeney M 'Protecting the Knowledge and Cultural Expressions of Aboriginal Peoples' (2014) 39(2) *University of Western Australia Law Review* 191.

²²⁸ The concepts of 'indigenous peoples' and 'communities' are contested terms. Cook A & Sarkin J, 'Who Is Indigenous: Indigenous Rights Globally, in Africa, and among the San in Botswana' (2009) 18 *Tulane Journal of International & Comparative Law* 105-113 highlights the difficulties with defining who is indigenous. However, for purposes of this research, indigenous communities are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system: Misiedjan D & Gupta J, 'Indigenous Communities: Analyzing Their Right to Water under Different International Legal Regimes' (2014) 10 *Utrecht Law Review* 77. Indigenous communities are distinct groups of people with a continuity of existence or identity tracing their roots to the tribes or nations of their ancestral past. Historically, they have been identified as the original inhabitants of territories colonised by European powers: Candelaria SM, 'The Rights of Indigenous Communities in International Law: Some Implications under Philippine Municipal Law' (2000) 16 *World Bulletin* 24 Indigenous communities would therefore be seen as the societal structure within which indigenous individuals live. The term indigenous peoples would more appropriately be seen as referring to each indigenous individual.

²²⁹ Amriott J (2004) 8.

²³⁰ Ansari AH & Laxman L 'A Review of the International Framework for Access and Benefit Sharing of Genetic Resources with Special Reference to the Nagoya Protocol' 2013 *Asia Pacific Journal of Environmental Law* 118.

3.1.4 Conclusion

Therefore, based on this inadequacies, notably the absence of an enforcement mechanism, employment of existing IP frameworks (which are mostly incompatible with TK and TCEs) as policy tools and the anchoring of TK protection on ‘communities’ rather than ‘peoples’, the protection of TK under the CBD is limited.

3.2 Nagoya Protocol

In 2010, the CBD contracting parties adopted the Nagoya Protocol on Access and Benefit Sharing and the Fair and Equitable Sharing of Benefits arising from their Utilisation to the Convention on Biological Diversity (Nagoya Protocol).²³¹ The Nagoya Protocol provides an implementation framework for the CBD’s objective of fair and equitable sharing of benefits arising from the utilisation of GRs.²³² It entered into force in October 2014.²³³

3.2.1 Relevance to TK

The Nagoya Protocol was negotiated against the backdrop of calls to end biopiracy. National laws were ineffective in checking biopiracy in foreign jurisdictions.²³⁴ It was mainly negotiated to clarify rules regarding access and benefit-sharing.²³⁵

ILCs that hold GRs and TK associated to GRs enjoy extensive consideration under the Nagoya Protocol. First, where communities have the established right to grant access to GRs or hold TK, parties should adopt measures ensuring that PIC for access is obtained from such communities.²³⁶ Second, benefits derived from the utilisation of GRs or TK must be shared in a fair and equitable way with such communities upon mutually-agreed terms.²³⁷ Third, Parties, with effective participation of communities, are required to establish mechanisms to inform users of TK about their obligations. Such obligations can be laid down in community protocols and model contractual clauses as developed by communities.²³⁸

²³¹ Dutfield G (2015) 657.

²³² Warren LM ‘The Convention on Biological Diversity: Will the decisions made at COP10 in Nagoya make it easier to Conserve Biodiversity?’ (2010) 12 *Environmental Law Review* 247.

²³³ See ‘About the Nagoya Protocol’ available at <https://www.cbd.int/abs/about/default.shtml/> (accessed on 12 April 2017).

²³⁴ Moody OO (unpublished LL.M Thesis, UWC 2011) 66-7.

²³⁵ Blackwell AH & Blackwell CW ‘Hijacking Shared Heritage: Cultural Artifacts and Intellectual Property Rights’ (2014) 13 *Chicago-Kent Journal of Intellectual Property* 156; Article 1 Nagoya Protocol.

²³⁶ Articles 6(2) & 7 Nagoya Protocol.

²³⁷ Articles 5(2) & 5(5) Nagoya Protocol.

²³⁸ Article 12(1)-(3) Nagoya Protocol.

3.2.2 Inadequacies of the Nagoya Protocol

The Nagoya Protocol contains too many qualifiers and phrases that limit the application of the obligations it purports to impose. It provides in Article 5(5) that each Party shall take legislative or other measures, ‘as appropriate’, in order that the benefits arising from the utilisation of TK associated with GRs are shared in a fair and equitable way with relevant communities holding such knowledge. Article 12(1) of the Protocol requires Parties in implementing their obligations ‘in accordance with domestic law’ to ‘take into consideration’ ILCs’ customary laws, community protocols and procedures, as applicable, to TK associated with GRs.²³⁹ However, ‘take into consideration’ hardly implies a meaningful command. Such qualifiers impose no enforceable obligations on States to protect TK rights. States could exploit these to limit indigenous peoples’ participation.²⁴⁰

Though Article 12 of the Nagoya Protocol places customary law firmly at the centre of global governance of TK and GRs, the transfer of well-defined legal obligations to transnational corporations to observe customary law is not a given. It may be imposed by judicial, administrative or statutory means. Without political will, though, such obligations may never become binding.²⁴¹

Under Article 6(2) of the Nagoya Protocol, States are expected to take measures to ensure that the PIC of ILCs is obtained for access to GRs (and TK). However, this new obligation is applicable only when the communities have the ‘established right to grant access to such resources’, whereas the relevant measures to be taken by States must be ‘in accordance with domestic law’ and taken ‘as appropriate’. The use of phrases like ‘in accordance with domestic law’, may lead to abuses of rights. The phrase ‘established rights’²⁴² could be used to exclude rights based on customary use.²⁴³ Requiring the enactment of a law as a precondition for PIC works to the detriment of the provider countries because without such laws, they will be unable to insist on enforcement of user country compliance measures and this could facilitate biopiracy.²⁴⁴

²³⁹ Blackeney M (2014) 191.

²⁴⁰ Etemire U (2013) 8-9.

²⁴¹ Tobin B ‘Biopiracy by Law: European Union Draft Law Threatens Indigenous Peoples’ Rights over their Traditional Knowledge and Genetic Resources’ (2014) *European Intellectual Property Review* 126.

²⁴² Established rights might only refer to situations where a community can demonstrate that its right to GRs is affirmed by legislation or judicial decision.

²⁴³ Etemire U (2013) 10-11.

²⁴⁴ Ansari AH & Laxman L (2013) 128. It is noteworthy that the Nagoya Protocol was negotiated to create greater legal certainty and transparency for both providers and users of GRs (and related TK) by establishing more predictable conditions for access to GRs and helping to ensure benefit-sharing when GRs leave the

The Nagoya Protocol is dependent upon national implementation for effectiveness.²⁴⁵ It requires all States to establish ‘appropriate, effective and proportionate’ measures to ensure that GRs utilised within their territory have been accessed on the basis of PIC and mutually-agreed terms.²⁴⁶ Article 17 of the Protocol requires each Party to designate checkpoints to receive relevant information related to PIC, source of GRs, establishment of mutually-agreed terms, and/or the utilisation of GRs. The nature of these checkpoints was not defined and there are no mandatory checkpoints.²⁴⁷ There is merely an enabling clause on monitoring compliance.²⁴⁸ There are no guidelines in the Nagoya Protocol on measures which are considered appropriate, effective and proportionate or measures necessary for effective monitoring and compliance.²⁴⁹ Although Article 17 institutionalises an internationally-recognised certificate as evidence of compliance, it only applies to the utilisation of GRs and not the TK related to them.²⁵⁰

Also, there is uncertainty regarding the scope of the Nagoya Protocol; that is, whether it applies to GRs utilised before its entry into force. This does not necessarily imply that benefit-sharing only relates to benefits from GRs and TK accessed post-CBD or even post-Nagoya Protocol. The uncertainty needs to be clarified in accordance with international law principles because the provisions of the Nagoya Protocol ‘do not bind a party in relation to any act which took place or any situation which ceased to exist before the date of the entry into force of the treaty with respect to that party’.²⁵¹ Nevertheless, under Article 28 of the Vienna Convention, it can be deduced that the generation of benefits after that date is a new act or that the holding of the GRs or TK is a situation which has not ceased to exist. By Article 28 of the Vienna Convention, however, it can be presumed that the Nagoya Protocol applies to GRs (and related TK) which were collected/accessed by research institutes and companies prior to its entry into force and which are still being utilised. However, the fact that the Protocol makes no definitive provision relating to such categories of GR and TK leaves this latter submission as mere conjecture.

country of origin: ‘About the Nagoya Protocol’ available at <https://www.cbd.int/abs/about/> (accessed on 21 July 2017).

²⁴⁵ Blackeney M (2014) 191.

²⁴⁶ Article 15(1) Nagoya Protocol.

²⁴⁷ Warren LM (2010) 249-250.

²⁴⁸ Article 30 Nagoya Protocol.

²⁴⁹ Ansari AH & Laxman L (2013) 131.

²⁵⁰ Picart CJS & Fox M, (2014) 12.

²⁵¹ Ansari AH & Laxman L (2013) 134.

The Nagoya Protocol failed to address concerns regarding biopiracy. It omitted to define acts constituting biopiracy and measures to address such concerns.²⁵²

3.2.3 Conclusion

Thus, the Nagoya protocol fails in providing effective protection for TK as it subjects PIC to the enactment of national legislation but provides no mechanisms for PIC where a nation fails to enact legislation, it embellishes its provisions with numerous modifying phrases giving room for States to evade their obligations, does not have a legally-certain scope of application especially in relation to TK accessed prior to its enactment (which are still being utilised) and failed to address questions of biopiracy.

3.3 International Treaty on Plant Genetic Resources for Food and Agriculture

The UN Food and Agriculture Organisation's International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which was adopted in November 2001 and entered into force in 2004, is vital in ensuring the continued availability of plant GRs that are essential for food and agriculture.²⁵³ Its objectives are the conservation and sustainable use of plant GRs for food and agriculture and the fair and equitable sharing of benefits derived from their use.²⁵⁴ It was negotiated in the wake of the non-binding 1983 International Understanding on Plant Genetic Resources, which had the same fundamental objectives.²⁵⁵

Though it was not negotiated on the platform of the CBD, the ITPGRFA is complementary to the CBD as well as other relevant instruments like the Nagoya Protocol which implies coherence and harmony among the various international instruments in the operation of the ITPGRFA's principles and norms.²⁵⁶

3.3.1 Relevance to TK

By Article 9, the ITPGRFA recognises the contribution of indigenous communities and farmers to the conservation and development of plant GRs which constitute the basis of food production throughout the world. It also mandates the Contracting Parties to take responsibility for realising farmers' rights relating to plant GRs. In accordance with their

²⁵² Ansari AH & Laxman L (2013) 137-8.

²⁵³ Sihanya B 'Plant Breeder's Rights in Kenya: Appropriate IP for Biodiversity and Biotechnology' 2015 *East African Law Journal* 80.

²⁵⁴ Article 1 ITPGRFA.

²⁵⁵ Bass K 'The Battle over Plant Genetic Resources: Interpreting the International Treaty for Plant Genetic Resources' (2015) 16(1) *Chicago Journal of International Law* 153.

²⁵⁶ Moody O 'Addressing Biopiracy through an Access and Benefit Sharing Regime-Complex: In Search of Effective Protection for Traditional Knowledge Associated with Genetic Resources' (2016) 16 *Asper Review International Business & Trade Law* 268.

needs and priorities, each Contracting Party should, ‘as appropriate, and subject to its national legislation’ protect *TK relevant to plant GRs for food and agriculture* and ensure the right to equitably participate in sharing benefits arising from the utilisation of plant GRs for food and agriculture. Article 9 also recognises a farmer’s right to ‘save, use, exchange and sell’ seeds, subject to national legislation. This provision is important because traditional farming practices help promote local biodiversity as farmers trade seeds locally and breed new varieties of plants over time. Traditional farming practices are important for using plant GRs for food and agriculture).²⁵⁷

Article 12.4 of the ITPGRFA creates a Multilateral System of Access and Benefit Sharing that pools a total of 64 crops representing 80 per cent of plant-derived food into an easily accessible global pool of GRs. It facilitates access to these resources for purposes of research, breeding and training pursuant to a Material Transfer Agreement, and ensures that benefits arising from their use are shared through benefit-sharing mechanisms, under the guidance of the treaty’s governing body.²⁵⁸ The idea of the benefit-sharing system is that parties benefitting monetarily from Multilateral System-derived materials are to make a payment into a joint fund so that all Contracting Parties can share the benefits.²⁵⁹ Article 13 also specifies that nations should share the benefits of the Multilateral System through the exchange of information, technology transfers and capacity building.

3.3.2 Inadequacies of the ITPGRFA

First, the language of the ITPGRFA is couched in very qualified terms. Parties have to protect and promote farmers’ rights ‘in accordance with their needs and priorities’ and ‘as appropriate’.²⁶⁰ The question this raises is whether the needs referred to are those of the States or of the farmers.

Most importantly, the protection of TK in the ITPGRFA is limited to TK related to plant GRs for food and agriculture. However, not all TK is related to GRs and those related to GRs are not limited to food and agriculture purposes but often extend to medicinal, pharmaceutical, ecosystem management, etc. purposes.²⁶¹

²⁵⁷ Bass K (2015) 162.

²⁵⁸ Article 13.2.

²⁵⁹ Art. 13.2(d)(ii).

²⁶⁰ Antons C ‘Sui Generis Protection for Plant Varieties and Traditional Knowledge in Biodiversity and Agriculture: The International Framework and National Approaches in the Philippines and India’ (2010) 6 *Indian Journal of Law & Technology* 95.

²⁶¹ Antons C (2010) 93-4.

3.3.3 Conclusion

Therefore, considering that its provisions are predominantly couched in qualified terms and that much TK is not related to GRs or limited to food and agriculture uses only, the ITPGRFA does not adequately protect TK.

3.5 The Swakopmund Protocol

The African Regional Intellectual Property Organisation (ARIPO)²⁶² adopted the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore²⁶³ (Swakopmund Protocol)²⁶⁴ at a diplomatic conference held in August 2010 in Swakopmund, Namibia and it entered into force in May 2015.²⁶⁵ It was conceived to protect TK holders from infringements of their rights and prevent TCEs from misappropriation²⁶⁶ with a view to ensuring an equitable balance between TK holders and bona fide users.²⁶⁷

The Swakopmund Protocol was designed to protect creations derived from the exploitation of TK against misappropriation and illicit use. It was also intended to prevent the granting of patents in respect of inventions based on pirated TK and to promote wider commercial use and recognition of TK by its holders, while ensuring that collective custodianship and ownership are not undermined by IP regimes.²⁶⁸

The Swakopmund Protocol acknowledges that ILCs have for long utilised their TK and culture for their survival and livelihood, and that there is a gradual misappropriation of these TK and TCEs. Thus, it seeks to enhance the capacity of TK and TCEs owners to realise their aspirations through an effective protection system that respects, recognises and promotes TK and TCEs.²⁶⁹

²⁶² ARIPO has 19 Member States and was established to pool the resources of its member countries in industrial property matters to avoid duplication of resources: 'Reasons for establishing ARIPO' available at <http://www.aripo.org/about-aripo> (accessed on 28 April 2017).

²⁶³ 'Expressions of folklore' is used interchangeably with TCEs and are known to mean the same thing amongst TK protection advocates: WIPO (2015) 15.

²⁶⁴ It is a *sui generis* treaty for protecting TK and TCEs: van der Merwe A (2014) 417.

²⁶⁵ 'ARIPO Protocols' available at <http://www.aripo.org/about-aripo/legal-framework> (accessed on 25 April 2017).

²⁶⁶ Section 1 Swakopmund Protocol.

²⁶⁷ 'The Swakopmund Protocol' available at <http://www.aripo.org/about-aripo/legal-framework> (accessed on 25 April 2017).

²⁶⁸ Blackeney M (2014) 198-9.

²⁶⁹ African Regional Intellectual Property Organisation 'Background Information on the African Regional Intellectual Property Organisation' (2016) 6(2) *ARIPO Magazine* 2.

3.5.1 Relevance to TK and TCEs

The Swakopmund Protocol recognises collective ownership of TK and TCEs.²⁷⁰ TK ownership is vested in the local and traditional communities and recognised individuals within such communities, who create, preserve and transmit knowledge in a traditional context in accordance with the provisions of section 4.²⁷¹ It equally recognises local and traditional communities as TCE owners as they are entrusted with the custody and protection of TCEs in accordance with the customary laws of their communities.²⁷²

By Section 2.1, the definition of TK is not limited to any technical field as it encompasses different facets of life in conformity with the realities of the dynamism of TK manifestations. The protection of TK is not subject to any formality²⁷³ and includes the fair and equitable sharing of benefits arising from the commercial use of TK which should be determined by mutual agreement between the parties.²⁷⁴

Section 7 confers exclusive right on communities to authorise the exploitation²⁷⁵ of their TK. This is in addition to preventing anyone from exploiting their TK without their PIC. TK owners may assign their rights and grant licenses for the exploitation of their TK provided that such agreements are evidenced in writing. However, TK belonging to a community cannot be assigned. The agreements must equally be approved by the relevant national authority to be valid.²⁷⁶

The Swakopmund Protocol stipulates only one exception to the rights conferred on TK holders and that is continued use within the traditional context.²⁷⁷ This aligns much with the desires of TK holders as it is one of the major reasons why existing IP regimes are deficient in protecting TK.²⁷⁸

²⁷⁰ Nwauche ES 'The Swakopmund Protocol and the Communal Ownership and Control of Expressions of Folklore in Africa' (2014) 17(5-6) *Journal of World Intellectual Property* 198.

²⁷¹ Section 6 Swakopmund Protocol.

²⁷² Section 18 Swakopmund Protocol.

²⁷³ Section 5.1 Swakopmund Protocol.

²⁷⁴ Section 9 Swakopmund Protocol.

²⁷⁵ "Exploitation" refers to: (a) Where the traditional knowledge is a product: (i) manufacturing, importing, exporting, offering for sale, selling or using beyond the traditional context; (ii) being in possession of the product for the purposes of offering it for sale, selling it or using it beyond the traditional context; (b) Where the TK is a process: (i) making use of the process beyond the traditional context; (ii) carrying out the acts referred to under paragraph (a) of the subsection with respect to a product that is a direct result of the use of the process. (Section 7.3).

²⁷⁶ Section 8 Swakopmund Protocol.

²⁷⁷ Section 11 Swakopmund Protocol.

²⁷⁸ Though by Section 12, the State may grant compulsory license for exploitation of TK, in the interest of public health and safety, where the TK holder is not exploiting same sufficiently and refuses to grant a license on reasonable commercial terms.

TK owned by a community enjoys perpetual protection so far it fulfils the protection criteria in section 4, but where the TK rights are held by an individual, protection shall last for 25 years following the exploitation of knowledge beyond its traditional context by the individual.²⁷⁹ Authorisation given by a community to third parties to access protected TK associated with GRs does not imply authorisation to access the GRs.²⁸⁰

TCEs are protected against all acts of misappropriation or unlawful exploitation for as long as they fulfil the protection criteria in section 16.²⁸¹ This equally conforms to the indefinite protection desire of TK and TCEs holders.

Regarding enforcement, the Swakopmund Protocol enjoins States to ensure that national legislation provide for civil and criminal sanctions.²⁸² Thus, communities can obtain civil remedies while States may also institute criminal proceedings against violators.

TCEs are to be protected if they are: (a) the products of creative and cumulative intellectual activity such as collective creativity or individual creativity *where the identity of the individual is unknown*; and (b) characteristic of a community's cultural identity and traditional heritage and maintained or developed by such community in accordance with customary laws and practices²⁸³ and this is not subject to any formality.²⁸⁴ By this provision, a community is a critical criterion for identifying TCEs. Even though the criterion admits individual creativity, it insists that the individual creator should be unidentifiable. This gives the impression that when an individual creator is known, the work cannot be regarded as a TCE, except by customary law, the individual is designated as the community's representative so that his work is representative of the community. This criterion assumes that the community is an identifiable group in a state which is defined as including a 'local or traditional community.'²⁸⁵

The Swakopmund Protocol stipulates that all TCEs shall be protected against misappropriation and envisages four categories of TCEs: (a) TCEs with cultural or spiritual value; (b) TCEs which are words, signs, names and symbols; (c) TCEs that are held as secret; and (d) miscellaneous TCEs. For the first category, Section 19.2 requires States to provide effective measures to ensure that the relevant community can prevent their exploitation

²⁷⁹ Section 14 Swakopmund Protocol.

²⁸⁰ Section 15 Swakopmund Protocol.

²⁸¹ Section 21 Swakopmund Protocol.

²⁸² Section 23 Swakopmund Protocol.

²⁸³ Section 16 Swakopmund Protocol.

²⁸⁴ Section 17.1 Swakopmund Protocol.

²⁸⁵ Nwauche ES (2014) 192-3.

without its PIC. Second, any use of the TCEs or adaptation thereof, must acknowledge, in an appropriate way, the community as the source. Such measures must also prevent any distortion, modification or other derogatory action in relation to the TCEs. Also, the acquisition of IP rights over the TCEs or adaptations thereof must be consequent upon the community's PIC. Thus, the community must give its PIC before the national authority grants authorisation. Without such PIC, the community can challenge the acquisition of IP rights over the TCE. The prohibited acts which require the community's PIC are the exclusive economic and moral rights which a valid copyright confers on a copyright owner.²⁸⁶

With respect to words, signs, names and symbols, the communities are entitled, to prevent any use of the TCEs or derivatives thereof without their PIC, or the acquisition of IP rights which disparage them.²⁸⁷ The protection offered by this section is directed against the infringement of TCEs by trademarks. States must provide platforms by which communities can oppose the registration of trademarks on this basis.²⁸⁸ Regarding TCEs that are held as secret, States are to provide effective mechanisms for communities to prevent their unauthorised disclosure, subsequent use of and acquisition and exercise of IP rights over them.²⁸⁹

The fourth category are miscellaneous TCEs for which States should provide adequate and effective measures to ensure that: (a) the relevant community is identified as the source of any work adapted from the TCEs; (b) any distortion, mutilation or other derogatory action in relation to TCEs can be prevented and/or is subject to civil or criminal sanctions; (c) any false or misleading indications which, in relation to goods or services that refer to or evoke the TCEs of a community or suggest any endorsement by or linkage with that community, can be prevented and/or subjected to civil or criminal sanctions; and (d) where the use or exploitation is for commercial exploitation, there should be equitable benefit-sharing on terms determined by the national competent authority in consultation with the relevant community.²⁹⁰

²⁸⁶ Nwauche ES (2014) 194-5.

²⁸⁷ Section 19(2)(b) Swakopmund Protocol.

²⁸⁸ Nwauche ES (2014) 195.

²⁸⁹ Section 19(4) Swakopmund Protocol.

²⁹⁰ Section 19(3) Swakopmund Protocol.

3.5.2 Inadequacies of the Swakopmund Protocol

First, though the Swakopmund Protocol made significant strides by recognising community ownership of TK and TCEs, control of third party use of TCEs is vested in States.²⁹¹ Section 22.2 vests the power to issue authorisations to exploit TCEs on the national competent authority, which acts on behalf of communities. The manner of granting permission to third parties to use TCEs is important because national authorities may be unwilling to enforce TK holders' rights. It is plausible to argue that communities will be more eager to enforce their rights.²⁹²

Reference to 'local and traditional community' in Section 2.1 appears to refer to ethnic communities organised on blood descent. However, it is important to note that communities can also be organised around social factors like religion and language and as such qualify as 'local' and 'traditional'. For example, many African communities are organised around what is usually termed 'traditional African religion'. Are such religious communities contemplated in 'local or traditional community' or does the term encompass Islamic and Christian communities? Another concern is with respect to indigenous peoples. Should reference to 'local' and 'traditional' refer exclusively to indigenous peoples or should it include settler populations?²⁹³

Also, it is surprising that, on a continent with significant indigenous populations, the Swakopmund Protocol does not recognise indigenous peoples as parties thereto. The challenge with this is the possibility of States being non-committal (as is often the case) towards the implementation of the Protocol to protect the interests of indigenous peoples.

3.5.3 Conclusion

The Swakopmund Protocol has brought a greater involvement of communities in the management of TK and TCEs, through the mandatory PIC requirement. However, the fact that authorisation of third party utilisation of TK and TCEs is vested in the States may not sufficiently protect TK holders' interests as States may hide behind *national interests* just to authorise utilisation of TK and TCEs.

²⁹¹ Nwauche ES (2014) 191.

²⁹² Nwauche ES (2014) 194.

²⁹³ Nwauche ES (2014) 193.

3.6 Chapter conclusion

From the foregoing, it is clear that while these initiatives have made significant contributions towards the protection of TK and TCEs, they have not been of optimum effect in preventing their misappropriation. There are significant loopholes in these instruments which make it easy for them to be sidestepped and rendered as toothless ‘bulldogs’. The absence of an enforcement mechanism, employment of existing IP frameworks (which are mostly incompatible with TK and TCEs) as policy tools, the anchoring of TK protection on ‘communities’ rather than ‘peoples’, subjection of PIC to the enactment of national legislation but providing no mechanisms for PIC in the absence of national legislation, failure to address biopiracy, the employment of numerous qualifying terminology, restriction of protection to few aspects of TK and TCEs, failure to create binding State obligations to protect TK and TCEs, and the conferral of powers to authorise third party utilisation of TK and TCEs in the States, are inadequacies that hamper the effectiveness of these instruments. Thus, any mechanism that will effectively protect TK and TCEs must avoid such loopholes.

The next chapter examines selected national legislation and the extent to which they can be said to protect the interests of TK and TCE owners. The chapter also highlights some of the major challenges that could hamper the effective implementation of a TK and TCE protection mechanism and examines indigenous peoples’ legal systems to establish the presence of knowledge-management systems within indigenous peoples’ customary laws.

CHAPTER FOUR

AN ANALYSIS OF SELECTED NATIONAL LEGISLATION DEALING WITH TRADITIONAL KNOWLEDGE, OTHER SPECIFIC PROBLEMS OF TRADITIONAL KNOWLEDGE PROTECTION AND INDIGENOUS PEOPLES' KNOWLEDGE- MANAGEMENT SYSTEMS

4.0 Introduction

In the previous chapter, selected international instruments providing protection for TK and TCEs were examined and it was established that those instruments offer TK and TCEs limited protection.

With a view to establishing the extent to which nations are making efforts for TK protection and underscoring the limitations of such national initiatives, part one of this Chapter examines some selected national legislation: the New Zealand's Patents Act 2013 and Trade Marks Act 2002, the South African Patents Amendment Act 2005 and Intellectual Property Laws Amendment Act 2013 and the Kenyan Protection of Traditional Knowledge and Cultural Expressions Act 2016.²⁹⁴ Part two discusses some challenges which could hamper the successful implementation of a protection mechanism for TK and TCEs. It also examines indigenous legal systems and how they enhance effective indigenous management of TK and TCEs.

Part One: Examination of National Legislation

4.1 New Zealand

4.1.1 Patents Act 2013

The New Zealand's Patents Act²⁹⁵ (NZ Patents Act) was enacted to address Māori²⁹⁶ concerns regarding the grant of patents for inventions derived from indigenous plants and animals or from Māori TK amongst other objectives.²⁹⁷

(a) Relevant provisions

For purposes of deciding whether an invention is novel, the **prior art base** means all matter (a product, process, information about a product or process, or anything else) that has at any

²⁹⁴ These nations have been specifically chosen for the reasons stated in footnote 30 above. The discussion on South Africa's initiatives is much longer than others mainly because these initiatives attempt to protect TK within five existing IP regimes which all had to be examined.

²⁹⁵ No. 68 of 2013.

²⁹⁶ The Maori are an indigenous group in New Zealand: 'Maori' available at <http://www.themaori.com/> (accessed on 28 June 2017).

²⁹⁷ Section 3(d) NZ Patents Act.

time before the date of the application been made available to the public (in New Zealand or elsewhere) by written **or oral description, use, or in any other way**.²⁹⁸ The fact that prior art includes ‘oral description or use’ helps Maori TK and TK holders globally to object to any patent application that merely replicates their TK. This is preferred because it does not limit prior art to written material.²⁹⁹

To strengthen prior art search, an advisory committee (the Committee), comprising persons knowledgeable in Māori TK and culture, is established to advise the Patents Commissioner (if he requests) on whether an invention claimed in a patent application is derived from Māori TK or indigenous plants or animals, and if so, whether the commercial exploitation of that invention is likely to be contrary to Māori values.³⁰⁰

While the Act restricts its coverage to Maori TK, it does not restrict such coverage to any particular aspects but to all classes of Maori TK (sacred, spiritual, secret or otherwise).

(b) Shortcomings

The NZ Patents Act offers only elements of defensive protection³⁰¹ for TK. It confers no enforceable right on TK holders. It provides that a patent may only be granted to ‘**a person**’ who is the inventor or derives title to the invention from the inventor or is the personal representative of a deceased inventor.³⁰² Thus, collective TK rights are not recognised. The Act does not give a definition of ‘person’ to include communities. Besides, it expressly provides that a patent is personal property.³⁰³

Also, the Commissioner is not obliged to seek the Committee’s advice. Where he chooses to seek the Committee’s advice, he is only required to consider, but is not bound thereby.³⁰⁴

(c) Conclusion

Consequently, Maori TK holders are not adequately protected under the NZ Patents Act. This is so considering that there are numerous manifestations of TK which are not related to ‘inventions’ and do not fit within the ‘scientific’ rubrics of patents.

²⁹⁸ Section 8(1) NZ Patents Act; 2.2 above.

²⁹⁹ The USA regards **only** oral disclosures made in the USA as prior art: 35 United States Code- Patents Section 102(a). A therapeutic technique orally taught through generations in a foreign country can thus still be patented in the USA, despite it being publicly known for centuries: GRAIN ‘Traditional Knowledge of Biodiversity in Asia-Pacific: Problems of Piracy & Protection’ available at https://iatp.org/files/Traditional_Knowledge_of_Biodiversity_in_Asia-htm (accessed on 15 June 2017).

³⁰⁰ Section 225 NZ Patents Act.

³⁰¹ This mechanism was explained in Chapter Two above.

³⁰² Section 22 NZ Patents Act.

³⁰³ Section 17(1) NZ Patents Act.

³⁰⁴ Section 227 NZ Patents Act.

4.1.2 Trade Marks Act 2002

The New Zealand Trade Marks Act³⁰⁵ (NZ Trademarks Act) was enacted to address Māori concerns regarding the registration of trademarks containing Māori signs (including imagery and text) amongst other objectives.³⁰⁶

a. Relevant provisions

The Act mandates the Commissioner to appoint an Advisory Committee³⁰⁷ (comprising persons knowledgeable in Māori custom)³⁰⁸ to advise him on whether the proposed use or registration of a trademark that is, or appears to be, derived from a Māori sign is offensive, or is likely to offend, the Māori.³⁰⁹ However, the Act does not provide what weight the Committee's advice will bear. Considering that it is merely an advisory committee, the Commissioner certainly has the discretion to do whatever he pleases with any advice.

Of interest to TK holders is the provision for collective trademarks to be registered in the name of an association in respect of goods and/or services produced/provided by its members.³¹⁰ Thus, TK-holding communities may employ traditional symbols as collective trademarks but they will have to be registered as an association as the Act does not recognise community trademark ownership. Besides, the Act expressly states that a trademark is personal property.³¹¹

Also, by means of defensive protection, the Commissioner may refuse the registration of a mark which, in his opinion, may offend a significant section of the (Māori) community.³¹²

The NZ Trademarks Act aligns with the suggestion that TK holders may object to third-party trademarks which employ indigenous names and symbols (without their consent).³¹³ This helps to prevent consumer confusion and wrong attribution of a product to the Māori.

b. Shortcomings

First, defensive protection is limited in scope. It is hardly a replacement for formally-recognised positive rights in TK and TCEs. Positive IP rights may earn royalties but

³⁰⁵ No. 49 of 2002.

³⁰⁶ Section 3 NZ Trademarks Act.

³⁰⁷ Section 177 NZ Trademarks Act.

³⁰⁸ Section 179(2) NZ Trademarks Act.

³⁰⁹ Section 178 NZ Trademarks Act.

³¹⁰ Section 15 NZ Trademarks Act.

³¹¹ Section 9 NZ Trademarks Act.

³¹² Section 17 NZ Trademarks Act.

³¹³ Munzer SR & Raustiala K (2009) 88.

defensive protection cannot. Also, it does not exclude third parties from coming up with the same symbol or trademark independently and then using it.³¹⁴

Also, indigenous communities can only make use of collective trademarks if they are registered as 'associations' as the Act does not recognise communal trademark ownership.

c. Conclusion

Considering that collective trademarks are only available for 'goods and services' provided by members of an association and that not all TK is related to *goods* and *services*, the protection available to TK is limited.³¹⁵ Besides collective trademarks, the Act confers no enforceable positive rights on TK holders. Thus, the Act offers limited protection for TK.

4.2 South Africa

4.2.1 Patents Amendment Act 2005

The South African Patents Amendment Act (Patents Amendment Act)³¹⁶ amended the Patents Act (Patents Act)³¹⁷ and sought to require a patent applicant to furnish information relating to the use of any indigenous biological resource, GR or TK in an invention.

(a) Relevant Provisions

Section 30 of the Patents Act was amended to require every patent applicant to lodge with the registrar a statement disclosing whether or not his/her invention is based on or derived from an indigenous biological resource, GR or TK. Where an applicant has used GR or TK, such applicant is obliged to furnish proof of authorisation to make use of the indigenous biological resource, GR or TK.³¹⁸ In other words, a patent application for an invention derived from TK must disclose whether the TK holders' PIC was obtained. The penalty for non-disclosure or false declaration is refusal of the patent application or revocation, where already granted.³¹⁹

This amendment was intended to achieve 'disclosure' as a mandatory patent requirement.³²⁰ Because TK and GRs are often misappropriated through patents, developing countries seek to

³¹⁴ Munzer SR & Raustiala K (2009) 82.

³¹⁵ See 2.4 above.

³¹⁶ No. 20 of 2005.

³¹⁷ No. 57 of 1978.

³¹⁸ Section 2 Patents Amendment Act.

³¹⁹ Section 61 Patents Act.

³²⁰ Developing countries advocated the introduction of an obligation to disclose the origin of GRs (and TK) utilised in inventions. This would include not only include information about origin but also compliance with national access laws and fair and equitable benefit-sharing under relevant national regimes. The remedy to biopiracy is believed by 'disclosure' proponents to lie partly in requiring patent applicants to disclose information about TK and GRs used in their inventions. The purpose of such disclosure would be to ensure that no patent is granted where the invention is linked to TK or GRs that is improperly acquired or utilised. While

introduce a disclosure norm to prevent biopiracy. The concern leading to such disclosure requirements is that TK-based patents, with little innovation, are granted without assurance that GRs and TK utilised are acquired lawfully.³²¹

(b) Shortcomings

The Patents Amendment Act grants no enforceable rights to TK holders. It only provides defensive protection to prevent patenting of ‘inventions’ which merely directly replicate indigenous peoples’ TK.

It would be difficult for TK to satisfy the novelty requirement in Section 25(5) of the Patents Act. However, if TK is used to develop a protectable product in a *scientific* manner, it could meet the inventive step requirement. The main obstacle for the protection of TK under the Act remains the identification of an inventor³²² since the Patents Act does not recognise ‘communal inventors’.³²³ Section 25(4)(b) of the Patents Act provide for patentability of microbiological processes, however, indigenous communities’ medical knowledge is not based on specific plant compounds but entire (or parts of) plants. Thus, their knowledge is excluded from patentability.³²⁴

Section 29(1)-(4) of the Patents Act provides for joint ownership of patent rights. This may however be difficult for TK holders due to the diversity of communities who may claim ownership of a particular TK. This is so because the ‘inventor’ in relation to TK is often a chain of people and not a single identifiable individual or group. The Patents Amendment Act provides no recognition for collectively-held knowledge.³²⁵

Also, the disclosure obligation does not apply to TK-related inventions derived from the knowledge of an indigenous community which possesses no associated GR.³²⁶

The disclosure requirement relies majorly on an applicant’s willingness to reveal the use of TK and, as such, does not effectively protect TK holders.³²⁷ The amendment has not curbed

several nations have enacted legislation requiring disclosure, international disclosure proposals continue to be debated. See Hoare AL & Tarasofsky RG ‘Asking and Telling: Can “Disclosure of Origin” Requirements in Patent Applications Make a Difference?’ (2009) 10(2) *Journal of World Intellectual Property* 149.

³²¹ Srinivas KR (2008) 91-2.

³²² See 2.3(f) above.

³²³ Andada P & Khademi H ‘Protecting Traditional Medical Knowledge through the Intellectual Property Regime Based on the Experiences of Iran and South Africa’ in Ncube CB & Du Plessis E (eds) *Indigenous Knowledge & Intellectual Property* (2016) 67-8.

³²⁴ Daya Y & Vink N ‘Protecting traditional ethno-botanical knowledge in South Africa through the Intellectual Property Regime’ (2006) 45(3) *Agrecon* 327-8.

³²⁵ Timmermans K ‘Intellectual Property Rights and Traditional Medicine: Policy Dilemmas at the Interface’ (2003) 57(4) *Social Science & Medicine* 748.

³²⁶ Tong L ‘Aligning the South African intellectual property system with traditional knowledge protection’ (2017) 12(3) *Journal of Intellectual Property Law & Practice* 182.

the misappropriation of South African TK³²⁸ and its ineffectiveness is partly because its provisions are directly enforceable on local users while foreign users are not obliged to comply with source-country laws in their countries.³²⁹

(c) Conclusion

Therefore, the Patents Amendment Act provides limited protection for TK most especially as it confers no enforceable rights on TK holders and relies merely on a patent applicant's willingness to make disclosures.

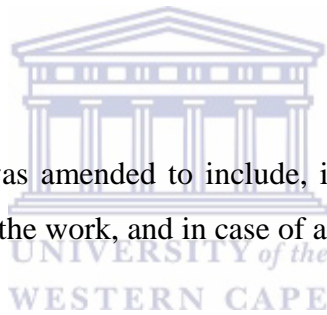
4.2.2 Intellectual Property Laws Amendment Act 2013

The Intellectual Property Laws Amendment Act (IPLAA)³³⁰ amended the Performers' Protection Act 1967, Copyright Act 1978 (Copyright Act), Trade Marks Act 1993 and Designs Act 1993 ('host Acts'). It was enacted to recognise and protect certain TK manifestations with existing IP regimes and promote its commercial exploitation for the benefit of the indigenous communities from which it originated.³³¹

(a) Relevant provisions

i. Ownership

'Author' in the Copyright Act was amended to include, in case of a derivative indigenous work,³³² a person who first made the work, and in case of an indigenous work, the indigenous



³²⁷ Andada P & Khademi H (2016) 69.

³²⁸ Lewis M 'Access and Benefit-Sharing in the Wake of CBD COP10: The Nagoya Protocol and its Potential Implications for South Africa' (2010) 17(2) *SAJELP* 75-77.

³²⁹ Tvedt MW & Young T 'Beyond Access: Exploring Implementation of the Fair and Equitable Sharing Commitment in the CBD' (2007) *IUCN Environmental Policy and Law Paper No. 67/2* 31. In 2008, the European Patents Office granted patents to German company, Schwabe Pharmaceuticals for certain treatments containing South African *Pelargonium* species despite the fact that the company failed to obtain PIC for the use of the plants or to make benefit-sharing arrangements. Four of the patents were challenged on behalf of a community in the Eastern Cape on the ground that Schwabe did not obtain PIC from, or make benefit-sharing arrangements with, the South African government or the community that provided the resources and associated TK. It was thus argued that the patents were against good. One of the patents was ultimately revoked on the basis that the patented procedure lacked an inventive step. In 2009 Nestec SA (a subsidiary of Nestlé) made five 'international' patent applications to use South African rooibos and honeybush in the treatment of hair and skin conditions and inflammatory disorders. Nestec failed to negotiate benefit-sharing agreements or attempt to obtain bioprospecting permits prior to making these applications: Lewis M (2010) 75-77.

³³⁰ No. 28 of 2013.

³³¹ South African Department of Trade & Industry 'Policy framework for the protection of indigenous traditional knowledge through the intellectual property system and the Intellectual Property Laws Amendment Bill 2008' *Government Gazette 31026 of 5 May 2008* available at <http://www.sabinetlaw.co.za/economic-affairs/legislation/intellectual-property-laws-amendment> (accessed on 24 May 2017).

³³² Derivative indigenous work means any work forming the subject of the Act, applied to any form of indigenous work recognised by an indigenous community as having an indigenous or traditional origin, and a substantial part of which, was derived from indigenous TK or TCE irrespective of whether such was derived before or after the commencement of IPLAA, 2013: Section 3 IPLAA.

community³³³ from which the work originated and acquired its traditional character.³³⁴ Thus, the IPLAA recognises communal IP rights. Where the author cannot be determined or the traditional work is owned by an indigenous community which no longer exists or the authorship cannot be shared between more than one indigenous community, ownership shall vest in the National Trust for Indigenous Knowledge for the benefit of the relevant indigenous community (or communities).³³⁵

Except by assignment to a collecting society or transfer to a duly-appointed indigenous community's representative, copyright in indigenous works is not transmissible by assignment or testamentary disposition but any of the exclusive rights may be licensed. Where copyright vests in a representative of an indigenous community, it shall automatically transfer to the National Trust, upon the death of the last member of that community.³³⁶

ii. Protection requirements

The IPLAA dispenses with 'fixation' by providing that a traditional work is eligible for copyright³³⁷ (derogating from Section 2(2) of the Copyright Act) if it is '*...capable of substantiation from the collective memory of the relevant indigenous community*'.³³⁸ It makes no provision regarding originality/newness in copyright but still requires that derivative indigenous designs be new³³⁹ (without defining 'newness'). No copyright in derivative indigenous works is *registrable* unless the PIC of the relevant TK/TCE owner(s) has been obtained, disclosure of the indigenous cultural expression³⁴⁰ has been made and a benefit-sharing agreement concluded with the relevant TK holders.³⁴¹

³³³ 'Indigenous community' means any recognisable community of people originated in or historically settled in a geographical area or areas located within the borders of the Republic, as such borders existed at the date of the commencement of the IPLAA, 2013, characterised by social, cultural and economic conditions which distinguish them from other sections of the national community, and who identify themselves and are recognised by other groups as a distinct collective: Section 3(f) IPLAA.

³³⁴ Section 3(b) IPLAA.

³³⁵ Section 4 IPLAA.

³³⁶ Section 4 IPLAA.

³³⁷ Section 4 IPLAA.

³³⁸ Section 4 IPLAA.

³³⁹ Section 12 IPLAA.

³⁴⁰ Indigenous cultural expressions or knowledge' means any form, tangible or intangible, or a combination thereof, in which traditional culture and knowledge are embodied, passed on between generations, and tangible and intangible forms of creativity of indigenous communities including, but not limited to- (a) phonetic or verbal expressions such as stories, epics, legends, poetry, riddles and other narratives, words, signs, names or symbols; (b) musical or sound expressions, such as songs, rhythms, or instrumental music, the sounds of which are the expression of rituals; (c) expressions by actions, such as dances, plays, ceremonies, rituals, expressions of spirituality or religion, sports, traditional games, puppet performances, and other performances, whether fixed or unfixed; (d) tangible expressions, such as material expressions of art, handicrafts, architecture, or tangible spiritual forms, or expressions of sacred places; 'indigenous work' means a literary, artistic or musical work with an indigenous or traditional origin, including indigenous cultural expressions or knowledge which was created by persons who are or were members, currently or historically, of an indigenous community and which

The IPLAA also provides that a traditional term is registrable as a certification or collective trademark or as a geographical indication (GI) if it can distinguish the goods and services of an indigenous community from those of another community or person.³⁴²

iii. Nature of Rights and Exceptions

Copyright in indigenous works grants exclusive right to indigenous rights holders to reproduce, adapt, publish, perform, broadcast, etc. such works. There are however two general limitations. First, the IPLAA does not displace vested rights of any third party in the particular traditional work prior to the enactment of the IPLAA, although continued commercialisation incurs an obligation to pay royalties unless the benefit derived is below the prescribed value.³⁴³ Such third party must make a disclosure of the TK/TCE and conclude a benefit-sharing agreement with the TK/TCE holders. Also, traditional works may be used without PIC for private study, professional review, news reportage, education, research, legal proceedings, archival recordings and reproduction and inventory in reasonable volumes provided the copyright owner is acknowledged.³⁴⁴ These exceptions are similar to those found in the pre-IPLAA copyright legislation, and also apply to trademarks and designs.³⁴⁵

iv. Term of Protection

A derivative indigenous work is protected for a term of 50 years from the year the work is first published with the author(s)' consent or from the death of the author(s) concerned, whichever is later while indigenous works are protected perpetually.³⁴⁶

v. Other mechanisms

There is established a National TK Database for purposes of recording different manifestations of TK and TCEs, ownership and identification of representation within an

literary, artistic or musical work is regarded as part of the heritage of such indigenous community: Section 3 IPLAA.

³⁴¹ Section 9 IPLAA makes similar provision regarding trademark registration of derivative indigenous terms which must have been created on or after the commencement of the IPLAA and *the community (or a substantial part thereof) from which they originated must be indigenous when the terms were created or the terms were passed down from a previous generation*. The provision presupposes that an indigenous community may cease to be indigenous. However, the fact that there are settlers in a community does not make it lose its identity. Be that as it may, it is equally accepted that if a term originated in a community with significant settler populations, it may be difficult to truly ascertain if such term came from the indigenous peoples or the settlers. This is a shortcoming of anchoring the protection of TK and TCEs on indigenous communities as against indigenous peoples; Section 4 IPLAA.

³⁴² Section 9 IPLAA.

³⁴³ Tong L (2017) 187.

³⁴⁴ Section 4 IPLAA; sections 9 & 12 make similar exceptions for trademarks and designs.

³⁴⁵ Tong L (2017) 187-8.

³⁴⁶ Section 4 IPLAA; trademarked traditional term/expression and a traditional design are protected in perpetuity while a derivative indigenous design is protected for ten to fifteen years: Sections 10 & 12 IPLAA.

indigenous community. Where the applicant for registration is an indigenous community, it must disclose the community's identity and structure, the full details of the community representative in whose name the copyright should be registered, the indigenous work to be recorded, the basis of the community's right thereto and whether the work is sacred or should be kept confidential for any reason.³⁴⁷

Also, a National Trust for Indigenous Knowledge is established for purposes of promoting, preserving and commercialising TK and TCEs, and assisting indigenous communities in applying the laws relating thereto.³⁴⁸

(b) Shortcomings

The IPLAA does not create any new form of protection. It merely extends the existing IP regimes to include TK and TCEs but excludes technical knowledge like medical and agricultural knowledge.³⁴⁹

Although the host Acts were amended individually, certain common amendments to the Copyright Act are made applicable to the other Acts causing cumbersome reading requiring constant cross-referencing. Also, there are vague and conflicting provisions which make it impossible to predict what the application of the IPLAA entails, without regulations or judicial interpretation.³⁵⁰ For example, there is a recurring puzzling provision that amendments will apply 'except in so far as is otherwise provided' in the IPLAA and that the particular Act would take precedence. However, the IPLAA also provides that such pre-IPLAA provisions apply in so far as the host Acts can be applied.³⁵¹

As explained in Chapter Two,³⁵² one problem with protecting TK and TCEs with existing IP regimes is that they anchor on exclusive property rights as the person who developed the invention (work) is seen as the owner.³⁵³ The question is always 'who owns the underlying property right?' This contrasts with TK and TCEs which develop within communal set-ups with peculiar management and access structures. Western notions of individual IP ownership are philosophically at odds with the collective nature of TK. While sharing of TK is

³⁴⁷ Section 4 IPLAA; Section 9 makes similar provision for trademarks of traditional expressions.

³⁴⁸ Section 4 IPLAA.

³⁴⁹ This is probably because such are thought to be adequately covered by the Patents Amendments Act. However, the shortcomings of that Act have been highlighted in this research: du Plessis EWJ 'Protection of Traditional Knowledge in South Africa: The Troubled Bill, the Inoperative Act, and the Commons Solution' in Ncube CB & Du Plessis E (eds) *Indigenous Knowledge & Intellectual Property* (2016) 77.

³⁵⁰ Tong (2017) 183.

³⁵¹ Tong L (2017) 186.

³⁵² See 2.2(c) and 2.3(f) above.

³⁵³ Cross JT 'Property Rights and Traditional Knowledge' (2010) 13(4) *Potchefstroom Electronic Law Journal* 21.

entrenched in communal values and customary laws, IP law dictates that knowledge-sharing should anchor on monetary value. Using existing IP regimes to protect TK therefore necessitates a profound shift in how communities construct their practices and cultural values.³⁵⁴

The IPLAA may operate at cross-purposes with the Swakopmund Protocol. While all of South Africa's neighbouring countries are members of ARIPO, South Africa is not. Many of the traditional groups that the IPLAA caters for are not only indigenous to South Africa, but are also found in ARIPO Member States.³⁵⁵

Including communities which 'historically settled' within the Republic in the definition of 'indigenous community' is commendable as it seeks to recognise emigrant communities. However, there are no discernible limitations on groups qualifying as indigenous communities. Any community of people, including residents of a golf estate can subjectively decide that a particular work of their choice has a traditional character. Besides, the IPLAA has no extraterritorial application to deal with emigrant 'indigenous communities' now domiciled in neighbouring countries.³⁵⁶

Also, employing the conventional IP regimes to protect TK and TCEs means that the IPLAA must comply with the TRIPs Agreement's most-favoured nation doctrine (MFN). By this doctrine, any advantage, favour, privilege, or immunity granted by South Africa to any country must *immediately* and *unconditionally* be accorded to the of other WTO Members.³⁵⁷ For example, South Africa shares regional TCEs with Zimbabwe such as the 'Ndebele' artifacts. Therefore, if 'indigenous community' status were conferred on the Zimbabwean Ndebele community, failure to *immediately* and *unconditionally* confer same status on similar communities in other WTO Members would result in a breach of the MFN doctrine.³⁵⁸

Indeed, attempting to delimit TK within the conventional IP regimes' private ownership protection is premised on a false assumption that IP rights are suitable in all environments. It

³⁵⁴ Feris L (2004) 248.

³⁵⁵ Nkomo ML 'South Africa's proposed intellectual property law: the need for improved regional cooperation' (2013) *South African Comparative & International Law Journal* 258; for example, the San indigenous group are found in South Africa, Zimbabwe, Lesotho, Mozambique, Swaziland, Botswana, Namibia, and Angola; the Nama can be found in South Africa, Botswana and Namibia: IPACC 'Who are the Indigenous People of Southern Africa' available at <http://www.ipacc.org.za/en/where-we-work/southern-africa.html> (accessed on 24 May 2017). Consequently, certain provisions of the national and regional legal instruments may conflict and it is important that such conflicts be addressed to ensure effective operation of these instruments in the interests of the communities they are intended to benefit.

³⁵⁶ Nkomo ML (2013) 269.

³⁵⁷ Article 4 TRIPs Agreement.

³⁵⁸ Nkomo ML (2013) 271-2.

is established that conventional IP regimes compromise the integrity of TK and TCEs as they cannot account for communal interest in cultural resources.³⁵⁹

Also, the IPLAA confers ownership of the property created in the State, and not in the communities themselves. TK rights will be commercially exploited by the State and royalties derived from indigenous works will accrue to the National Trust Fund which has discretion on the allocation of funds and owes no obligation to transfer funds to any community.³⁶⁰

(c) Conclusion

Therefore, due to the exclusion of technical TK like medical and agricultural knowledge, the conferral of ownership and control of TK and TCE usage and the benefits derivable therefrom on a National Trust Fund among other shortcomings, the IPLAA does not adequately protect the interests of TK and TCE holders.

4.3 Kenya

4.3.1 Protection of Traditional Knowledge and Cultural Expressions Act 2016

The Republic of Kenya enacted the Protection of Traditional Knowledge and Cultural Expressions Act 2016 (TK Act)³⁶¹ as a *sui generis* legislation. It was enacted to give effect to Articles 11, 40 and 69(1) of the 2010 Kenyan Constitution³⁶² and enable communities to control the use of culturally-significant and economically-valuable knowledge by creating new forms of IP rights.³⁶³

(a) Relevant provisions

The TK Act protects TK (individually or collectively generated) which is preserved and transmitted from one generation to another, within a community, for *economic, ritual, narrative, decorative or recreational purposes*; distinctively associated with a community

³⁵⁹ Gibson J 'Intellectual Property Systems, Traditional Knowledge and the Legal Authority of Community' (2004) 26 *European Intellectual Property Review* 281.

³⁶⁰ Dean O 'The winning choice for traditional culture' 24 July 2013 *Legal News* available at <http://www.bizcommunity.com/Article/196/364/97237.html> (accessed on 24 May 2017). It is noteworthy that three years after enactment, the IPLAA is not yet operational and will only come into effect on a date to be fixed by the President by proclamation: Tong L (2017) 183.

³⁶¹ No. 33 of 2016.

³⁶² Available at http://www.wipo.int/wipolex/en/results.jsp?countries=KE&cat_id=16 (accessed on 18 April 2017). These provisions mandate the Kenyan government to promote the IP rights of Kenyans and ensure that communities receive compensation for the use of their cultural heritage while recognising and protecting the ownership of indigenous seeds and plant varieties, their diverse genetic characteristics and their use by the communities of Kenya. Section 71 mandates the State to ensure sustainable exploitation, management and conservation of natural resources, ensure equitable benefit-sharing and protect and enhance IP in, and indigenous knowledge of, biodiversity and the GRs of the communities.

³⁶³ Harrington J & Deacon H 'Traditional Knowledge and Culture Expressions Act 2016' 03 December 2016 *The Star* available at http://www.the-star.co.ke/news/2016/12/03/traditional-knowledge-and-culture-expressions-act-2016_c1467018 (accessed on 18 May 2017).

and integral to the cultural identity of a community holding it *‘through a form of custodianship, guardianship or collective and cultural ownership or responsibility’*, established by customary laws.³⁶⁴ Similar provision is made in relation to TCEs (of whatever form) which are products of creative and cumulative intellectual activity, including collective or individual creativity (*where the identity of the individual is unknown*).³⁶⁵ This protection is not subject to any kind of formality but the Act empowers county governments to, subject to PIC, register TK and TCEs for recognition purposes without requiring public disclosure of any TK³⁶⁶ and without compromising the status of or the interests of TK holders relating to undisclosed (elements of their) TK. The TK Act also establishes a comprehensive TK Digital Repository for recording information regarding registered TK and TCEs.³⁶⁷

TK-holding communities possess exclusive rights to authorise the exploitation of their TK and prevent the exploitation of same without PIC. In addition to other rights and remedies, TK owners may institute legal proceedings against any person who exploits TK without their permission.³⁶⁸ Where TK is used beyond its traditional context, the user must acknowledge the TK owners and indicate the source of the TK or TCE. Such user must use the TK or TCE in a manner that respects the holders’ cultural values.³⁶⁹

The government may grant compulsory licenses, subject to the PIC of TK holders, for the exploitation of TK where it is not sufficiently exploited or where TK holders refuse to grant licenses for exploitation.³⁷⁰ TK is protected as long as it fulfils the protection criteria under section 6.³⁷¹

Without the owners’ PIC, TK or TCEs shall not be exploited in any way (i.e. reproduction, performance, broadcast, translation, adaptation, arrangement, modification, import, export, etc.) Mechanisms must be established for communities to prevent any distortion, mutilation, modification of, misappropriation, misuse or unlawful access and exploitation of TK and TCEs, and the acquisition or exercise of IP rights over TCEs or adaptations thereof.³⁷²

However, the TK Act permits of exceptions. The protection does not restrict usage, dissemination and transmission of TK or TCEs by community members in accordance with

³⁶⁴ Section 6 TK Act.

³⁶⁵ Section 14 TK Act.

³⁶⁶ Section 7(1)-(3) TK Act; Section 15(2)-(7) makes similar provisions regarding TCEs.

³⁶⁷ Section 8 TK Act.

³⁶⁸ Section 10(1)-(2) TK Act.

³⁶⁹ Section 11 TK Act.

³⁷⁰ Sections 12 and 27 TK Act.

³⁷¹ Section 13 TK Act; Section 17 makes similar provision for TCEs.

³⁷² Section 18 TK Act.

customary law. Also, the protection extends only to uses of TK or TCEs taking place outside their traditional context, whether for commercial gain or not and is subject to educational uses, private use, criticism or review, news reporting, use in legal proceedings, archival recording and reproduction exclusively for safeguarding knowledge or cultural heritage. A TK or TCE user shall obtain the owners' PIC, expressly acknowledge them or the geographical place where the TK or TCE originated and use same in a manner compatible with fair practice and the community's customary laws.³⁷³

Any right under the conventional IP regimes that exists in relation to a derivative work shall vest in the creator of the work but where a derivative work is to be used for a commercial purpose, an authorised user agreement shall be prepared between the rights-holder and the authorised user. Such agreement shall provide for fair and equitable benefit-sharing with the TK holders and provide for disclosure of the TK or TCEs on which the derivative work is based. The user agreement must also provide for non-derogatory treatment of the TK or TCEs in the derived work.³⁷⁴ The Act is also commendable in providing for proper record-keeping in cases where TK is shared with a community in another country.³⁷⁵

The TK Act makes provision for dispute resolution by the Kenyan Copyright Board by considering the relevant customary law³⁷⁶ where ownership of TK or TCE is disputed by different communities.³⁷⁷ Where there are no discernible ownership claims to a particular TK or TCE, the rights are vested in the government.³⁷⁸

Anyone who violates the provisions of the Act or the rights of TK and TCE holders may be criminally liable³⁷⁹ and TK holders may also institute civil actions against such violators³⁸⁰ for injunctions, damages, declaration, forfeiture and other remedies.³⁸¹

³⁷³ Section 19 TK Act.

³⁷⁴ Section 20 TK Act; Sections 24 and 25 make similar provision for commercial exploitation of TK and TCEs with appropriate documentation.

³⁷⁵ Section 7(4) TK Act.

³⁷⁶ Section 7(6) TK Act.

³⁷⁷ Section 30 TK Act.

³⁷⁸ Section 31 TK Act.

³⁷⁹ Section 37 TK Act.

³⁸⁰ Section 38 TK Act.

³⁸¹ Section 39 TK Act.

(b) Shortcomings

Though its provisions are highly commendable, the TK Act is riddled with a few shortcomings.

The rights of TK and TCE holders is subject to the Cabinet Secretary's authority as a prospective user of TK or TCEs may obtain the PIC of right holders but the prospective user must still inform the Cabinet Secretary that he has obtained the holders' consent. Failure by the prospective user to provide the Cabinet Secretary with a copy of the proposed authorised user agreement, for comment and advice, may render it void.³⁸²

The provision for compulsory license is problematic due to the PIC requirement. It is clear that if there is compulsory licensing then there can be no PIC as it presupposes that consent has been withheld by the community/owners. The dispute resolution provisions in Section 12 also create two parallel avenues through the courts and the Cabinet Secretary which may lead to conflicting outcomes.³⁸³

There is equally tension in the Act between local and national interests. Biodiversity and TK are important resources for national development. The 'compulsory licensing' provisions could allow government officials to pursue their selfish interests in the name of 'national interests'. This is more so considering that the Act does not define 'national interest'.³⁸⁴

Finally, TK and TCEs are often shared with communities in neighbouring countries. However, the Act does not make sufficient provision for cross-border cooperation mechanisms to assist in management and enforcement of rights in trans-boundary TK and TCEs. This may increase trans-boundary conflicts and reduce regional bargaining power in enforcing community rights over TK.³⁸⁵

(c) Conclusion

Considering that the TK Act subjects the interests of TK and TCE holders to the authority of the Cabinet Secretary and also makes inadequate provisions regarding TK and TCEs shared

³⁸² Section 36 TK Act.

³⁸³ Nzomo V 'Kenya's Protection of Traditional Knowledge and Cultural Expressions Act No. 33 of 2016 Comes into Force' *IP Kenya* 23 September 2016 available at <https://ipkenya.wordpress.com/2016/09/23/kenyas-protection-of-traditional-knowledge-and-cultural-expressions-act-no-33-of-2016-comes-into-force/#more-8374> (accessed on 24 May 2017).

³⁸⁴ Harrington J & Deacon H 'Traditional Knowledge and Culture Expressions Act 2016' *The Star* 03 December 2016 available at http://www.the-star.co.ke/news/2016/12/03/traditional-knowledge-and-culture-expressions-act-2016_c1467018 (accessed on 18 May 2017).

³⁸⁵ Harrington J & Deacon H 'Traditional Knowledge and Culture Expressions Act 2016' *The Star* 03 December 2016 available at http://www.the-star.co.ke/news/2016/12/03/traditional-knowledge-and-culture-expressions-act-2016_c1467018 (accessed on 18 May 2017).

by trans-boundary communities, it leaves room for third parties to exploit to the detriment of indigenous communities.

4.4 Part One Conclusion

Even if these pieces of legislation are not riddled with these shortcomings, they will still not adequately protect TK and TCEs. This is because national legislation has no extra-territorial application. Consequently, TK owners would not be able to secure similar protection abroad and exploitative behaviour in other countries would go on as always.³⁸⁶ ‘Sovereignty’ restricts the legislative authority of every nation to the confines of its borders.³⁸⁷ It thus means that an IP right is limited to the territory of the state granting it.³⁸⁸ In principle, then, foreign rights cannot be infringed by local activity, and local rights cannot be infringed by foreign activity.³⁸⁹ This explains why effective TK and TCE protection requires multilateral cooperation.

Part Two: Possible Challenges to the Implementation of a TK Protection mechanism and a Discussion of possible customary law solutions to TK infringements

4.5 Possible challenges to the implementation of a protection mechanism for TK and TCEs

Critics of TK and TCEs, and writers in general, have highlighted specific problems which make TK protection complicated. Some of these problems are discussed in the following paragraphs.

Apart from the difficulty of identifying owners of TK and TCEs,³⁹⁰ it is often unclear who, if anyone, within an indigenous community is authorised to ‘sell’ knowledge. Also, frequently, more than one group possesses the same TK or TCE and corporations often run into difficulty in identifying the appropriate owners for compensation.³⁹¹ A great deal of TK and TCEs

³⁸⁶ Dinwoodie GB ‘Towards an International Framework for the Protection of Traditional Knowledge’ in Twarog & Turner (eds.) *Elements of National Sui Generis Systems for the Preservation, Protection and Promotion of Traditional Knowledge: Innovations and Practices and Options for an International Framework* (2005) 1.

³⁸⁷ Leibold A ‘Extraterritorial Application of the FCPA under International Law’ (2015) 51 *Willamette Law Review* 249.

³⁸⁸ Peukert A ‘Territoriality and Extraterritoriality in Intellectual Property Law’ in Handl G, Zekoll J & Zumbansen P (eds), *Beyond Territoriality: Transnational Legal Authority in an Age of Globalization*, *Queen Mary Studies in International Law* (2012) 1.

³⁸⁹ Peukert A (2012) 6.

³⁹⁰ See 2.2(c) and 2.3(f) above.

³⁹¹ Heald PJ ‘The Rhetoric of Biopiracy’ (2004) 11 *Cardozo Journal of Int’l & Comp. Law* 535.

cannot be traced to a specific community and no identifiable group of people may exist in which the rights can be vested.³⁹²

Second, while an innovation may be based on TK, quantifying the contribution of TK thereto is difficult. For example if a plant extract is known to be medicinal, making the critical component available with clinical efficacy is a problem, and the solution has to go beyond TK. It might involve developing a process to isolate and purify that component. TK is a starting point but the challenge lies in developing a suitable process/product. Perhaps the fact that this plant extract has curative potential may be well-known to others as well, not just that community.³⁹³

Also, indigenous peoples' ignorance of the economic value of their knowledge makes it difficult to establish a reliable market with those who seek to exploit TK. The buyer also often lacks information on the value of particular TK. This makes it difficult for a corporation to price information it does not yet have.³⁹⁴

Another problem involves the relationship between different laws: local communities often have their own laws, and the question is which law prevails, the state law or the community's? In addition, quite often there are communities stretching over the borders of states, namely communities with the same local law extending into two or more states.³⁹⁵ Most geographical boundaries were created by colonialists based on their mercantile interests without regard for indigenous communities' interests. In consequence, numerous traditional communities are indigenous to multiple countries. For example, the Tsonga are native to Mozambique, South Africa, Swaziland, and Zimbabwe. Therefore, none of these countries can legitimately assert rights in Tsonga TK and TCEs to the exclusion of others.³⁹⁶

³⁹² Dutfield G (2000) 283.

³⁹³ Srinivas KR (2008) 99.

³⁹⁴ Heald PJ (2004).

³⁹⁵ von Lewinsky S 'Commentary on Traditional Knowledge' (2002) 7 *International Intellectual Property Law & Policy* 77-5.

³⁹⁶ Nkomo ML (2013) 262; it may be contended that the doctrine of 'self-determination' enables the Tsonga to decide which country they belong to. Self-determination, as a political concept, means, where territorial changes are made among countries, any concerned population have a right to decide democratically which country to belong to. It is a general political principle that the people of every country should have the right to freely choose their rulers and form of government. The customary law of self-determination is set forth in United Nations General Assembly 1960 Declaration on the Granting of Independence to Colonial Countries and Peoples, the UNDRIP, etc. These resolutions however limit the exercise of self-determination. For example, Article 3 of the UNDRIP recognises the right to self-determination but Article 46 states that the Declaration does not authorise any action which would impair the territorial integrity or political unity of sovereign States. Thus, self-determination is limited by sovereignty. By sovereignty, States have final authority within their territories and in view of 'territorial integrity', a group within a State does not have the right to challenge State's sovereignty or seek to change the territorial boundaries of the state through secession. Thus, the Tsonga cannot use self-determination to challenge the territorial integrity of the nations where they are found. They can,

Other problems for TK and TCEs protection include: What happens to TK rights when an individual leaves the community? Does the diaspora have the right to exploit such knowledge if an individual goes outside the physical boundaries of his community? What happens to those who are expelled from the group or if over time, due to cultural, political or other circumstances, a group separates or even disintegrates?³⁹⁷

In summary, therefore, apart from the challenges that make the existing IP regimes unsuitable to protect TK and TCEs, an appropriate protection mechanism must overcome the challenges highlighted in this section as they can frustrate efforts aimed at successfully implementing a protection mechanism.

4.6 Customary Law and possible indigenous solutions to TK infringements

It is trite that indigenous communities' legal systems are embedded in their customary laws. Customary law refers to the customs, rules and traditions governing the relationship of members of a community and which they accept as binding. It is the organic law regulating the lives of indigenous people. It is organic because it is not static; and regulatory, because it controls the lives and transactions of the community and mirrors its culture.³⁹⁸ Customary law covers many different systems which are largely tribal in origin and usually operate within each tribe's territory.³⁹⁹ Thus, it emanates from the traditions of a distinct group of people and is called different names including native, tribal and Aboriginal law.⁴⁰⁰

One striking feature of customary law is its flexibility. It is always subject to motives of expediency and shows unquestionable adaptability to altered circumstances without losing its character in order to reflect evolving socio-economic conditions.⁴⁰¹ Indigenous communities have always possessed their own legal systems which dictate the rights and obligations of individual members. Its rules include local sanctions for breach. It is therefore wrong to assume that rights are exclusive creations of statutes.⁴⁰² For example, before colonisation, the

however, persuade the respective national governments to cooperate for purposes of protecting their interests. See Dawson P 'On Self-Determination and Constitutional Recognition' (2015) 8(16) *Indigenous Law Bulletin* 3.

³⁹⁷ Long DE 'Traditional Knowledge and the Fight for the Public Domain' (2006) 5 *John Marshall Review of Intellectual Property Law* 326.

³⁹⁸ *Oyewumi v. Ogunesan* (1990) 3 NWLR (Pt.137) 182, 207.

³⁹⁹ Burabari AN 'The Validity of Customary Law as a Source of Nigerian Law' 26 July 2014 available at <https://nigerianlawclass.wordpress.com/2014/07/26/the-validity-of-customary-law-as-a-source-of-nigerian-law-by-burabari-adule-nkor/> (accessed on 10 May 2017).

⁴⁰⁰ Kerr AJ *The Customary Law of Immovable Property and of Succession* 3ed (1990) 7.

⁴⁰¹ *Lewis v. Bankole* (1908) 1 NLR Vol.8, 100–01.

⁴⁰² Conway DM 'Indigenizing Intellectual Property Law: Customary Law, Legal Pluralism, and the Protection of Indigenous Peoples' Rights, Identity, and Resources' (2009) 15 *Texas Wesleyan Law Review* 216.

traditional Maori community had a system of rights which was spiritual, collective and reciprocal.⁴⁰³

In local communities, there is a strong consideration for the collective interests in disputes and enforcement of decisions is secured through social pressure.⁴⁰⁴ The scope of customary law can be traced to the structure of indigenous communities. In Australia, for example, Aboriginal law evolved based on social relations with the family as the basic social unit where an individual, from birth, became a part of a kinship, enjoying rights within the collective, but also owing obligations to other members of the society.⁴⁰⁵

Virtually all cultures have their own knowledge-management mechanisms. Such mechanisms may have semblances of conventional IP but they are culture-specific⁴⁰⁶ and are rooted in each community's legal system. Dutfield, quoting the Canadian Four Directions Council, stated:

‘indigenous peoples possess their own locally-specific systems of jurisprudence with respect to the classification of different types of knowledge, proper procedures for acquiring and sharing knowledge and the rights and responsibilities which attach to possessing knowledge, all of which are embedded uniquely in each culture...’⁴⁰⁷

Under customary law, rights in artistic works are owned collectively. Only certain artists are permitted within a tribe to depict certain designs, usually based on their status. The right to depict a design does not include a right to permit its reproduction unless on the authorisation of the community.⁴⁰⁸ While Western philosophies anchor on individualism, competition and self-interest, indigenous philosophies are based on spiritual unity and cooperation.⁴⁰⁹

Also, communities have rules that give an individual sole right to use or transmit knowledge, ranging from license requirements for those who dispense technical knowledge to having an exclusive folk speaker or singer of traditional songs. Such rules help prevent distortion of, or

⁴⁰³ Mikaere A ‘Settlement of Treaty Claims: Full and Final, and Fatally Flawed?’ (1997) 17 *NZ University Law Review* 444; Maori custom recognised rights in both tangible and intangible property which were collectively enjoyed by the people prior to the arrival of the British on New Zealand soil: Kuruk P ‘The Role of Customary Law under Sui Generis Frameworks of Intellectual Property Rights in Traditional and Indigenous Knowledge’ (2007) 17 *Indiana International & Comparative Law Review* 91-4.

⁴⁰⁴ Stitch KK ‘Customary Justice System and Rule of Law Reform’ (2014) 221 *Military Law Review* 216.

⁴⁰⁵ Kuruk P (2007) 80.

⁴⁰⁶ Oguamanam C ‘The Protection of Traditional Knowledge: Towards a cross-cultural dialogue on intellectual property rights’ (2004) 15 *Australian Intellectual Property Journal* 35.

⁴⁰⁷ Dutfield G (2000) 282.

⁴⁰⁸ Golvan C ‘Aboriginal Art and the Protection of Indigenous Cultural Rights’ (1992) 7 *European Intellectual Property Law Review* 230.

⁴⁰⁹ Gervais DJ (2002) 76-5-76-6.

mistakes in applying, the underlying knowledge.⁴¹⁰ Customary laws require community permission before outsiders could use and share in the community's property and resources because its nature eschews alienation of communal resources.⁴¹¹

The collective nature of TK is often emphasised, given its communal character and the difficulty of attributing it to a single 'inventor'. While many traditional societies possess strong sharing ethos, concepts of 'ownership' and 'property' or their close equivalents exist in most communities. Resources and knowledge may be individually-held and transmitted along family lineages. However, individual rights over knowledge are often accompanied by certain collective responsibilities.⁴¹² Indigenous communities consider each member as having *individual* rights and *collective* responsibilities that are linked inextricably. Individual property rights over knowledge are not necessarily absent from many societies.⁴¹³ Therefore, indigenous communities have their own custom-based IP systems which are sometimes very complex. Customary rules governing access to and use of knowledge do not necessarily differ all that widely from western IP formulations, but in the vast majority of cases they almost certainly do. They also differ widely from each other, as shown in the preceding paragraphs in this section. Therefore, to assume that there is a generic form of collective/community IP system would be misleading as such ignores the tremendous diversity of traditional proprietary systems. Despite this, it is often assumed that TK is shared freely and that where property rights exist, they are always collective in nature rather than individual as in the West. In some ways this view may do a disservice to indigenous communities' TK and TCEs.⁴¹⁴

There are informal IP regimes prevalent in indigenous communities which are made up of diverse but stable structures regulating innovations and knowledge flows in the communities.⁴¹⁵ TK-holding communities have developed distinct practices which are local, passed on orally, and are designed to guide all aspects of life. They set out the rights and responsibilities attached to TK to meet community needs and ensure that the knowledge is transmitted.⁴¹⁶ These communities have developed rules and procedures regulating access to

⁴¹⁰ Cross JT (2010) 33.

⁴¹¹ Wicomb W & Smith H 'Customary communities as 'peoples' and their customary tenure as 'culture': What we can do with the *Endorois* decision' (2011) 11 *African Human Rights Journal* 444.

⁴¹² Swiderska K 'Traditional knowledge protection and recognition of customary law: Policy issues and challenges' (2004) 9.

⁴¹³ Dutfield G 2003 24.

⁴¹⁴ Dutfield G 2003 23-4.

⁴¹⁵ WIPO Fact-Finding Report (2001) 57.

⁴¹⁶ Swiderska K, Argumedo A, Pant R, et al 'Protecting Traditional Knowledge from the Grassroots up' (2009) IIED Briefing 1-2.

TK, based on their customary laws and practices. Specialised TK (such as medicinal knowledge) is restricted to family lineage or kin. Access brings a responsibility to ensure proper use of knowledge for community healthcare. The rules ensure that such knowledge is only transmitted to people who are fit to ensure its proper use. The *Maasai* and *Mijikenda* of Kenya, for instance, traditionally use a rating process to assess personal conduct. This implies a responsibility on the part of third parties to also ensure proper use of knowledge for community welfare. Sacred TK is kept secret among particular persons, and used in spiritual healing, ceremonies and worship. They are obliged to keep it secret to maintain its sacred character, and may be penalised for not doing so. In some communities, a secret code or language is used and the holder is traditionally put under oath not to share the TK.⁴¹⁷ In *John Bulun Bulun & George Milpurrurru v R & T Textiles Ply Ltd*,⁴¹⁸ the Australian Federal Court relied on customary law in arriving at its judgment.

While customary laws vary between cultures and communities, they possess major potential as a basis for national and international policy on TK and TCEs.⁴¹⁹

4.7 Recognition of Customary Law

The post-colonial era relegated customary law to an inferior position comparative to the formal, 'Western' legal system.⁴²⁰ However, considerable evidence shows that customary law is receiving increasing recognition across the world. In Nigeria, customary law was made inferior to the common law⁴²¹ but is enforced subject to three tests:⁴²² customary law must not be repugnant to natural justice, equity and good conscience; it must not be incompatible with any law in force; and it must not be contrary to public policy.⁴²³

In no African country is customary law totally proscribed. Customary law continues to be recognised and enforced, albeit to different degrees depending on the jurisdiction.⁴²⁴ National

⁴¹⁷ Swiderska K et al (2009) 3.

⁴¹⁸ (1998) 86 FCR 244. The case involved an artist's painting portraying the heritage of his people, the Ganalbingu, which was replicated without permission on rolls of fabric made overseas and re-imported into Australia. The Court held that the Ganalbingu customary law requires that the use of the artistic work be in accordance with the requirements of customary law, and that the author of the artistic work was obliged to prevent any misuse.

⁴¹⁹ Swiderska K et al (2009) 2.

⁴²⁰ Wicomb W & Smith H (2011) 425.

⁴²¹ Oba AA 'Religious and Customary Laws In Nigeria' (2011) 25 *Emory International Law Review* 892-3.

⁴²² Asein JO 'Introduction to Nigerian Legal System (2005) 2ed 129-38, *Lawal-Osula v. Lawal-Osula* (1995) 10 SCNJ 84; Section 3(2) of the Kenyan Judicature Act 1967 available at http://seafarersrights.org/legal_database/judicature-act-of-kenya/ (accessed on 24 May 2017) makes provision for Kenyan courts to apply customary law after similar tests.

⁴²³ *Mojekwu v. Iwuchukwu* [2004] 4 SCNJ 180.

⁴²⁴ Only in Ethiopia and Tunisia have some legislative measures been adopted to abolish carefully-selected aspects of customary law: Kuruk P (2007) 89.

constitutions authorise it as a major source of law in legal proceedings where applicable.⁴²⁵ Article 211(3) of the Constitution of the Republic of South Africa 1996 mandates the courts to apply customary law when applicable, subject to the Constitution and any relevant legislation. In *Alexkor Ltd. v. Richtersveld Community*,⁴²⁶ the South African Constitutional Court upheld the right of the Richtersveld indigenous people to occupy land in accordance with customary law. The Court emphasised the distinctiveness of customary law as an independent source of norms and that the Constitution does not deny the existence of rights that are conferred by customary law so far they are consistent with the Bill of Rights.

Unlike in Africa, customary law is not formally recognised as part of the United States legal system, although its application is enforced where necessary by Indian tribal courts. The US Supreme Court has upheld tribal courts as appropriate forums for exclusive adjudication of disputes affecting important interests of both Indians and non-Indians.⁴²⁷ The court also acknowledged the wide jurisdiction of tribal courts, emphasising, for instance, that if state courts' jurisdiction over Indians would interfere with tribal sovereignty, the state courts are divested of jurisdiction.⁴²⁸

In New Zealand, customary law is recognised through the native title concept established in *Re The Landon & Whitaker Claims Act*,⁴²⁹ where the Crown was held to be bound, both by common law and its own agreements, to a full recognition of native proprietary rights under native custom. Subject to the qualification that lands held under native title are inalienable to third parties except the Crown, other aspects of native title, including the rights protected, the groups who can lay claim to such rights and rules of succession are determined exclusively by customary law.⁴³⁰

In Australia, Section 71 of the Aboriginal Land Rights Act of 1976⁴³¹ empowers Aboriginals to use Aboriginal land in accordance with customary law. The tribal assessor is not bound by the rules of evidence but must observe and, where appropriate, apply relevant customary law. Australian courts also take Aboriginal laws into account in the development of interrogation

⁴²⁵ For instance, Article 11 of the Ghanaian Constitution provides that the laws of Ghana include customary law rules.

⁴²⁶ 2004 (5) SA 460 (CC).

⁴²⁷ *Santa Clara Pueblo v. Martinez*, 436 US 49 (1978).

⁴²⁸ *Iowa Mut. Ins. Co. v. La Plante*, 480 US 9 (1987).

⁴²⁹ 1871, 2 N.Z.C.A. 41.

⁴³⁰ Kuruk P (2007) 93.

⁴³¹ Available at <https://www.legislation.gov.au/Details/C2013C00556> (accessed on 13 June 2017).

rules, the exercise of prosecutorial discretion, and the application of defense of provocation.⁴³² Customary law was even upheld in a copyright claim.⁴³³

Section 35(1) of the Canadian Constitution Act 1982⁴³⁴ expressly recognises aboriginal rights and this serves as the primary basis for the legal recognition and protection of aboriginal practices in Canada. As a constitutional provision, its terms subordinate common law rules and principles.⁴³⁵

The African Human Rights Commission in *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya*,⁴³⁶ gave international recognition to customary law. It held that in any development projects that would have a major impact within the Endorois territory, the state must not only consult with the community, but also obtain their prior and informed consent, according to their customary law.

The customary laws of indigenous communities are increasingly recognised globally as dynamic and vibrant sources of law for communal legal ordering.⁴³⁷ Therefore, it is a disservice to view TK and TCE protection solely from the conventional IP perspective, when customary law already contains significant mechanisms for effective TK and TCE protection. This explains why Anderson recommended that the best protection would be to support these customary systems and subsequently draw intersections therefrom in coming up with an international instrument.⁴³⁸

Therefore, the customary law mechanisms highlighted here show that indigenous peoples already possess TK and TCE protection mechanisms. What have impeded them are the non-recognition of their TK as 'knowledge' worthy of protection and the subjection of the application of customary law to statutory laws and common law rules. These impediments significantly contribute to the misappropriation of TK and TCEs as the owners often have no legal basis upon which to insist on proper usage of their TK and TCEs.

⁴³² By these rules, prosecutorial discretion must be informed by customary law, particularly regarding whether or not to prosecute Aborigines for certain offences: Kuruk P (2007) 95.

⁴³³ *Yumbulul v. Reserve Bank of Australia* (1991) 21 I.P.R. 481.

⁴³⁴ Available at http://www.solon.org/Constitutions/Canada/English/ca_1982.html (accessed on 13 June 2017)

⁴³⁵ Connolly A 'Judicial Conceptions of Tradition in Canadian Aboriginal Rights Law' (2006) 7(1) *Asia-Pacific Journal of Anthropology* 30.

⁴³⁶ 276/2003 (para.291) available at <http://www.achpr.org/communications/decision/276.03/> / (accessed on 18 May 2017).

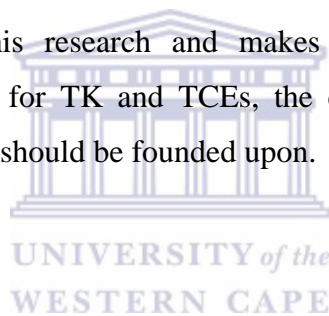
⁴³⁷ Tobin BM 'Biopiracy by Law: European Union Draft Law Threatens Indigenous Peoples' Rights over their Traditional Knowledge and Genetic Resources' 2014 *European Intellectual Property Review* 133.

⁴³⁸ Anderson J (2010) 7.

4.8 Chapter conclusion

This Chapter has established the limitations of national TK and TCE protection mechanisms, most notably the fact that national laws cannot prevent misappropriation of TK and TCEs which occur in foreign jurisdictions. This important limitation of national laws is what makes it imperative for a multilateral approach to TK protection. It has also shown that indigenous communities possess knowledge management systems within their customary laws which will be extremely valuable in the multilateral protection of TK. The only impediment to such indigenous knowledge-management systems has been their continued non-recognition as most jurisdictions still view customary laws as inferior. It will be of great importance therefore that there be a change in the way customary law is perceived if TK and TCEs are to be adequately protected. Considering that the nature of TK is inextricably linked to the cultural and social experiences of its holders, it will be important for a protection mechanism to incorporate mechanisms that TK holders are familiar with and this is where customary law systems become indispensable.

The next chapter concludes this research and makes recommendations regarding the appropriate model of protection for TK and TCEs, the conditions for protection and the disciplines which the mechanism should be founded upon.



5.0 General Conclusions

This research set out to answer the central question: what mechanism will provide effective protection for TK, the conditions for such protection and what multilateral disciplines must be embedded in such a mechanism. The scope of the study was limited to an examination of previous and existing multilateral, regional and national IP regimes, and their suitability for protecting TK and TCEs including their shortcomings and limitations to their effectiveness. The study also focused on indigenous peoples' knowledge-management systems within the ambits of customary law. The study was based on four research objectives:

- (a) To establish the suitability of existing IP regimes for the protection of TK and TCEs;
- (b) To examine selected international and regional initiatives for TK protection with a view to establishing the shortcomings which render them ineffective for TK protection;
- (c) To undertake an analysis of selected national legislations enacted for the protection of TK and TCEs and ascertain the extent to which they effectively protect TK and TCEs; to identify other problems which could render a TK protection mechanism ineffective and examine indigenous peoples' knowledge-management systems within the framework of their customary laws as possible solutions; and
- (d) To make recommendations on the most effective protection mechanism, the conditions for such protection and the disciplines that should be the foundation of such mechanism.

Chapter one introduced this research and established that there is continued misappropriation of TK and TCEs globally by transnational corporations, musicians, movie producers, artists, etc. The Chapter highlighted that this continued misappropriation is a result of the absence of an effective mechanism for the protection of TK and TCEs.⁴³⁹

Chapter two addressed the first research objective. It examined existing IP regimes (copyright, patents, trademarks, geographical indications, trade secrets and designs) and established that these regimes do not provide substantial protection for TK and TCEs most importantly because they are predicated on fundamentals (such as profit motives, identifiable author/inventor, granted on conditions/requirements that are antithetical to TK and TCEs, and

⁴³⁹ Paragraph 1.3 above.

the rights granted are for limited duration) that do not necessarily align with the vagaries of TK and TCEs.⁴⁴⁰

Chapter three addressed the second research objective. It examined selected international initiatives (the CBD, the Nagoya Protocol, ITPGRFA and the Swakopmund Protocol) for the protection of TK and TCEs and established that, while those initiatives were designed to curb the misappropriation of TK and TCEs, their effectiveness is limited because of numerous inherent shortcomings. These shortcomings include the absence of an enforcement mechanism, employment of existing IP frameworks (which are mostly incompatible with TK and TCEs) as policy tools, the anchoring of TK protection on ‘communities’ rather than ‘peoples’,⁴⁴¹ subjection of PIC to the enactment of national legislations but providing no mechanisms for PIC where a nation fails to enact a legislation, failure to address biopiracy, the employment of numerous qualifying terminologies,⁴⁴² failure to create explicit obligations on States to protect TK and TCEs, and the conferral of powers to authorise third party utilisation of TK and TCEs in the States rather than on indigenous peoples.⁴⁴³

Chapter four addressed the third research objective and discussed national legislation of New Zealand, South Africa and Kenya enacted for protection of TK and TCEs. It found that, while commendable, these legislations were riddled with inadequacies including non-conferral of positive (enforceable) rights on TK holders, limitation of protection to only tangible TK manifestations,⁴⁴⁴ provision of only defensive protection,⁴⁴⁵ failure to recognise communal creations/inventions, failure to adequately address trans-boundary TK and TCEs and the conferral of ownership of TK and TCEs on the States rather than the indigenous peoples who created and developed TK and TCEs.⁴⁴⁶ It was equally established that, even if these legislations are not riddled with the identified shortcomings, they are still limited by ‘sovereignty’ hence necessitating a multilateral approach to curbing biopiracy.⁴⁴⁷ Chapter four’s analysis also highlighted a number of other problems that could hinder an effective protection for TK and TCEs, such as lack of a clearly-defined structure of authority and knowledge management in many indigenous communities (which can hamper the conduct of PIC), the incidences of shared TK and TCEs which transcend national boundaries, difficulty

⁴⁴⁰ Paragraph 2.7 above.

⁴⁴¹ Paragraph 3.1.3 above.

⁴⁴² Paragraph 3.2.2 above.

⁴⁴³ Paragraph 3.6 above.

⁴⁴⁴ Paragraph 4.1.1(b) above.

⁴⁴⁵ Paragraph 4.1.2(b) above.

⁴⁴⁶ Paragraph 4.2.2(b) above.

⁴⁴⁷ Paragraph 4.4 above.

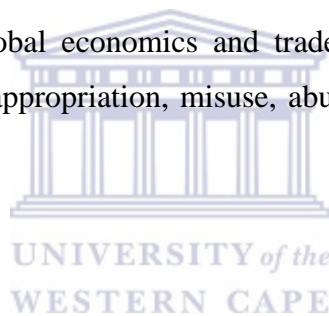
in quantifying the contribution of TK and TCEs to a particular intellectual creation, indigenous peoples' ignorance regarding the economic value of TK and TCEs, sourcing of TK and TCEs from indigenous individuals who live outside indigenous communities etc.⁴⁴⁸ The chapter also considered knowledge-management systems in indigenous communities and argued that indigenous communities possess peculiar systems through which they manage their TK and TCEs within the framework of customary law.⁴⁴⁹ However, the challenge is that there is limited (though improving) recognition for customary law in most jurisdictions and as such, TK-owning communities have, in most cases, been unable to enforce their customary rules to protect their TK and TCEs without any interference from the formal legal systems.⁴⁵⁰

This chapter builds on the previous chapters and advances recommendations for an effective protection mechanism, conditions for such protection and highlights disciplines that should be foundational to this mechanism.

It is important to reiterate that 'protection' in the context of this research implies the conferral of exclusive rights for the exploitation of TK and TCEs on the holders so as to enable them take maximum advantage of global economics and trade in their TK and TCEs and the prevention of the continued misappropriation, misuse, abuse and derogatory use of TK and TCEs.

5.1 Recommendations

5.1.1 *Sui generis* protection



Having established the incompatibility of existing IP regimes with the dynamics of TK and TCEs and also established that an effective protection of TK and TCEs cannot be successfully attained at national level, this mini-thesis recommends the negotiation of a binding multilateral *sui generis* treaty (international treaty) which imposes responsibilities on both the TK provider and user countries. This international treaty will define standards that could be applied to the protection of TK and TCEs across the multilateral trading system.

Also, considering preceding discussions, the international treaty should combine both defensive and positive protections to be effective. It must make provisions for prior informed consent (PIC), benefit-sharing, communal/collective authorship, indefinite protection, scope of application, trans-boundary TK and TCEs, enforcement and the nature of rights to be exercised by owners of TK and TCEs. National *sui generis* mechanisms to implement this

⁴⁴⁸ Paragraph 4.5 above.

⁴⁴⁹ Paragraph 4.6 above.

⁴⁵⁰ Paragraph 4.7 above.

treaty must preserve the standards recommended herein. These issues will be discussed in detail in the subsequent paragraphs.

5.1.1.1 Positive protection

The international treaty must clearly define the conceptual and practical issues, such as the subject matter of and conditions for protection, nature of rights conferred, duration and enforcement measures. While it may be impossible to capture the full manifestations of TK and TCEs in the treaty, it will be more efficient to clearly state those classes of TK and TCEs which are not eligible for protection. It is not necessary to confine the definition of TK and TCEs to a particular area for purposes of the international treaty so as not to leave out a significant chunk of TK and TCEs. It is better if the treaty highlights the basic characteristics of TK and TCEs to be protected.

The international treaty should confer decision-making powers on TK and TCE holders and not national governments. This will help to avoid the arbitrary subjection of TK holders' interests to *national interests*, in the process of national implementation of the treaty. It must empower indigenous peoples to control and manage their TK and TCEs to prevent unauthorised exploitation.

5.1.1.2 Binding obligations

Considering that international treaties require national implementation to be effective,⁴⁵¹ care must be taken to ensure that, while the international treaty must be cognisant of differences in national experiences and allow for flexibilities in national implementation, the language of the instrument must create explicit binding obligations on States. It must be drafted in a manner that State Parties will be bound to implement its provisions, much like the WTO's various multilateral agreements to avoid some shortcomings identified in previous international initiatives.

While it is recognised that States often enter reservations when acceding to treaties, it will be important to ensure that there will be no reservations allowed in relation to the core provisions of the treaty directly dealing with measures to combat biopiracy.

⁴⁵¹ The process of national implementation of treaties varies between States depending on whether the State is *monist* or *dualist*. For further discussions see Finegan T 'Neither Dualism nor Monism: Holism and the Relationship between Municipal and International Human Rights Law' (2011) 2(4) *Transnational Legal Theory* 478.

5.1.1.3 Nature of rights

Having established that indigenous communities possess peculiar knowledge-management and proprietary systems within the framework of customary law, it is important that the *sui generis* treaty be anchored on the customary law and practices of TK holders. It must recognise indigenous peoples' philosophies of collective rights and should be sufficiently flexible to accommodate the diversity of TK and recognise the supremacy of customary law on TK matters. This is to be done by expressly providing that, in the management of TK and TCEs, indigenous communities are empowered to apply their knowledge-management systems and customary law rules.

5.1.1.4 Customary Law

Having established that indigenous communities possess peculiar knowledge-management and proprietary systems within the framework of customary law, it is important that the international treaty be anchored on the customary law and practices of TK holders. It must recognise indigenous peoples' philosophies of collective rights and should be sufficiently flexible to accommodate the diversity of TK and recognise the supremacy of customary law on TK matters. This is to be done by expressly providing that, in the management of TK and TCEs, indigenous communities are empowered to apply their knowledge-management systems and customary law rules, which differ from country to country.

5.1.1.5 Prior Informed Consent

The international treaty must make provision for PIC by compelling bioprospectors and all users of TK and TCEs to obtain the consent of TK and TCE holders before utilisation. Such consent should be given, collectively, by a community or group of affected communities. The international treaty must also clearly define what PIC connotes to avoid confusion.⁴⁵² PIC must be construed, not merely to imply consultation but also to secure the agreement of TK and TCE holders. However, the right of TK and TCE holders to refuse consent in given circumstances must be recognised.

Where there are rival claims to TK or disputed line of authority within a community, the national government should be empowered to give consent regarding such TK or TCE.

⁴⁵² Roesch R 'The story of a legal transplant: The right to free, prior and informed consent in Sub-Saharan Africa (2016) 16 *African Human Rights Law Journal* 522 observes that States, NGOs and local communities do not understand consent and its consequences the same way. Thus, if communities enter into negotiations with others, the PIC process may be endangered due to misunderstanding.

While there may be instances where community leaders may not be objective in PIC processes (especially where they are being hoodwinked by subjective propositions like bribes), the State, acting as facilitator, will reserve a right to ensure that such underhand transactions are discouraged so that the objective of protection is not defeated.

5.1.1.6 Benefit-sharing

The international treaty must mandate anyone who commercialises or derives profit from the utilisation of TK and TCEs to share benefits derived from such commercialisation with the indigenous peoples who own the TK or TCEs. Such benefits must be shared equitably with and among the relevant communities (where neighbouring communities hold the same TK or TCEs). This is because it is not just enough to design a treaty that protects the proprietary interests of indigenous peoples but also necessary to confer economic benefits on them. Considering the collective interests at stake, it will be necessary to require that benefit-sharing agreements be made public to ensure accountability and fairness. Such publication will also assure the TK and TCE user that benefit-sharing negotiations have been done with the accredited indigenous peoples' representatives.

Where custom does not permit a community to make profit from a particular TK or TCE, benefit-sharing agreement should not be required but the community protocol or an agreement between the TK user and the community should disclose such fact.

5.1.1.7 Enforcement

Enforcement of rights and obligations, within the confines of national jurisdictions, should be in accordance with customary law and practice. The international treaty should mandate States to adequately recognise and give priority to customary law systems in TK and TCE misappropriation cases. States should be mandated to enact legislation to establish rights and obligations regarding the protection of TK and TCEs. By doing this, infringements of TK and TCEs which take place in any part of the world can be challenged in the nations where such infringements occur. Consequently, it will no longer be the case that 'foreign rights cannot be infringed by local activity, and local rights cannot be infringed by foreign activity'.⁴⁵³ It should also provide for communal rights to initiate legal proceedings (both civil and criminal) and seek remedies for contravention of TK and TCE rights within each national jurisdiction.

The treaty should also make provisions for TK holders to initiate proceedings against State parties who fail to perform their obligations under the treaty (along with actions by one State

⁴⁵³ Paragraph 4.4 above.

Party against the other). This is in view of the fact that history has shown that States are usually reluctant to protect the interest of indigenous peoples. Unfortunately, the WTO Dispute Settlement system and the WIPO Arbitration process do not provide a platform for individuals or groups to initiate proceedings against States. As a result, unless these institutions are willing to restructure their dispute settlement processes, the treaty herein recommended cannot be administered by them. Thus, there may be a need for an entirely different organisation for the purposes of the functioning of this international treaty.

5.1.1.8 Authorship

The international treaty must recognise the knowledge-ownership structures in indigenous communities. It must recognise that, in most instances, TK and TCEs are owned by an entire community and are linked to the *universal* experience of the people. Thus, it must recognise collective rights and operate within the indigenous communities' proprietary systems ranging from the individual, the familial to the communal.

Where a TK or TCE cannot be traced to any community or group of people, such should not be protected under the treaty as there are then no rights or interests that may be violated. It will not be proper to confer ownership of such TK or TCEs on any national government. This is even more so considering that the treaty must only reward those who have laboured to develop TK and TCEs.

While it may be said that by their communal nature, indigenous or local communities lack legal personality to hold IP rights, legal personality is a creation of law and its categories are not closed. There is no reason why it cannot be extended to cover indigenous collectives as has been accorded to corporate entities. Corporate organisations are a community of investors who enjoy the benefit of protection arising from their juristic personality.⁴⁵⁴ It is the State who decides who enjoys legal personality and the recognition of different types of legal personalities is dependent on the values, culture and ideologies of each national legal system.⁴⁵⁵ Therefore, there is no rationale for imposing individual ownership system on TK and TCEs. As a matter of fact, trade secrets are protected as IP but there is no evidence that they are developed by particular individuals. Trade secrets develop over time but they are protected simply because they develop within the empirical process of an organisation. A

⁴⁵⁴ In South Africa, for example, many bodies including community-based organisations, sports clubs, etc. acquire juristic personality under the Non-Profit Organisations Act 1997.

⁴⁵⁵ Mgbеoji I 'Patents and Traditional Uses of Plants: Is a Communal Patent Regime Part of the Solution to the Scourge of Bio Piracy?' (2001) 9 *Indiana Journal of Global Legal Studies* 183.

local community may as well be seen as an organisation whose members developed TK and TCEs, incrementally over generations.

5.1.1.9 Peoples, not communities

The *sui generis* treaty must anchor protection for TK and TCEs on ‘indigenous peoples’ rather than ‘indigenous communities’. This will ensure that where TK and TCEs are obtained from indigenous persons who live outside their communities, the conditions for access and necessary benefit-sharing will still be observed. After all, TK is often *possessed* by individual community members, though they are *owned* by the community.

5.1.1.10 Scope of application

The treaty should not be designed to apply to TK and TCEs which had previously been utilised in various works and inventions. But where such TK and TCEs are *still* being utilised in any way, the provisions of the *sui generis* treaty, particularly regarding PIC and benefit-sharing, must be applicable.

5.1.1.11 Duration

Considering that, by nature, TK and TCEs are inextricably linked with the communal existence of indigenous peoples and not necessarily of any particular individual (and not just because TK holders desire perpetual protection), the treaty must be designed to recognise and protect TK and TCEs in perpetuity.

The justification for this is that, in much the same way that companies can use trademarks and GIs in perpetuity as long as their businesses require, indigenous peoples should also enjoy their TK and TCE protection as long as their existence depend on same. However, provision could be made for instances where communities opt to renounce their claims to certain TK and TCEs.

5.1.1.12 Trans-boundary TK and TCEs

Where an indigenous group shares TK and TCEs with another group in a different nation, PIC and benefit-sharing must be extended to both groups. However, where the TK is associated with GRs, the community which provides the GR utilised by the bioprospector should get more in terms of benefit-sharing. The various national governments should cooperate in facilitating the entire process and not interfere therewith.

5.1.2 Defensive protection

The international treaty must also include defensive protection⁴⁵⁶ measures. It must prohibit misrepresentations and distortions of TK and TCEs as well as the use of secret/sacred TK and TCEs other than in their customary (traditional) context. It should also be designed to abolish all forms of biopiracy. Also, the treaty should recognise the use of community protocols setting out the administrative structure of each TK-owning community to ensure certainty regarding the line of authority among each indigenous group for purposes of consent.

In particular, two defensive protection mechanisms are recommended: mandatory disclosure of the utilisation of TK and TCEs, not only for patents, but for all IP works and the use of TK and TCE databases.

5.1.2.1 Disclosure of use of TK and TCEs

The international treaty should require all creators of IP works to disclose the origin and utilisation of TK and TCEs in their works with evidence of owners' consent. This aligns with the objective of the disclosure of origin proposal discussed in chapter Four and will help ensure that existing IP regimes are not used to infringe TK rights. It is also important to stress that this disclosure should be utilised in all forms of IP especially those that require registration and those not requiring registration prior to protection, like copyright, should be required to include a declaration in the 'fixed' form whether or not TK and TCEs have been utilised in the works.⁴⁵⁷

Failure to make such disclosure or suppression of facts relating thereto should lead to a revocation or invalidation of any rights vested in the creator of such works.

5.1.2.2 TK and TCE databases

The second recommendation is to compile databases of TK and TCEs for purposes of patent examinations and for establishing originality in other IP works. This will enhance the recognition of the existence of TK as 'prior art'. While some have raised concerns on the potential for misappropriation of TK and TCEs through databases, databases will enable countries and indigenous peoples to easily know when their TK and TCEs have been misappropriated.

⁴⁵⁶ See 2.2(f) above for explanation of 'defensive protection'.

⁴⁵⁷ It will be a significant departure from the TRIPs Agreement to make disclosure a mandatory requirement for registration and protection of IP rights. Therefore, the TRIPs Agreement will have to be reviewed to include this requirement. This is because so long the TRIPs Agreement remains as it is, it will be impossible to compel countries which have no interest in the protection of TK and TCEs to enforce a disclosure norm in the absence of a multilateral obligation.

The databases will equally help countries to ascertain which TK and TCEs they share with their neighbours and enhance regional cooperation in managing them.

5.2 Protection requirements

The second objective of this chapter is to determine what should be the requirements for protection of a TK and TCE under the treaty herein recommended.

The international treaty must not subject TK and TCEs to *Western* scientific criteria for IP protection. To remedy the problem caused by the IP requirement that protected matter be reduced to some material form, TK and TCEs should be protected whether or not they are in any material form. While it is instructive that much TK and TCEs do not exist in tangible forms as established in Chapter two, the rights to be granted should not be subject to registration with a government agency (but registration may be encouraged to enhance certainty).

It is also important that for any TK or TCE to be protected, it must be connected to the cultural and social identity of an indigenous group, be transmitted in *any mode* of expression from generation to generation, be created, maintained and shared collectively by the members of the said indigenous community and must have resulted from their innovative actions, regardless of when such TK or TCE was created or developed.

5.3 Disciplines

To guarantee the effectiveness and efficiency of the treaty across the multilateral trading system, the protection of TK should be subject to the most-favoured nation⁴⁵⁸ and national treatment disciplines.⁴⁵⁹ This will help prevent any form of discrimination in the manner in which countries treat and protect the TK of different countries.⁴⁶⁰

5.4 Conclusion

One thing is certain, an international *sui generis* treaty designed as recommended herein will significantly help in combatting the incidences of biopiracy. While it is acknowledged that implementing such a *sui generis* system of protection will have its own challenges (just like

⁴⁵⁸ Para 4.2.2(b) above.

⁴⁵⁹ National treatment requires that under national laws, foreigners must not be subjected to lesser rights and benefits than citizens, subject to the specific terms of the relevant international conventions. The principle requires States to give foreigners the same treatment they give to their own citizens: see Article 3 TRIPs Agreement.

⁴⁶⁰ In this context, States with TK and TCEs must not subject foreign TK and TCEs to discriminatory treatment relative to their own TK and TCEs. For example, the South African government will not be able to treat/protect Zimbabwean TK and TCEs differently from the way it treats South African TK.

any other system), it is without doubt the most appropriate course to follow if TK and TCEs must be effectively protected. This will greatly support national initiatives to protect TK and will be in the interest of indigenous groups where their existing community protocols and customary laws are used as foundations for this proposed international regime. There is no doubt that empowering the customary laws of indigenous peoples will greatly enhance efforts to stop all incidences of misappropriation of TK and TCEs. This is more so considering that indigenous communities possess efficient practices in managing their TK and TCEs, within their customary legal systems.

Further research is, however, necessary regarding how to render effective the recommended international treaty essentially in relation to States who may not be parties thereto considering that such States will not be bound by the treaty and may continue to provide platforms for incidences of biopiracy.



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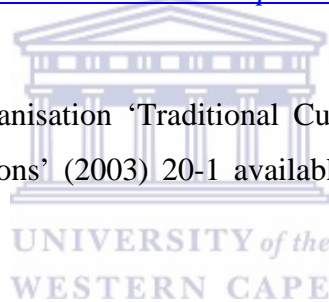
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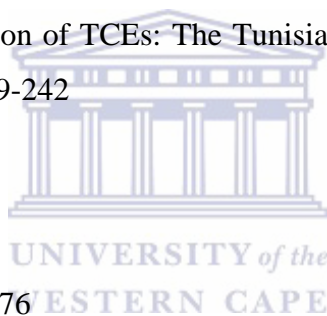
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