UNIVERSITY OF CAPE TOWN

FACULTY OF LAW

SCHOOL FOR ADVANCED LEGAL STUDIES

SUI GENERIS PROTECTION OF TRADITIONAL KNOWLEDGE IN NIGERIA: LESSONS TO BE LEARNT FROM SELECTED AFRICAN JURISDICTIONS

BY

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(AMSMOH001)

A DISSERTATION SUBMITTED TO THE UNIVERSITY OF CAPE TOWN IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE MASTER OF LAWS– WITH SPECIALIZATION IN INTELLECTUAL PROPERTY LAW

SUPERVISOR: PROFESSOR CAROLINE NCUBE

WORD COUNT: 22,710

FEBUARY 2022

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DEDICATION

To my late Grandmother, Sherifat Abimbola. You were my shelter and source of comfort during my childhood. I am grateful you were in my life.

ACKNOWLEDGEMENTS

I would like to appreciate my supervisor Professor Caroline Ncube for her inputs, comments and patience with my tardiness. I have learnt a lot from her during the course and research components of this programme. Thank you.

Special gratitude go out to my parents whose financial support made journey possible in the first place. I also appreciate my siblings, Aminat, Ibrahim and Aisha for being their encouragement and support.

Finally, I acknowledge and appreciate my cousin, Dr Rilwan Abimbola for being a role model and a source of comic relief whenever the pressure gets to me.

Contents

LIST OF ABBREVIATIONS

ABS	Access to Benefit-sharing
African Model Law	African Model Law for the Protection of the Rights of Local Communities, Farmers, and Breeders, and for the Regulation of Access to Biological Resources
ARIPO	African Regional Intellectual Property Organisation
AU	African Union
BIPRI	United International Bureaux for Protection of Intellectual Property
CBD	Convention on Biological Diversity
COP	Contracting Parties
DSI	Department of Science and Innovation
DST	Department of Science and Technology
GRs	Genetic Resources
ICSU	Internal Council of Science
IGC	Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore
IKS Act	Protection, Promotion, Development, and Management of Indigenous Knowledge Act
IPLAA	Intellectual Property Laws Amendment Act
IP	Intellectual Property
IPRs	Intellectual Property Rights
MAT	Mutually Agreed Terms

Nagoya Protocol	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
NIKSO	National Indigenous Knowledge Systems Office
NNMDA	Nigeria Natural Medicine Development Agency
NOTAP	National Office for Technology Acquisition and Promotion
OAU	Organisation of African Unity
PDA	Patents and Designs Act
PTK Act	Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act
Swakopmund Protocol	Swakopmund Protocol for the Protection of Traditional Knowledge and Expressions of Folklore
TCEs	Traditional Cultural Expressions
TK	Traditional Knowledge
TK/CE	Protection of Traditional Knowledge and Cultural Expressions Act
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
UN	United Nations
US	United States
UNCED	United Nations Conference on Environment and Development
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation

CHAPTER ONE

INTRODUCTION AND CONCEPTUAL FRAMEWORK

1.1 Background to Traditional Knowledge

There is not yet a universally accepted definition for traditional knowledge (TK). The World Intellectual Property Organisation's (WIPO) definition of TK is the widely accepted definition of TK. WIPO defines TK as 'knowledge, know-how, skills, and practices that are developed, sustained, and passed on from generation to generation within a community, often part of its cultural or spiritual identity.'[1]

WIPO considers indigenous knowledge as part of TK and that not all TK would qualify as indigenous knowledge.[2] Indigenous Knowledge is defined as 'knowledge held and used by communities, peoples and nations that are indigenous.[3] Indigenous knowledge and TK may be used interchangeably,[4] as used in this dissertation. WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, TK and Folklore (IGC) clarifies that the adjective 'traditional' does not mean ancient or inert nor does it relate to the 'nature of the knowledge' but 'to the way the knowledge is created, preserved and disseminated.'[5]

The recognition of TK on the international plane began with the Rio Declaration on Convention on Biological Diversity (CBD) which was adopted at the United Nations Conference on Environment and Development (UNCED) in 1992.[6] This is as a result of concerted efforts and calls by several organizations to address issues surrounding TK protection for indigenous communities.

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1 WIPO 'Traditional Knowledge' available at *https://www.wipo.int/tk/en/tk/*, accessed on 8 June 2021.
2 WIPO *Intellectual Property Needs and Expectations of Traditional Knowledge Holders: WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge* (2001) 25.
3 WIPO 'Glossary of Key Terms Related to Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions' (27, April 2012) available at *https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_22/wipo_grtkf_ic_22_inf_8.pdf* accessed on 25 August 2021.
4 Ibid.
5 WIPO *Elements of a Sui Generis System for the Protection of Traditional Knowledge* (30 September 2002) WIPO/GRTKF/IC/4/8 (2002) para 27.
6 H Benny 'The Need to Protect Traditional Knowledge' available at *https://thecompany.ninja/the-need-to-protect-traditional-knowledge-tk/* accessed on 25 January 2022.

The CBD defines TK as 'knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity'[7]

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) in the joint work with the Internal Council of Science (ICSU) defines TK as

> 'the cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sophisticated sets of understandings, interpretations and meanings are part and parcel of a cultural complex that encompasses language, naming and classification systems, resource use practices, ritual, spirituality and worldviews.'[8]

The African Regional Intellectual Property Organisation's (ARIPO) Swakopmund Protocol[9] defines TK as

> 'any knowledge originating from a local or traditional community that is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, where the knowledge is embodied in the traditional lifestyle of a community, or contained in the codified knowledge systems passed on from one generation to another. The term shall not be limited to a specific technical field, and may include agricultural, environmental or medical knowledge, and knowledge associated with genetic resources.'[10]

TK has also been embedded in legislative texts in many jurisdictions including African countries. For example, Nigeria,[11] South Africa,[12] Kenya[13] and Zambia.[14]

Nigeria's National Environmental Management (Access to Generic Resources and Benefit Sharing) Regulations[15] (hereafter referred to as the ABS Regulations) defines TK as 'a body of pattern of behaviour, practices and beliefs that are valued by a traditional or indigenous community from generation to generation.'[16]

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7 Convention on Biological Diversity (5 June 1992) 1760 UNTS 79, art 8(j).
8 UNESCO/ICSU, 'Science, Traditional Knowledge and Sustainable Knowledge' (2002) 4 *ICSU Series on Science for Sustainable Development* 9
9 Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore (2010).
10 Swakopmund Protocol, s 2.
11 The Patents and Designs Act 1970.
12 The Protection, Promotion, Development and Management of Indigenous Knowledge Act 6 of 2019,
13 The Protection of Traditional Knowledge and Cultural Expressions Act No. 33 of 2016
14 The Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act No. 16 of 2016.
15National Environmental Management (Access to Generic Resources and Benefit Sharing) Regulations (2009), S.I. 30.
16 ABS Regulations, s 25.

1.2 International Frameworks and Initiatives for Protection of TK

(A) The Convention on Biological Diversity

The CBD is an international legal framework which recognizes the importance of TK in environmental protection, innovation and biodiversity conservation. It is the first international framework to explicitly address the protection of TK and it examines protection of TK from a positive approach.[17] The CBD came into force in 1992 and as of June 2021, it had been ratified or acceded to by 198 State Parties, including Kenya, Nigeria, South Africa and Zambia.[18] The CBD incorporates[19] principle 22 of the Earth Summit in Rio de Janerio which recognises the importance of 'identity and culture of indigenous people to facilitate their participation in sustainable development.'

Article 8(j) of the CBD mandates contracting states to as far as possible subject to their national legislations 'reserve, preserve, and maintain knowledge, innovations and practices 'of indigenous communities. The Article also encourages them to exercise sovereignty over biological resources with their national boundaries and elaborates on prior informed consent which is the requirement of the consent of indigenous communities to allow access to their resources.

The contracting parties (COP) meet periodically to review the implementation of the CBD, and at the third meeting for implementation the COP established the ad-hoc, open session, inter-sessional working group to address the implementation of Article 8(j).

At the sixth meeting, the COP adopted the recommendations of the working group which suggested a multifaceted approach towards the protection of TK through the use of existing IP mechanisms, *sui generis* measures and contractual arrangements, registers of TK and guidelines and codes of practice.[20]

The COP also established the Ad-Hoc Open-ended Working Group on Access and Benefit-Sharing which developed the Bonn Guidelines on Access and Benefit-Sharing[21] (Bonn

17 T Dagne 'The Protection of Traditional Knowledge in the Knowledge Economy: Cross Cutting Challenges in International Intellectual Property Law' (2012) 14(2) *International Community Law Review* 162.
18 CBD, 'List of Parties', available at *https://www.cbd.int/information/parties.shtml#tab=0* accessed on 12, June 2021.
19 CBD, Art 8(j).
20 CBD, Report of the Ad Hoc Open-Ended Inter-Sessional Working Group on Art. 8(j) and Related Provisions of the Convention on Biological Diversity on the Work of its Second Meeting, U.N. Doc. UNEP/CBD/COP/6/7 (14, February 2002) para 5.
21CBD, Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization COP 6 Decision VI/24 (Sixth Ordinary Meeting of the Conference of the Parties

Guidelines). The Bonn Guidelines focuses on making the existing IP system more fair and equitable by promoting access to benefit-sharing (ABS) and disclosure of origin for use of TK. The most recent progress of the CBD is the drafting of a document on 'elements of code on ethical conduct' which was adopted by the COP at its tenth meeting (COP-10) in 2010,[22] this code elaborates and expands the protection of TK provided in Article 8(j).

During the tenth meeting, the COP further adopted the Nagoya Protocol on ABS[23] which allows state parties the discretion on enforcing prior informed consent rights of TK holders if it does not complies with their national laws hence where prior informed consent does not comply with their domestic legislations they won't be in violation for non-enforcement.[24] The shortcomings of this Protocol is that it did not create transparency as to what constitutes ABS and did not set the standards for fair and equitable sharing.[25]

The issues associated with the CBD are the jurisdictional tensions with the Agreement on Trade-Related Aspects of Intellectual Property Rights[26] (TRIPS Agreement) over treatment of biodiversity related IP rights and the fact that United States (US) is yet to ratify the CBD though they are a party to TRIPS and one of the leading voices on intellectual property (IP) related issues.[27]

to the Convention on Biological Diversity, the Hague, 7 - 19 April 2002).

22 CBD, Draft Elements of A Code of Ethical Conduct to Ensure Respect for the Cultural and Intellectual Heritage Indigenous and Local Communities Relevant to the Conservation and Sustainable Use of Biological Diversity, Annex to COP Decision IX/13G, at 70, U.N. Doc. UNEP/CBD/COP/9/29 (30 June 2010).

23 CBD, 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, COP Decision X/1, U.N. Doc. UNEP/CBD/COP/DEC/X/1, Annex I, at 5 (29, October 2010).

24 Nagoya Protocol, art 7.

25 X Zheng 'Key legal challenges and opportunities in the implementation of the Nagoya Protocol: The case of China' (2019) 28(2) *Review of European, Comparative & International Environmental Law*' 175 at 182.

26 Agreement on the Trade-Related Aspects of Intellectual Property, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994)

27 Dagne, op cit (n17) 165.

(B) World Intellectual Property Organisation

WIPO is a specialised agency of the United Nations (UN) actively engaged in IP protection and administration. Between 1998 and 1999, WIPO conducted nine fact-finding missions around the world to discover the needs and expectations of TK and its nature in order to understand how to effectively protect it.[28]

In 2000, WIPO established the IGC in response to concerns surrounding access to genetic resources which proposed two mechanisms of protecting TK either through adapting the current IP system to protection of TK or through a *sui generis* system of protection which is not currently covered by the existing system.[29] WIPO has also been examining legal and policy mechanisms of protecting TK and it recognises the need to liaise with non-IP forums in order to make its work compatible with theirs, some of these non-IP forums are CBD (discussed above), World Trade Organisation (WTO), Food and Agricultural Organisation (FAO), World Health Organisation (WHO), to mention but a few.

(C) World Trade Organization

The WTO is not a body primarily concerned with the protection of IPRs. Most developed countries were dissatisfied with WIPO's enforcement mechanisms which basically required members to follow the 'the national treatment' policy in order to offer equal protection so they forced an inclusion of trade-related IPRs (Intellectual Property Rights) in the Uruguay Round of negotiations[30] which saw the emergence of the TRIPS Agreement.

The TRIPS Agreement did not make provisions for protection of TK in fact the application of the Agreement to TK has created more problems than solutions.[31] The *sui generis* option under Article 27.3(b) is often confused as providing a *sui generis* protection to TK-based plant varieties, it is submitted that, although the TRIPS Agreement obliges members to provide for protection of 'plant varieties' through the *sui generis* system, there is nothing suggesting that TK was in consideration in this provision.[32]

28 WIPO op cit (n5) 209.
29 WIPO op cit (n2) 3.
30 Uruguay Round is the 8th round of multilateral trade negotiations within the framework of the General Agreement on Tariffs and Trade.
31 Dagne op cit (n17) 155.
32 Ibid.

This research examines the appropriate mode for TK protection in a developing country like Nigeria by examining selected African jurisdictions with *sui generis* frameworks. It is however important to examine the nature of TK and the rationale behind IP protection of TK.

1.3 Justifications for IP Protection of TK

TK is considered a valuable good so there is the need to protect the sweat and labour of individuals or communities. Although there are arguments that TK's characteristics do not make it qualify for IPRs protection since IPRs are based on the Western system of legal protection,[33] it is submitted that the same philosophies applicable to other forms of IP applies to TK. It is therefore important to examine these theories of IPRs in order to ascertain the objective of IP protection of TK

(A) The Lockean Natural Rights or Labour Theory

The natural rights theory originated from John Locke's proposition that a person who labours on resources which are either 'unowned' or 'held in common' has a natural right to those resources and the state has the duty to enforce those rights.[34] This theory postulates that the product of one's sweat and creativity should naturally belong to the person.

Opponents of application of IPRs to TK argue that since TK is being passed down through generations of descendants who had nothing to do with its creation therefore the labour theory will not apply since the originators are long dead.[35] TK is often kept confidential within a community although in many cases TK has already been revealed to other communities but this does not prevent the protection of TK under IP but rather justifies the creation of special rules under the IP system for the protection of TK.[36]

Overall, indigenous people should have a right to the indigenous knowledge which was developed, conserved and passed through generations under the Lockean natural rights theory.

(B) Utilitarian/Reward Theory

33 The Crucible II Group 'Options for National Laws Governing Control over Genetic Resources and Biological Resources' (2001) 2 *Seedling Solutions* 35.
34 W Fisher 'Theories of Intellectual Property' in (2001) 168 *New Essays in the legal and political theory of property* 4.
35 SR Munzer and K Raustiala 'The Uneasy Case for Intellectual Property Rights in Intellectual Property Rights in Traditional Knowledge' (2009) 27(1) *Cardozo Arts & Entertainment Law Journal* 59.
36 Munzer and Raustiala op cit (n35) 61.

The utilitarian or reward theory (also known as the incentive-based theory) proposes that unless the creators of IP works are rewarded for their efforts, they will not have the motivation to create more works. It posits that creators should be rewarded with exclusive rights to these works created if this work is made public.

Opponents of the application of this theory to TK argue that indigenous people do not need incentives to create TK since most of the works have already been created.[37] They argue that this theory should only apply to TK where it is dynamic and not static because where it is the latter, the TK would have no benefit to the society since it was discovered generations ago, it would be difficult to justify its protection under the utilitarian theory.[38] Dynamic TK can be justified under the utilitarian theory since there are efforts are being made to improve existing TK.

This theory is weak in justifying the IP protection of TK. It is however submitted that if one thinks of TK as a living tradition and that tradition has had a recent burst of innovation, then the utilitarian theory may apply because of that innovation.[39]

(C) Personality Based Theory

The personality-based theory holds that 'property rights in a creation must be granted before the creator can fully be in control of their personality or spirit.'[40]

This theory suggests that IP works are a reflection of the personality or identity of the author, hence the need to protect such artistic, cultural identity through IPRs, the personality-based theory can sometimes overlap with the natural rights based theory thus it is often viewed as an alternative to the natural rights theory.

There is the issue of blending of cultures where practices and know-hows of TK are varied or adapted either through marriage, knowledge sharing or migration which undermines the concept of unique personality.[41] Despite this issue, it is logical to submit that TK has a stronger justification for IP protection under the personality-based theory than any other theory.

37 Munzer and Raustiala op cit (n35) 74.
38 Munzer and Raustiala op cit (n35) 73.
39 Munzer and Raustiala op cit (n35) 74.
40M Du Bois 'Justificatory Theories for Intellectual Property Viewed through the Constitutional Prism' (2018) 21 *PER / PELJ* 24.
41 Munzer and Raustiala op cit (n35) at 72.

(D) Stewardship Theory

The stewardship theory was proposed by Carpenter, Katyal and Riley[42] as an alternative to the 'ownership theory,' the rationale behind this is that the ownership theory applies to individuals, so they recommended the 'stewardship theory' for indigenous communities.

The theory advocates for 'trusteeship' and 'custody or conservation' instead of 'title,' in such a manner where a tribe is to operate as a fiduciary on behalf of its own members, the tribe owes a duty of care and loyalty to the beneficiaries.[43]

It is however unclear if this theory is to operate alongside the ownership theory or if it replaces it since one would naturally assume an owner appoints a steward, where the indigenous community acts as the steward over its TK, how would competing claims of stewardship be resolved and what law would operate to adjudicate over them?[44] It is submitted that a robust application of principles or theories would not be compatible with the *sui generis* nature of TK.[45]

1.4 Research Questions

This research examines the primary question of whether Nigeria should adopt a *sui generis* framework in the protection of TK. The examination of this primary question necessitates the answering of the following secondary questions:

(i) Is the existing system of IP protection of TK in Nigeria adequate?

(ii) Is the *sui generis* system of protection of TK in other selected African jurisdictions adequate and are there lessons and benefits which Nigeria can draw from them?

(iii) How, if at all, do international and regional legal instruments seek to protect TK ?

42KA Carpenter, SK Katyal and AR Riley 'In Defense of Property' (2009) 118 *The Yale Journal* 1065.
43 Carpenter, Katyal and Riley op cit (42) 1074.
44 Munzer and Raustiala op cit (n35) 60.
45 Ibid.

Chapter two attempts to answer question one by examining the framework on IP protection of TK in Nigeria.

Chapter three attempts to answer question two by examining the adequacy of *sui generis* protection of TK in South Africa, Kenya and Zambia.

Chapter four attempts to answer question three by examining the recent developments at WIPO IGC, and regional frameworks on s*ui generis* protection of TK. This chapter also examines the suitability of *sui generis* protection of TK.

Chapter five concludes the research by proposing elements of a *sui generis* framework in protection of TK for Nigeria.

1.5 Methodology

This study relies on a qualitative methodology based on the desktop examination and interpretation of primary and secondary sources. The primary sources include international, regional and national legal frameworks on TK protection as well as related legislation on TK protection.

International frameworks include CBD and WIPO's IGC draft agreement on International Legal Instrument relating to Intellectual Property Genetic Resources and Traditional Knowledge Associated with Genetic Resources 2019.

The regional frameworks examined are the African Model Law,[46] and the Swakopmund Protocol which does not bind South Africa and Nigeria since they are non-ARIPO members. National frameworks include Nigeria's Patents and Designs Act 1970, South Africa's Protection, Promotion, Development and Management of Indigenous Knowledge Act 6 of 2019, Kenya's Protection of Traditional Knowledge and Cultural Expressions Act No. 33 of 2016, Zambia's Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act No. 16 of 2016.

Secondary sources are books, journal, articles, scholarly writings and case law on the protection of TK.

46 African Model Law for the Protection of the Rights of Local Communities, Farmers, and Breeders, and for the Regulation of Access to Biological Resources 2000.

1.6 Jurisdictions considered

This research takes a comparative analytical approach across selected African jurisdictions, the rationale behind the choice of these jurisdictions is primarily because of how recent their legal instruments on the *sui generis* protection of TK. The Swakopmund Protocol is considered because it is the foremost regional framework on *sui generis* protection of TK thus it is examined with the view of informing the Nigerian system of TK protection.

CHAPTER TWO

AN ANALYSIS OF PROTECTION OF TK IN NIGERIA

2.1 Introduction

The protection of TK is not contained expressly in any of the Nigerian IP statutes. It is however submitted that the Patents and Designs Act[47] (hereafter referred to as the PDA) when purposively interpreted recognises TK albeit to a limited extent as the subject of an IPR under the Nigerian patent regime.[48]

In Nigeria, patents are granted under the PDA, however, before the enactment of the PDA, the United Kingdom Patents Act 1949 and its amendments applied in Nigeria.[49] The patent system initially applied in the colony of Lagos by virtue of the Patents Ordinance No 17 of 1900, it was extended to the Southern parts of Nigeria through the Patents Proclamation Ordinance No 27 of 1900 and to the Northern parts of Nigeria in 1902 through the Patents Proclamation Ordinance No 12 of 1902.[50]

The amalgamation of these different parts of Nigeria in 1914 necessitated the repeal of these different patent laws and the enactment of the Patent Ordinance No 30 of 1916 which was subsequently amended as the Registration of UK Patents Ordinance No 6 of 1925.[51]

The enactment of the 'indigenous' PDA in 1970 repealed the Registration of UK Patents Ordinance of 1925, the Patents Rights (Limitation) Act 1968 and the UK Patents Act 1949.[52]

The PDA was modelled on a 1965 draft Model Law prepared by 'WIPO's immediate predecessor, the United International Bureaux for Protection of Intellectual Property (best known by its French acronym, BIPRI).'[53] The Model Law was developed out of pressure

47 Patents and Designs Act No 60, 1970 Cap P2 of the Laws of the Federation of Nigeria 2004.
48 EP Amechi 'Biopiracy, Patent Law and a sui generis legislation for the protection of traditional knowledge on medicinal uses of plants' (2020) 37 *The Journal of Private and Property Law* 29 at 32.
49 G Ezejiofor 'The Law of Patents in Nigeria: A Review' (1973) 9 *African Law Studies* 39 at 58.
50 SA Yauri 'The Patent System in Nigeria' (2012) 34 *World Patent Information* 213.
51 Ibid.
52 GM Sikoyo, JW Wakhungu and E Nyukuri 'Intellectual Property Protection in Africa: status of laws, research and policy analysis in Ghana, Kenya, Nigeria, South Africa and Uganda' (2006) 16 *African Centre for Technology Studies Ecopolicy Series* 19.
53 BIRPI, *Model Law for Developing Countries on Inventions, 1965* https://www.wipo.int/publications/en/details.jsp?id=3175&plang=EN, revised in 1979.

from industrialized nations on the developing and least developed countries, notwithstanding the fact there was little or no industrial activity in those countries at that time.[54]

The development of a template-like Model Law for 69 developing countries without taking into consideration each country's unique communal resources can be criticised as 'carefully crafted to favour the inventors' since a country like Nigeria was not industrialised like Britain but rather it was a country reliant on 'peasant farming based on the use of rudimentary tools.'[55]

The imposition of the patent system on Nigeria had nothing to do with stimulation of innovation, rather it was a means of expanding the colonial enterprise.[56] The PDA is still operative in this form without undergoing any amendments which might have created certain problems and lacunas within the patent law system in Nigeria.[57] It appears there was no national policy informing said adoption of the Model law as to the country's industrial and technological development.[58]

The PDA still shares certain similarities with the UK Patents Act which is indicative of the fact that 'the Nigerian IPRs regimes, and indeed all IPRs system operating in African states are continuities of the colonial order.'[59]

2.2 Evaluation of the protection of TK in Nigeria including its challenges and benefits

As discussed above, TK is protected as a patent in Nigeria, therefore it would have to meet the requirements for patentability under the PDA. Section 1 of the PDA stipulates the conditions under which a patent would be granted for an invention. The PDA did not define an invention but it provides that an invention is patentable if 'it is new, results from an inventive activity and is capable of industrial activity'[60] and where 'it constitutes an improvement upon a patented invention and also is new, results from inventive activity and is capable of industrial application.'[61]

54 OT Umahi 'Access to Medicines: the Colonial Impact of Patent Law in Nigeria' (2011) 1(1) *Ben Idahosa University Law Journal* 1 at 4.
55 Umahi op cit (n54) 3.
56 Umahi op cit (n54) 8.
57 Umahi op cit (n54) 6.
58 Sikoyo, Wakhungu and Nyukuri op cit (n) 19.
59 I Mgbeoji *'Bio-cultural Knowledge and the Challenges of Intellectual Property Rights Regimes for African Development'* (2011) Nigerian Institute of Advanced Legal Studies (NIALS) convocation lecture series at 20.
60 PDA, s 1(1) (a).
61 PDA. s 1(1) (b)

It appears 'newness' or 'novelty' is cardinal to patentability of an invention and for the purpose of the purpose of determining novelty, an invention would be considered new if it does not form part of the state of art.[62] An invention also results from 'inventive activity if it does not obviously follow the state of art….'[63] The PDA defines the state of art as

> everything concerning that art or field of knowledge which has been made available to the public anywhere and at any time whatever (by means of a written or oral description, by use or in any other way) before the date of the filing of the patent application relating to the invention or the foreign priority date validly claimed in respect thereof….[64]

Therefore, TK would satisfy the requirement for patentability if it is an invention which is novel, results from an inventive activity, and is capable of industrial application. TK is deemed to be capable of industrial application if it can be manufactured or can be used in any industry including agriculture.[65]

Novelty is not restricted to the non-availability of the invention of the public but extends to include non-availability of descriptive information to the public.[66] Therefore, for TK to qualify as a patent it has to be novel and must not fall within the public domain, this means that once the information is disclosed orally or in writing, it falls within public domain and therefore is regarded as anticipatory.[67]

The public domain 'represents a body of knowledge and information available to the public to access and use freely'.[68] The public domain is defined as 'the universe of inventions and creative works that are not protected by IP rights and are therefore available for anyone to use without charge. When copyright, trademark, patent, or trade-secret rights are lost or expired, the IP they had protected becomes part of the public domain and can be appropriated by anyone without liability for infringement'.[69]

TK though belonging to an indigenous community might be widely diffused since there might be instances of exchange of knowledge between communities.[70] There are situations

62 PDA, s 1(2) (a)
63 PDA, s 1(2) (b).
64 PDA, s 3.
65 PDA, s 1(2) (c).
66 OA Ayodele and FO Damola 'Patentability of Inventions under the Nigeria's Patents and Designs Act: An Examination' (2017) 8(2) *Nnamdi Azikwe University Journal of International Law and Jurisprudence* 48 at 52.
67Amechi op cit (n48) 39.
68 RL Okediji *'Traditional Knowledge and the Public Domain'* (2018) 178 Centre for International Governance Innovation (CIGI) Papers at 1.
69 *Black's Law Dictionary* (8th edition, 2005) at 1027.
70 United Nations University, 'Traditional Knowledge Holders Formalize a Network for Community to Community Exchange' 9 October 2015 available at *https://ias.unu.edu/en/news/traditional-knowledge-holders-*

whereby foreign corporations and research institutions simply improve on TK which are in the public domain then proceed to obtain patent on said TK which afterwards ceases to be in the public domain.[71] There was an instance where a Nigerian scientist, Professor Maurice Iwu obtained patent to the extracts of an indigenous yam specie in 1992, then proceeded to create a benefit-sharing agreement between Bioresources Development and Conservation Programme (BDCP) (a non-governmental organization), Shaman Pharmaceuticals Inc (a pharmaceutical company in the United States) and traditional health practitioners.[72]

There was another instance in 2002, when Professor Iwu and five others secured US patent application number #6 403 576 for extracts of five Nigerian plant species namely; '*Aframomum aulocacarpus, Aframomum danelli, Dracena arborea, Eupatorium odoratum, Glossocalyx brevipes* and *Napoleonaea imperialis'*.[73] It is therefore submitted that TK which are mostly used by indigenous communities are mostly represented 'scientifically' by inventors who then proceed to obtain patents on these TK, thus the recognition of TK as a patent under PDA might have unintended consequences such as the use of TK as a raw material for innovation therefore restricting any commercial use by others.[74]

There is also the issue of duration and publication of patents, the PDA provides that patents shall have a duration of twenty years from the date of the filing of the patent application,[75] and it also provides that the claims of the patent must be published by the registrar.[76] This means that TK has a duration of twenty years, after which it enters the public domain and becomes available for all to exploit, this becomes problematic especially with the confidential nature of TK which is often passed through generations within a community, a family, or held by individual traditional health healers.[77]

Some of the general challenges of the patentability of TK include the cost of application and the high cost of prosecuting and enforcing patents, thus most of these traditional communities might be wary of the patent system.[78] The ineptitude and understaffing of patent offices is

formalize-a-network-for-community-to-community-exchange.html accessed on 2 August 2021.
71 Amechi op cit (n48) 40.
72 WIPO, 'Traditional Medicine as a Tonic for Development' 29 October 2012, available at *https://www.wipo.int/ipadvantage/en/details.jsp?id=3229* accessed on 2 August 2021.
73 CA Ezeanya 'Maurice Iwu and the sale of Nigeria's Collective Inheritance' 19 May 2011, available at *http://saharareporters.com/2011/05/19/maurice-iwu-and-sale-nigeria%E2%80%99s-collective-inheritance* accessed on 2 August 2021.
74 Amechi op cit (n48) 40.
75 PDA, s 7.
76 PDA, s 5(3).
77 Amechi op cit (n48) 40.
78 J Erstling 'Using Patents to Protect Traditional Knowledge' 15 (2009) *Texas Wesleyan Law Review* 295 at 300.

another barrier in the effective protection of TK under the existing IPR regime. Mgbeoji shared his personal observations on the shortcomings of the patent office in Nigeria's capital city, Abuja which includes lack of a standard storage facility for the retrieval of information and the examination of applications for payment of prescribed government fees rather than their correctness.[79]

The National Office for Technology Acquisition and Promotion (NOTAP) assists applicants in their searches, preparation, filing and processing of patent applications.[80] The PDA provides that these patent applications should be examined by registrar for compliance with the requisite procedures,[81] there is no provision for substantive examination of claims of novelty, inventiveness and industrial applicability.

The PDA has some sort of caveat in its examination provisions, it provides that 'patents are granted at the risk of the patentee and without guarantee of their validity.'[82] This means that registration of TK as a patent does not go through the process of a substantive examination of prior art for novelty and can be declared 'null and void' by the court for its non-patentability notwithstanding the costs incurred by TK holder.[83]

The PDA also provides that a patent shall not be granted for 'inventions the publication or exploitation of which would be contrary to public order or morality.'[84] The PDA did not provide any standard for determining what constitutes contradiction of public order and morality which is not ideal for a multi-ethnic, multi-cultural and multi-religious country like Nigeria where the yardstick or opinion on assessing morality is divided across tribes, ethnic groupings, social standings and religions.[85]

Overall, conventional IP legislations are not well suited for protection of TK because they are created on the basis of providing protection for individual or joint authors/inventors' private creation and ownership of works, as opposed to communal creation and ownership which is a characteristic of TK.[86]

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79 I Mbeoji 'African Patent Offices not fit for purpose' in Jeremy de Beer *et al* (eds) *Innovation & Intellectual Property: Collaborative Dynamics in Africa* 1 ed (2014) 236.
80 Yauri op cit (n54) 214.
81 PDA, s 4(1).
82 PDA, s 4(4).
83 PDA, s 9.
84 PDA, s 1(4) (b).
85 Ayodele and Damola op cit (n66) 49.
86 CB Ncube 'Comments on the Draft Protection of Traditional Knowledge Bill' available at f*ile:///C:/Users/USER/Downloads/COMMENTS_TO_PARLIAMENT_ON_THE_DRAFT_PROT.pdf* accessed on 1 February 2022.

There are certain benefits to the protection of TK under the PDA, the publication of claims for patent application has a way of attracting foreign investment by companies who are eager to avoid bio-piracy and would rather enter legitimate partnerships with the TK holders in form of Access Benefit-sharing agreements where benefits due are returned to the country or communities, which therefore contributes to the economy of the country where the TK was derived.[87] It also serves as a means of protecting the cultural heritage and knowledge of a community albeit for a limited period of time.[88] Thus, it creates wealth for individuals, communities and countries through payment of patent fees, royalties, and generation of foreign exchange.[89] However, it is important to note that TK was not created primarily for the purpose of commercialisation, rather for the local use within a community.[90]

TK can be transferred between the indigenous communities and interested parties who can proceed to apply as the statutory inventor. The PDA categorises inventors into true inventors and statutory inventors, the latter can obtain rights to a patent as long as the consent of the true inventor(s) or their successor in title has been sought and obtained.[91] The PDA also recognises the right of joint inventors and successors in title to apply for patent of TK[92] and their right to exploit and transfer said patented invention.[93]

The publication or disclosure requirement ensures a legitimate exchange of knowledge between communities and allows 'follow-up on authors or inventors, and informs the public of the origin of the underlying prior art.'[94]

The transfer of TK is usually negotiated through Access and Benefit-sharing (ABS) agreements. In ABS agreements, mutually agreed terms (MAT) refers to 'an agreement reached between the providers and users of genetic resources regarding the conditions for access to and utilization of these resources, and how resulting benefits are to be shared'.[95]

87 KM Waziri, AO Folasade 'Protecting Traditional Knowledge in Nigeria: Breaking the Barriers' (2014) 29 *Journal of Law, Policy and Globalization* 176 at 178.
88 Ibid at 179.
89 Ibid.
90 S Twarong *'Preserving, Protecting and Promoting Traditional Knowledge: National Actions and International Dimensions'* (United Nations Conference on Trade and Development 2004) 61 at 66.
91 PDA, s 2.
92 PDA, s 24(5).
93 PDA, s 24(4).
94 F Kariuki 'Ideological conundrums and technical challenges in protecting traditional knowledge using the intellectual property system' (2019) 3(2) *Journal of Conflict Management and Sustainable Development* 15 at 16.
95 WIPO 'A Guide to Intellectual Property Issues in Access and Benefit-sharing Agreement' available at *https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1052.pdf* accessed on 5 August 2021.

There are two ways of negotiating MAT, they are negotiations through individuals or a community which is the provider of the TK, or negotiations through specified templates or elements to be included in the agreement with the requisite governmental approval.[96] An option of either of these approaches is usually provided in the legislation or regulations of the relevant country.[97]

In Nigeria, the ABS Regulations has the overall objective of promoting access to genetic resources[98] and facilitating enjoyment of benefits whether monetary or otherwise.[99] The regulation provides a guideline on the form and content of a Material Transfer Agreement which includes IPRs that may be sought and conditions for said transfer.[100] It also imposes an obligation on the holder of an access permit to respect traditional and community rights over genetic resources as well as their entitlement to collective benefits from the use of such knowledge.[101]

The ABS regulation is a well detailed piece of legislation which 'makes Nigeria one of the countries with growing preponderance of national and regional access and benefits sharing laws.'[102] However, there is a dilemma as to how benefits whether monetary or not are to be shared within a community since it is often difficult to identify individual holders or custodians of the TK? The ABS regulation and the PDA are however silent on this and there is yet to be any attempt at initiating a review.

A commendable effort of Nigeria's initiative to protect TK is the establishment of the Nigeria Natural Medicine Development Agency (NNMDA) in 1997 with the mandate to 'research, collate, document, develop, promote and preserve knowledge, practice and products of natural medicine (traditional systems, traditional medication and non-medication healing arts, sciences and technology) with a view to facilitating its integration into the National Healthcare Delivery System'.[103] The NNMDA also developed a Digital Virtual Library which is 'a dedicated focal reference centre' for research and development of TK,[104] though most of

96 Ibid.
97 Ibid.
98 ABS Regulations, s 5.
99 ABS Regulations, s 18.
100 Third Schedule of the ABS Regulations.
101 ABS Regulations, s 19.
102 MA Muzan 'Some Insights on the Legal Measures for Access and Benefit Sharing of Genetic Resources in Nigeria' (2017) 50(1) *Law and Politics in Africa, Asia and Latin America* 30 at 47.
103 NNMDA 'Mandate of the Agency' available at *http://nnmda.gov.ng/mandate-of-the-agency/* accessed on 4 August 2021.
104 Ibid.

this research are already digitised, the Agency still faces the problem of making them available online due to bandwidth cost and constant power outages.[105]

2.3 Conclusion

The wholesome evaluation of the protection of TK in Nigeria reveals that the challenges/lacunas far outweigh the benefits which were forcibly stretched to be construed as benefits. This dissertation submits that patents are not particularly suited to the nature of TK, they are more suitable to inventions of a scientific nature. The challenges facing the protection of TK in Nigeria are not restricted to the non-suitability of patents to TK but this paper submits the PDA and the patent application process in Nigeria are ill-suited for the protection of inventions on a whole.

This has given rise to the need to explore other forms of protection for this *sui generis* nature of TK. The succeeding chapter will explore and analyse the mode of protection utilised by selected African countries in the protection of TK.

CHAPTER THREE

NATIONAL APPROACHES TO *SUI GENERIS* PROTECTION OF TK

3.1 Introduction

There are two different approaches to protect TK, it could be a defensive protection or a positive protection. A defensive protection when applied to TK aims to prevent the

105 GE Christian '*Digitisation, Intellectual Property Rights and Access to Traditional Medicine Knowledge in Developing Countries- the Nigerian Experience'* paper presented at International Development Research Centre (IDRC) at 20.

acquisition of IPRs over TK by person outside a community while a positive protection empowers TK communities with rights and legal tools to authorise or prevent the commercial exploitation of their TK.[106] Since TK cuts across various fields of public health, agriculture, trademark, patent, it could be protected through the existing IP categories or through a *sui generis* framework. Therefore, this chapter examines selected national approaches at *sui generis* protection of TK.

3.2 South Africa

3.2.1 The Protection, Promotion, Development, and Management of Indigenous Knowledge Act

South Africa has an abundance of indigenous biological resources, although the country represents around two percent of the world's landmass, it is home to ten percent of the world's plants resources, and its indigenous communities and individuals have a wealth of knowledge on the uses of these resources.[107]

The need to protect said knowledge necessitated the enactment of two legislations aimed at protecting TK through different methods. The Intellectual Property Laws Amendment Act[108] (IPLAA) was passed into law in 2013 and it aims at recognising TK as a form of IP by incorporating it into the four existing IP pieces of legislations while the Protection, Promotion, Development, and Management of Indigenous Knowledge Act[109] (IKS Act) seeks to protect TK through a *sui generis* system.

The IPLAA and IKS Act are yet to be in operation, with the former yet to come into force after almost eight years since its assent in December 2013, it has been considered a badly drafted, misconceived and unworkable legislation, and has been criticised for not recognising the *sui generis* nature of TK since it merely extends existing IPRs to cater for TK.[110]The IPLAA to an extent has been considered to have adopted a *sui generis* approach, by modifying existing IP statutes to suit TK.[111] The complexity of the conventional IP statutes

106WIPO 'Traditional Knowledge and Intellectual Property-Background Brief' available at *https://www.wipo.int/pressroom/en/briefs/tk_ip.html* accessed on 2 September 2021.
107 R Wynberg *et al South Africa's Bioprospecting, Access and Benefit-Sharing Regulatory Framework: Guidelines for Providers, Users and Regulators* (The Environmental Evaluation Unit, University of Cape Town, 2012) 6.
108 Intellectual Property Laws Amendment Act No 38 of 2013.
109 Protection, Promotion, Development, and Management of Indigenous Knowledge Act No 6, 2019.
110 L-A Tong 'Aligning the South African intellectual property system with traditional knowledge protection' (2017) 12(3) *Journal of Intellectual Property Law & Practice* 179 at 183.
111 Ncube op cit (n86) 4.

might present an obstacle for indigenous communities who might have to consult different pieces of legislation to draw out sections which specifically cater for TK.[112]

The intention to create a *sui generis* system of protection is evident in the report submitted by the then Department of Science and Technology (DST), now Department of Science and Innovation (DSI) to the Parliament in 2012 which specifically stated that:

'Indigenous Knowledge should be considered as a standalone area of intellectual property and this would speak to its idiosyncrasies that go beyond the conventional system of knowledge protection.'[113]

This chapter aims at evaluating the *sui generis* approaches of selected African countries therefore discussion will be restricted to the examination of the IKS Act and its *sui generis* components.

The IKS Act is a *sui generis* framework for the protection of TK in South Africa. *Sui generis* is a Latin expression for something that is peculiar or of its own kind,[114] thus this means the IKS Act does not protect TK through patent, copyright, trademark or trade secrets law rather it creates a separate and distinct kind of protection for TK. Therefore, though the Act envisages the interaction of IPRs with TK, it retains its *sui generis* nature.[115]

The IKS Act was developed by the DSI subsequent to the passage of the IPLAA, some of the key problems highlighted by the lawmakers was the appropriation of TK belonging to indigenous holders and the need to record and document TK for its protection and reservation.[116]TK is defined in the Act as 'knowledge which has been developed within an indigenous community and has been assimilated into the cultural and social identity of that community and includes knowledge of a functional nature, knowledge of natural resources and indigenous cultural expressions'.[117]

The IKS Act only protects registered TK which are considered the property of indigenous community within the meaning of s 25 of the Constitution.[118] The Act appears to adopt a

112 Ibid at 6.
113 Parliamentary Monitoring Group 'Indigenous Knowledge Systems activities & sui generis legislation: briefing by Department of Science and Technology' 12 June 2012 available at *www.pmg.org.za/committee-meeting/14560/* accessed on 1 February 2022.
114 USlegal '*Sui Generis* Law and Legal Definition' available at *https://definitions.uslegal.com/s/sui-generis/*, accessed on 7 September 2021.
115 Tong op cit (n110) 189.
116 Parliamentary Monitoring Group 'Indigenous Knowledge Systems & IKS legislation overview' 19 February 2020 available at *https://pmg.org.za/committee-meeting/29831/*, accessed on 7 September 2021.
117 IKS Act, s 1.
118 IKS Act, s 9(1) and (2).

positive and defensive approach to protect TK by providing affirmative rights in relation to TK, thereby excluding third parties from the use and exploitation of said knowledge without a license agreement while punishing unfair misappropriation.[119]

The objectives of the IKS Act include the protection of the TK of indigenous communities from unauthorised use, misappropriation and misuse,[120] promotion of public awareness and understanding of TK for the wider application and development thereof,[121] development and enhancement of the potential of indigenous communities to protect their TK,[122] regulation of the equitable distribution of benefits,[123] promotion of the commercial use of TK in the development of new products, services and processes,[124] provision for registration, cataloguing, documentation and recording of TK held by indigenous communities,[125] establishment of mechanisms for the accreditation of assessors and the certification of TK practitioners;[126] and recognition of TK as prior art under IP laws.[127]

3.2.2 Eligibility criteria and term of protection

The protection will be granted to TK where it has been passed from generation to generation within an indigenous community, has been developed within the indigenous community, and is associated with the social and cultural identity of that community.[128] Where TK fails to meet the criteria set out above, it falls within public domain from the date of proven ineligibility,[129] where on the other hand it is proven to be eligible, it would be protected for as long as it remains so.[130]

The IKS Act also vests the custodianship of TK in the trustee of that indigenous community as long as it falls within the subject matter for protection as contemplated in s 9 of the Act.[131] Trustee is defined by the Act as 'a natural or legal person that is duly delegated in terms of the practices of an indigenous community to represent that indigenous community in matters

119 MA Bagley *Toward an Effective Indigenous Knowledge Protection Regime: Case Study of South Africa* (Centre for International Governance Innovation Papers No 207, 2018) at 21.
120 IKS Act, s 3(a).
121 IKS Act, s 3(b).
122 IKS Act, s 3(c).
123 IKS Act, s 3(d).
124 IKS Act, s 3(e).
125 IKS Act, s 3(f).
126 IKS Act, s 3(g).
127 IKS Act, s 3(h).
128 IKS Act, s 11.
129 IKS Act, s 10(2).
130 IKS Act, s 10(1).
131 IKS Act, s 11.

pertaining to indigenous knowledge and to be vested with the custodianship of indigenous knowledge emanating from it'.[132]

The IKS Act extends protection to registered TK which is commendable, this can be seen as a deviation from the IPLAA which provides that TK should be in material form and must be capable of substantiation from the collective memory of the indigenous community. This particular insertion has been deemed unnecessary and unclear.[133] Although, mandatory registration has been said to raise challenges related to cost of registration fees and legal services. An ideal solution would be the subsidization of application fees and the simplification of registration so as not to require services of a legal practitioner.

The IKS Act also applies to TK created before or after the commencement of the Act, this is commendable because it seems to cover the gap left by the IPLAA which only applies to indigenous work created 'on or after' the commencement of the Act.[134]

3.2.3 Exclusive Rights

The IKS Act vests certain exclusive rights in the holding indigenous community to any benefits arising from its commercial use, right of attribution or acknowledgement, and right to limit any unauthorised use of the TK.[135] There are however exceptions and limitations to these rights, these exceptions are not really dissimilar to those found in the orthodox IP legislation. It provides that no prior informed consent shall be required for criticism or academic review, reporting news or current events, judicial proceedings, any incidental use of the above stated, and for national emergencies or disasters as long as the holding indigenous community is duly compensated for such use.[136]

It has been submitted that a more open-ended approach could be better which could be non-limiting in nature (a similar approach as contemplated in Copyright Amendment Bill[137]) though restricted to non-commercial uses which do not compete with the commercial interest of the community.[138] Also, if a closed list was to be retained, open access could be achieved

132 IKS Act, s 1.
133 Ncube op cit (n86) 8.
134 T Schonwetter, L Jansen, and L Foster 'IKS BILL, 2014 (GG 38574, 20.03.2015) – Comments – Joint Submission' 19 May 2015 available at *https://naturaljustice.org/wp-content/uploads/2015/03/PPDM-Indigenous-Knowledge.pdf* accessed on 20 October 2021.
135 IKS Act, s 13(1).
136 IKS Act, s 26(4).
137 Copyright Amendment Bill B-13B 2017.
138 S Karjiker 'Representations on the draft Protection, Promotion, Development and Management of Indigenous Knowledge Bill, 2014' available at *https://blogs.sun.ac.za/iplaw/files/2015/04/Commentary-Indigenous-Knowledge-Systems-Bill-2014.pdf* accessed on 20 October 2021.

in form of addition of exceptions such as the use of TK in educational resources such as school textbooks, use by libraries and archives, use by persons with disabilities as well as the preservation and digital curation in the digital environment.[139]

3.2.4 National Indigenous Knowledge Systems Office

The IKS Act establishes the National Indigenous Knowledge Systems Office (NIKSO) as a non-juristic entity within the DSI and it also makes provision for a registration office for the purpose of implementing the Act.[140] The functions of NIKSO include protection and recognition of TK owned by indigenous communities,[141] addressing redress and benefits of indigenous communities who have been deprived of their TK,[142] managing and recording details of assessors and TK practitioners,[143] organisation of awareness programs for indigenous communities to better utilise their TK,[144] assistance of indigenous communities in the negotiation of access benefits agreements,[145] and a host of other functions.

NIKSO are aided in their execution of their duties by the Advisory Panel who are to provide strategic advice on protection, promotion, development and management of TK to NIKSO,[146] assist NIKSO in the mobilisation of the indigenous communities,[147] and execute any task that may be entrusted to it by NIKSO.[148] Also in event, the indigenous community of the TK cannot be identified, NIKSO shall step in as the trustee.[149]

Overall, it can be inferred that NIKSO's personnel need to have considerable skills in marketing, and negotiation which might involve promoting partnerships for innovation.[150] It is important to note that this additional layer of protection should not have an effect on registration costs which might discourage or be a hindrance to registration.

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139. Schonwetter, Jansen, and Foster op cit (n134) 12
140 IKS Act, ss 4 and 17.
141 IKS Act, s 5(b).
142 IKS Act, s 5(c).
143 IKS Act, s 5(e).
144 IKS Act, s 5(f).
145 IKS Act, s 5(i).
146 IKS Act, s 8(a).
147 IKS Act, s 8(b).
148 IKS Act, s 8(c).
149 IKS Act, s 12(3).
150 A Van Der Merwe 'South Africa: Comments On The Protection, Promotion, Development, And Management Of Indigenous Knowledge Systems Bill, 2016' 5 April 2018 available at *https://www.mondaq.com/southafrica/trademark/582918/comments-on-the-protection-promotion-development-and-management-of-indigenous-knowledge-systems-bill-2016* accessed on 20 October 2021.

3.2.5 Access and Benefit-Sharing

NIKSO may at the request of the indigenous community provide assistance or facilitate the commercial utilisation of the TK.[151] Also, third parties who intend on the commercially use of the registered TK must enter into a license agreement with the trustee of the relevant indigenous community which would be applied through and facilitated by NIKSO.[152]

The license agreement has a term limit of 20 years after the date of the agreement for TK which is functional in nature,[153] this protects the perpetual nature and usage of TK while allowing TK holders to enter further license agreement with new users.

The Act also provides that in situations of multiple claims to TK, any remuneration derived from the benefit sharing agreement must be shared equally among the trustees.[154]

3.2.6 Dispute Resolution Committee

The Minister of Higher Education, Science and Innovation may appoint members of the Dispute Resolution Committee to resolve any dispute arising from the Act on an ad hoc basis.[155] The Act did not however clarify the constitution or qualification of said members, it can be inferred that this would be left to the discretion of the minister or perhaps regulations might be enacted in the not so distant future to substantiate on this.

151 IKS Act, s 25.
152 IKS Act, s 26.
153 Ibid.
154 IKS Act, s 30(1).
155 IKS Act, s 27.

3.2.7 Offences and Penalties

The IKS Act provides that any third party who without a license agreement with the holding indigenous community makes commercial use of the TK or infringes exclusive rights vested in said community is guilty of an offence and shall be liable upon conviction to payment of a fine.[156] It appears the Act has made provisions for criminal sanctions which does not really offer adequate compensation or relief to the holding indigenous community while neglecting civil remedies, it is therefore suggested that civil remedies such as damages, interdict, delivery should be introduced in the Act through subsequent amendments or supplementary regulations.[157]

3.2.8 The IPLAA and the IKS Act

The IKS Act provides that 'the Act does not alter or detract from any right in respect of any statute or the common law'.[158] It is uncertain how the IKS Act will function alongside the IPLAA, there is the view that s 32(1) of the IKS Act may be interpreted in such a manner that the IPLAA will take precedence over the IKS Act though the concerns related to the use of the existing IP system will remain.[159] Kleyn submits an opposing view that the IKS Act should repeal the IPLAA since both legislations are protecting the same subject matter (TK) in different ways therefore they cannot co-exist.[160]

This dissertation aligns itself with a more balanced approach which combines both strategies of protection of TK,[161] it could present the indigenous communities with either options of protecting and managing their TK through a *sui generis* approach, or the existing IP system since all indigenous communities differ, and their strategies for protection of TK are bound to be different.

156 IKS Act, s 28.
157 A Van Der Merwe op cit (n150).
158 IKS Act, s 32(1).
159 Tong op cit (n110) 189.
160 MM Kleyn 'Comments on Draft Protection, Promotion, Development and Management of Indigenous Knowledge Bill, 2014' 12 May 2015 available at *https://blogs.sun.ac.za/iplaw/files/2015/05/Written-comments-on-the-Indigenous-Knowledge-Systems-Bill-2014-Dr-MM-Kleyn-May-13-2015.pdf* accessed on 20 October 2021.
161 Schonwetter, Jansen, and Foster op cit (n134) 3.

3.4 *Sui Generis* protection by selected ARIPO members: Kenya

Kenya as a member of WTO, WIPO and ARIPO is a signatory to and has ratified a number of international IP instruments such as the CBD, the Nagoya Protocol which are implemented under the Environmental Management and Coordination Act.[162] The Kenyan Constitution defines property to include IP[163] and the Republic of Kenya has also implemented several laws on TK protection such as the Protection of Traditional Knowledge and Cultural Expressions Act[164] which has explicit provisions on TK protection.[165]

3.4.1 The Protection of Traditional Knowledge and Cultural Expressions Act

The Protection of Traditional Knowledge and Cultural Expressions Act (TK/CE Act) was enacted by the Republic of Kenya in 2016, the TK/CE Act was enacted for the purpose of providing sui generis protection to TK and Cultural Expressions in Kenya. Before the enactment of the IK/CE Act, Kenya had a National Policy on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions of 2009 (National Policy on TK) which aimed at laying the foundation for a national framework which recognises, preserves, protects and promotes the sustainable use of TK, it had concepts such as prior informed consent, good faith, equitable benefit sharing, sustainable development and international cooperation as its guiding principles.[166] However, the draft National Intellectual Property Policy of 2013 failed to provide a clear policy direction on the protection of TK, it merely covers conventional IPRs such as copyright, plant breeders' rights, and industrial designs.[167]

The TK/CE Act was enacted to give effect to articles 11, 40, 69 and 71 of the Kenyan Constitution. The provisions mandates the government to ensure that indigenous communities receive compensation for their cultural heritage while recognising and protecting the ownership of indigenous seeds and plant varieties, and their characteristics and use by the indigenous communities in Kenya.[168] The provisions further places an obligation on the State to protect and enhance the IP, genetic resources and TK of indigenous

162 Environmental Management and Coordination Act 1999 (as amended in 2017).
163 Constitution of Kenya, art 260.
164 Protection of Traditional Knowledge and Cultural Expressions Act 2016 (No. 33 of 2016).
165 F Kariuki 'Protecting Traditional Knowledge in Kenya State: Traditional Justice Systems as Appropriate *Sui Generis* Systems' (2019) 10 *WIPO-WTO Colloquium Papers* 91 at 93.
166 CK Mwangi *Protecting traditional knowledge in Kenya through African Customary Law: an analysis of inclusive subordination* LLM (Strathmore University) (2019) 21.
167 M Ouma 'Protecting Traditional Knowledge and Traditional Cultural Expressions in Kenya' (2014) 5 *WIPO-WTO Colloquium Papers* 77 at 79
168 Constitution of Kenya, art 11(3) (a).

communities[169] and it provides that any agreement or concession over the natural resources of the Republic shall require the ratification of the Parliament.[170]

The TK/CE Act was passed with the objective of creating a *sui generis* framework for the protection and promotion of traditional knowledge and traditional cultural expressions in Kenya. It defined TK as

> any knowledge originating from an individual, local or traditional community that is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, embodied in the traditional lifestyle of a community[171]

or

> any knowledge contained in the codified knowledge systems passed on from one generation to another including agricultural, environmental or medical knowledge, knowledge associated with genetic resources or other components of biological diversity, and know-how of traditional architecture, construction technologies, designs, marks and indications[172]

This dissertation will be restricted to a critical analysis of the provisions of the TK/CE Act touching on TK and not cultural expressions.

3.4.2 Eligibility Criteria

The TK/CE Act provides that the criteria for protection of TK is that it must have been generated, preserved from one generation to another, it must be individually or collectively generated though distinctively associated with a community, and it must be integral to the cultural integrity of the community holding the TK through custodianship, guardianship, collective cultural ownership which has been established by customary practices, laws or protocol.[173]

The criteria for protection stated above are not subject to any formality, though county governments are obliged to collect, document and register information regarding TK, the registration must however be undertaken willingly by the owners of the TK through prior informed consent, and shall not require public disclosure of said TK.[174] This might raise an issue particularly with the need to show evidence of the existence of the TK, it is unclear how

169 Constitution of Kenya, art 69(1) (c).
170 Constitution of Kenya, art 71(1) (a).
171 TK/CE Act, art 2.
172 Ibid.
173 TK/CE Act, s 6.
174 TK/CE Act, s 7.

TK which is not in a material form would be protected and how third parties are to identify the source or origin of the unregistered TK.

3.4.3 Database for TK

An outstanding provision of the TK/CE Act is that it provides database which would be in form of registers to be maintained by county governments and a TK Digital Repository (TKDR) to be maintained by the national government containing a detailed description of the TK which has been collected, documented and registered by the county government.[175]

Ouma opined that a sound TKDR requires a sound legal regime which controls access to works, ensures that prior informed consent is provided, and equitable benefit sharing in cases of exploitation.[176]

It is important to note that like its South African counterpart, the TK/CE Act is yet to be fully implemented therefore protective measures such as the registers and the TKDR are yet to come into existence.[177] The ownership of said database is also unclear, while the Act provides that the database is to be maintained by government, the ownership of the documented and compiled TK database between the county, national government and the communities is however ambiguous.[178]

The TK/CE Act did not also provide clarity on the ministry or agency responsible for the implementation of the Act at the national level.[179] However, it is clear that at county level, the county executive committee member responsible for matters relating to culture within the county government would be responsible for implementation of the Act.[180]

An alternative to the formal system of registration could be in form of a trust model which is similar to the TK commons of Kukula Traditional Health Practitioners' Association in north-eastern South Africa.[181] The TK commons is a system where traditional healers pool together

175 TK/CE Act, s 8.
176 Ouma op cit (n167) 83.
177 P Kimani 'Kenyan Reform on Traditional Knowledge and Traditional Cultural Expressions: Two Year On' 4 February 2019 available at *https://ipkitten.blogspot.com/2019/02/kenyan-reform-on-traditional-knowledge.html* accessed on 25 October 2021.
178 Kariuki op cit (n165) 96.
179 LP Nandjembo *The Effectiveness of the Swakopmund Protocol on the Protection of Traditional knowledge in Namibia* (University of Western Cape) (2017) 55.
180 TK/CE Act, s 4.
181 G Cocchiaro *et al* 'Consideration of a Legal Trust Model for the Kukula Healers' in Jeremy de Beer *et al* (eds) *TK Commons in South Africa' in Innovation & Intellectual Property Collaborative Dynamics in Africa* 1ed (2014) 151.

their knowledge for the purpose of controlling access.[182] The TK commons is a good defensive mechanism and has been considered in Kenya's National Policy on TK.[183]

The trust model is akin to the appointment of custodians as found in the TK/CE Act, it involves the appointment of a trustee who manages the trust on behalf of beneficiaries in accordance with rules of administration of the trust. The rules may include quorum of trustees for decision making, deciding votes, and rules on use of the knowledge to be outlined in any contract or license with a third party.[184] A drawback on the establishment of a TK commons is the social and economic challenges that may be faced by communities, which would necessitate government involvement, though control of access should be left in hands of local communities or their trustees.[185]

3.4.4 Exclusive Rights and Ownership

The TK/CE Act vests the right of protection in the owners and holders of the TK, it also vests certain exclusive rights in the holding community to authorise the exploitation of their TK, prevent any person from exploiting their TK without their prior informed consent.[186] In addition to other remedies, the owners have a right of action against any person who exploits their TK without permission.[187] The Act also makes provision for the right of attribution by providing that where TK is used beyond traditional context, the owner of the TK must be acknowledged, the source and origin of the TK must be indicated, and the TK must be used in a manner that respects the cultural values of the holders.[188]

The TK/CE Act like the IKS Act recognises trusteeship of TK within a community, a holder is defined as a recognised individual or organisation within a community entrusted with the custody or protection of TK while an owner is defined as local and traditional communities, and recognised individuals or organizations within such communities entrusted with the custody or protection of TK.[189] The terms 'holder' and 'owner' were used interchangeably throughout the Act, though the latter can be interpreted to include the community where the

182 Ibid at 155.
183 Ouma op cit (n167) 83.
184 Cocchiaro op cit (n181) 166.
185 M Ouma 'The Policy Context for a Commons-Based Approach to Traditional Knowledge' in Jeremy de Beer *et al* (eds) *TK Commons in South Africa' in Innovation & Intellectual Property Collaborative Dynamics in Africa* 1ed (2014) 132 at 146.
186 TK/CE Act, s 10(1).
187 TK/CE Act, s 10(2).
188 TK/CE Act, s 11.
189 TK/CE Act, s 2.

TK originates from, both terms include trustees or custodians of TK belonging to a community.

The TK/CE Act provides that where there is no claim to ownership and the county of origin is known, the county government shall hold the rights to the TK on behalf of the people in that county, however where the county of origin is unknown, the national government shall hold the rights to the TK on behalf of the people of Kenya.[190] It also provides that where there are concurrent claims by different communities to the TK, the respective county governments shall register said claim and where a community in Kenya shares TK with a community outside Kenya, the national and county government shall register said owners.[191]

The TK/CE Act also provides additional protection against unlawful access or exploitation of TK and certain acts such as reproduction, publication of the TK cannot be exercised without the prior informed consent of the owner.[192] The Act provides exceptions and limitations such as the protection of TK must not hinder development, exchange, dissemination and transmission of the TK by the members of the community, uses of TK outside the traditional or customary context are exempted, and use for purposes of teaching, research, personal use, criticism, legal proceedings, news reporting, reproductions and recording of the TK for archives or inventories.[193]

Overall, it appears the Act provides for positive and defensive protection of TK, positive protection is evident in the rights and remedies granted to the owners and holders of TK, and defensive protection can found in the creation of databases such as the registers and the TKDR.[194]

190 TK/CE Act, s 31.
191 TK/CE Act, s 7.
192 TK/CE Act, s 18.
193 TK/CE Act, s 19.
194 Kimani op cit (n177)

3.4.5 Moral and Cultural Rights

The TK/CE Act provides that the owners of the TK shall be the holders of the moral rights of the TK, and said moral rights shall include the right of attribution or paternity, the right not to have ownership of TK falsely attributed to them, the right not to have their TK subjected to derogatory treatment such as mutilation, material distortion, alteration which might prejudice the honour or reputation of the TK owners, or the integrity of the TK.[195]

The Act also provides that the moral rights of the TK owners shall exist independently of their cultural rights, and said moral rights are inalienable and shall exist in perpetuity.[196] The Act also recognises cultural rights in TK which are the rights to maintain, control, protect and develop their cultural heritage, TK and cultural expressions as well as their manifestations.[197]

3.4.6 Compulsory Licensing

The TK/CE Act provides that compulsory license could be granted with the prior informed consent of the TK owners where the TK is not being exploited, or where the owner or holder refuses to grant licenses for exploitation.[198] Prior informed consent is the giving of accurate information of intended use by the user, and based on that information, the prior acceptance by the owners of said use.[199]

The owners of the TK subject to the consent of the custodian of the community have a right to assign and conclude licensing agreements,[200] this might be problematic in situations where TK is unregistered and potential third party licensees have difficulty in identifying TK holders or source and origin of the community. The TK/CE Act goes on to provide that owners and holders shall have a right to equitable benefit sharing agreements[201] and the rights vested by the TK/CE Act shall not affect other subsisting rights such as patents, copyrights, designs and other forms of IP rather it shall be in addition to those other subsisting rights.[202]

The issue with this provision on compulsory licensing is the requirement of prior informed consent, it is unclear how compulsory licensing can be implemented where there are scenarios where consent could be withheld by the TK owners.[203] Thus, the inclusion of 'prior

195 TK/CE Act, s 21(1) and (2).
196 TK/CE Act, s 21(3) and (4).
197 TK/CE Act, s 23.
198 TK/CE Act, s 12.
199 TK/CE Act, s 2.
200 TK/CE Act, s 22.
201 TK/CE Act, s 24.
202 TK/CE Act, s 23.
203 TB Kuti *Towards Effective Multilateral Protection of Traditional Knowledge within the Global Intellectual Property Framework* LLM (University of Western Cape) (2017) 73.

informed consent' is highly problematic, since compulsory acquisition of TK often presupposes that consent has been withdrawn by the community.[204]

It is also unclear who the custodians of the community are, surely they cannot be the custodians of the TK since the definition of 'owner' happens to include custodian of the TK, and the definition section happens to be silent on this, thus the ambiguity remains.

3.4.7 Derivative Works

The TK/CE Act provides that any rights that subsists in a derivative work shall vest in the creator of the work, where such derivative work is being used for commercial or industrial purpose, an authorized user agreement must be prepared between the creator of the derivative work and the holders of the TK, and such user agreement must contain a benefit sharing agreement, an identification of the TK on which the derivative work is based on, and such TK in the derivative work must not be subject to derogatory treatment.[205] The Act defines derivative work as any intellectual creation based on or derived from TK.[206]

It has been submitted the above provision might risk stifling the creation of new creative works based on TK because of the wide restriction that it places on protected TK, thus it might have a chilling effect on creation of new TK.[207]

3.4.8 Dispute Resolution and Sanctions

The TK/CE Act provides that where there are concurrent claims to the TK in question, the Kenya Copyright Board or county government shall settle the dispute in accordance with the customs or protocol of the community, local information sources and any other means that may be applicable as long as they are not inconsistent with the Constitution.[208] The dispute may also be resolved through mediation and alternative dispute resolution mechanisms.[209]

The Act provides for penalties and offences, it provides that anyone who violates the Act will be liable to a fine or imprisonment not exceeding five years,[210] and the TK holder can bring civil action against any infringer for remedies such as injunction, damages, account of profits, delivery up, apology, and other appropriate remedies.[211]

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204 Nandjembo op cit (n179) 56.
205 TK/CE Act, s 20.
206 TK/CE Act, s 2.
207 Kimani op cit (n177).
208 TK/CE Act, s 7(6).
209 TK/CE Act, s 40.
210 TK/CE Act, s 37.
211 TK/CE Act, ss 37 and 38.

3.5 Zambia

Zambia underwent a major restructuring in its IP sector in 2016 by enacting various IP Acts which include a new Patents Act,[212] a new Industrial Designs Act,[213] and the Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act[214] (PTK Act).[215]

3.5.1 The Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act

The PTK Act was enacted in June 2016 as a way of domesticating ARIPO's Swakopmund Protocol which was ratified by Zambia on 28th August, 2015.[216] Thus, the PTK Act contains identical provisions to those found in the Swakopmund Protocol, and the preamble literally states that the purpose of the Act is to give effect to the Swakopmund Protocol.

3.5.2 Eligibility Criteria

The PTK Act defines TK as any knowledge originating traditional community, individual or group that is the result of intellectual activity and insight in a traditional context and where TK is embodied in the lifestyle of a community and has been passed from generation to generation.[217]

The Act protects TK where it is intergenerational in nature, distinctively associated with a traditional community, and integral to the cultural identity of the community.[218] The protection of TK is automatic and shall subsist from the moment the TK is or was created.[219] The Act nevertheless establishes a Register of TK which may be in electronic format containing details of the TK,[220] it is not mandatory for TK owners to register their TK, and said registration merely performs a declaratory function and does not amount to disclosure of the TK.[221]

212 Patents Act No 40 of 2016.
213 Industrial Act No 22 of 2016.
214 Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act No 16 of 2016.
215 IM Alves 'Zambia and the Commencement Orders on new IP Acts' 26 January 2018 available at *https://inventa.com/en/ng/news/article/281/zambia-and-the-commencement-orders-on-new-ip-acts* accessed on 30 October 2021.
216 Ibid.
217 PTK Act, s 2.
218 PTK Act, s 14.
219 PTK Act, s 15(1).
220 PTK Act, s 11.
221 PTK Act, s 15(5).

The PTK Act unlike its South African and Kenyan counterparts is operational though certain innovations such as the Register is yet to be fully available to the members of the public.[222]

3.5.3 Exceptions

The PTK Act provides that the Act does not apply to the use of the TK by its owners or members of the holding community, the sale of biological resources for direct consumption which do not involve the use of genetic resources, the use of the TK for educational, research and experimental purposes.[223] Therefore, the Act adopted the conventional exception for non-commercial use as found in other primary IP legislations.

The Act provides that the Minister may in the interest of public health and security grant a compulsory license to fulfil a national need. It appears there was an oversight in specifying the portfolio of this Minister in the definition section although the term 'Minister' was used several times in the Act.[224]

3.5.4 Protection of TK and rights of the holder

The PTK Act provides for different modes of protection of the TK holders' rights, it protects the holder's rights against infringement, against misappropriation, misuse or unlawful exploitation, it provides for an equitable balance between rights and interests of holders and users, and it protects against an improper grant of IPRs in TK.[225]

A holder as defined by the Act includes a traditional community, an individual or a group which is the owner of and has rights over the TK in accordance with customary laws and practices.[226] It appears the Act recognises and protects individual ownership of TK as opposed to communal protection as found in the previously examined *sui generis* legislations.

The protection of TK is perpetual in nature as long as it continues to fulfil the criteria for protection, however protection of individually owned TK is limited to a duration of twenty five years from the exploitation by the individual owner.[227] It is unclear how the lapse of protection of individual owned TK would be calculated since there is no mandatory

222 M Koopmans *et al* 'Case Study on Traditional Knowledge Protection' available at *https://africaeurope-innovationpartnership.net/sites/default/files/202109/Case_9_AEIP_TraditionnalKnowledgeProtection_June_2021.pdf* accessed on 30 October 2021.
223 PTK Act, s 3.
224 LY Ng'ombe 'Zambia's New Traditional Knowledge, Genetic Resources and Expressions of Folklore Act' 20 September 2016 available at *http://afro-ip.blogspot.com/2016/09/zambias-new-traditional-knowldeg.html* accessed on 31 October 2021.
225 PTK Act, s 4(1).
226 PTK Act, s 2.
227 PTK Act, s 24.

requirement of registration of TK, and unlike copyright, TK by their very nature are often kept a secret by individuals or within communities.

The Act provides for several benefits to be enjoyed by holders such as registration of trans-boundary TK in accordance with the Swakopmund Protocol, register their TK with ARIPO, use ARIPO's dispute resolution procedures, entitled to prior informed consent for use of their TK licensed with ARIPO.[228]

The PTK Act grants economic and moral rights, the former is evident in acts that are prohibited by the Act except with the prior informed consent of the traditional community,[229] while moral rights include the acknowledgement of TK holder and indication of source and origin of the TK.[230]

The Act grants exclusive rights to the holder to authorise the exploitation of the TK and to prevent anyone from exploiting the TK without the holder's prior informed consent,[231] it also contains benefit sharing provisions which are commendably quite detailed enough to non-exhaustive list of non-monetary things that would constitute benefits.[232]

The Act also provides access agreements shall be drafted between the TK holders and permit holder and it contains explicit provisions on details to be contained said agreements.[233] These access agreements are subject to the approval of the Patents and Companies Registration Agency which could also alter, suspend, and terminate the access agreement.[234]

228 PTK Act, s 4(4).
229 PTK Act, s 49.
230 PTK Act, s 21.
231 PTK Act, s 17.
232 PTK Act, s 43.
233 PTK Act, s 41.
234 PTK Act, s 44.

3.5.5 Dispute Resolution and Penalties

The PTK Act provides that the registrar shall have the power to hear disputes with an option of appeal to the high court.[235] Disputes may involve registration or licensing issues, this has been criticised as violating the principle of *nemo judex in causa sua* since it might be difficult to dispute the validity of a registration or fairness of an access agreement authorised by the registrar who has been vested with both administrative and judicial powers.[236]

The Act provides that where there is dispute as to the identity of the holder of the TK, the matter shall be settled in accordance with the customary laws and practices of the communities involved.[237] This has been criticised as impracticable, since Zambia has over 70 tribes with different customs and practices, this might present a conundrum where there are various disputing communities with distinct customs.[238]

The Act also provides that contravention of the provisions of the Act shall result in a fine or imprisonment not less than four years or both.[239]

3.6 Conclusion

This chapter has examined three *sui generis* legislations and it is apparent that the best approach to protect TK would be the combination of a defensive and positive approach as opposed to the defensive approach adopted by the Nigerian patent regime for the protection of TK.

The legislations though containing minor flaws are model laws for a country which has no protection in place for its TK. There are certain benefits Nigeria could benefit from these laws, for instance while the country already has a well detailed ABS legislation (as examined in chapter two) the appointment of trustees in a community as custodians of the TK could go a long way to achieving clarity on access and benefit sharing.

Nigeria's protection of TK under its patent regime makes it available for all to exploit after the expiration of a duration, the three *sui generis* legislations while making provision for the registration of TK and specialised TK database or registers, put certain measures in place to ensure non-disclosure of TK therefore maintaining the confidential and perpetual nature of TK.

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235 PTK Act, ss 56 and 64.
236 RM Sinkala *Protection of Traditional Medical Knowledge in the Patent System: Is There Room?* LLM (Uppsala Universitet) (2017) 50.
237 PTK Act, s 18(9).
238 Sinkala op cit (n236) 51.
239 PTK Act, s 73.

Automatic protection of TK is ideal as contemplated by the TK/CE Act and PTK Act which might reduce burden of application fees and red tapes associated with registration procedures.

Overall, the examined legislations reflect a non-rigid definition of TK, participation of stakeholders in the policy making, provision of not merely criminal sanctions but civil remedies for misappropriation of TK.

The next chapter will examine the continental approach on *sui generis* protection of TK and international developments on *sui generis* protection of TK.

CHAPTER FOUR

SUI GENERIS PROTECTION OF TRADITIONAL KNOWLEDGE

4.1 Introduction

The need for an international *sui generis* framework for the protection of TK cannot be overemphasised. While the progress of national and regional developments on the subject matter is commendable, this has had a very limited impact on the international scene since the frameworks are only effective domestically.[240] The only way to extend such protection is usually by establishing bilateral or plurilateral agreements between countries who have a common interest in protecting TK, and similar national laws.[241]

240 M Ouma 'Traditional knowledge: the challenges facing international lawmakers' available at *https://www.wipo.int/wipo_magazine/en/2017/01/article_0003.html* accessed on 30 December 2021.
241 Ibid.

This chapter examines the international developments on *sui generis* protection of TK. Although discussions on the protection of TK are ongoing in other international fora,[242] the chapter is restricted to the analysis of ongoing negotiations at WIPO to establish an international framework which sets minimum standards for the protection of TK.

The chapter also proceeds to examine the regional *sui generis* framework on protection of TK in Africa.

4.2 International Developments on *Sui Generis* Protection of TK

The discussion on the international development on *sui generis* protection of TK is centred on the ongoing developments at WIPO's IGC whose mandate include ensuring the balanced and effective protection of Genetic Resources (GRs), TKs, and Traditional and Cultural Expressions (TCEs).[243]

The IGC's work on protection and recognition of TK belonging to indigenous communities dates back to 2001, though negotiations formally began in 2010.[244] The most notable accomplishment of the IGC is the development of the differentiated or tiered approach to TK/TCEs, which was essentially captured at the 27th session of the IGC in 2014.[245] The differentiated or tiered approach is an approach which recognises that not all categories of TK can be granted the same level of protection. It identifies four categories; sacred, secret, narrowly or partially diffused, and widely diffused TK.[246]

The tiered approach is a pragmatic strategy which seeks to negotiate the extent of exclusive or non-exclusive rights being afforded to beneficiaries of TK, this means that the rights granted would be calibrated to the level of protection.[247] The principle is that widely diffused TK attracts lower level of protection than narrowly diffused. The rationale behind this is that

242 These Fora include United Nations Conference on Trade and Development, and the United Nations Permanent Forum on Indigenous issues.
243 WIPO 'IGC mandate 2020/21' available at *www.wipo.int/export/sites/www/tk/en/igc/pdf/igc_manadate_2020_2021.pdf* accessed on 31 December 2021.
244 WIPO 'The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore' available at *https://www.wipo.int/edocs/pubdocs/en/wipo_pub_tk_2.pdf* accessed on 30 December 2021.
245 WIPO '*Traditional Knowledge and Traditional Cultural Expressions: Certain Suggested Cross-Cutting Issues'* (12 March 2014) WIPO/ GRTKF/IC/27/INF/10 Document prepared by the Chair of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, His Excellency, Ambassador Wayne McCook.
246 C Oguamanam 'Tiered or Differentiated Approach to Traditional Knowledge and Traditional Cultural Expressions: The Evolution of a Concept' (2018) 185 *Centre for International Governance Innovation Papers* at 7.
247 Ibid at 6.

some TK is already in the public domain, thus it attracts lower level of protection because it is already diffused.[248] Thus, secret and sacred TK would require a higher level of protection.

The distinction between these categories is not so clear cut and might overlap. Oguamanam noted that it is possible for certain TK not to fit into the existing categories, he also pointed out that it is possible for secret TK to contain some elements of sacralisation, hence the cause of overlapping.[249] Despite, the tendencies for these categories to overlap, the tiered approach is a creative approach to create solutions to issues which conventional IP regime has had difficulty resolving.[250]

Another issue is deciding when TK has been diffused. The IGC still has to decide whether it is up to the custodians to decide that diffusion has occurred, or whether it is subject to objective judgment of external users, which may include value judgments to determine the nature of diffusion which has occurred.[251]

Overall, the tiered approach might not be fully developed, it has however attempted to fill lacunas and complexities which couldn't be resolved by the conventional IP regime.

Concrete efforts by the IGC to develop a *sui generis* legislative model for protection of TK yielded a WIPO draft article on the protection of TK,[252] which aims to adopt a multicultural convention that affords *sui generis* protection for TK.[253] The tiered approach was included in the draft article as an alternative 2 in article 5.

The draft article is as a result of a series of meetings and workshops held by the IGC from 2001 to 2019. It is important to reiterate that it is not a convention but a draft article, which could still serve as a guide at the national and regional level.

The preamble of the draft article contains provisions on policy objectives, general guiding principles, and acknowledgement of the rights of indigenous communities over their

248 Ibid.
249 Ibid at 7.
250 C Oguamanam 'Tiered or Differentiated Approach to Traditional Knowledge? Coast Salish Cowichan Sweater, Ghana Kente, Nigeria Adire and Arnhem Bark Paintings' 1 December 2016 available at *https://abs-canada.org/tiered-or-differentiated-approach-to-traditional-knowledge-coast-salish-cowichan-sweater-ghana-kente-nigeria-adire-and-arnhem-bark-paintings/* accessed on 30 December 2021.
251 C Oguamanam 'WIPO IGC 39: Unraveling the Tiered Approach to TK/TCEs' 28 March 2019 available at *https://openair.africa/wipo-igc-39-unraveling-the-tiered-approach-to-tk-tces/* accessed on 30 December 2021.
252WIPO *The Protection of Traditional Knowledge: Draft Articles – Facilitators Rev* (19, June 2019) WIPO/GRTKF/IC/40/4 Document of the Secretariat for the 40th Session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Geneva, 17 June to 21 June, 2019.
253 A Mogos 'Revitilizing Intellectual Property Right Protection for Traditional Knowledge and Cultural Expression in Ethiopia: A Lesson from Kenya' (2021) 10(1) *Oromia Law Journal* 120 at 131.

resources. The draft article provides for definition of terms, eligibility criteria, subject matter of protection, and scope of protection.[254] The draft article also provides for a public and non-public national database, sanctions and remedies for infringement, disclosure of source and origin of TK, rights and interests of beneficiaries, exceptions and limitations, and terms and formalities of protection.[255]

The draft article is not a final document, therefore this dissertation won't make elaborate comments on its provisions since it is subject to future revisions. The outcome of the two most recent sessions of the IGC, which are the 40th and the 41st session will be examined in detail below.

The draft article was presented at IGC 40 on 19 June 2019, where the IGC recommended that the 2019 WIPO General Assembly recognise the importance of the participation of indigenous peoples and local communities in the work of the Committee, it pointed out that the WIPO Voluntary Fund for Accredited Indigenous and Local Communities[256] is depleted, encouraged Member States to consider contributing to the Fund, and other alternate funding arrangements.[257]

The session held from June 17 to 21, 2019. At the start of the session, the Chair questioned the need to resort to specific exceptions to conferred rights and alluded to his preference for general and broad exceptions, whereby Member States have the flexibility of establishing exceptions and limitations at the national level.[258]

There were also issues relating to agreement on the text on protection of GRs which was criticised as not representing the interest of the African Group. There seems to be an agreement on all core issues on TK/TCEs, including definition and use of terms, protected subject matter, and eligibility criteria.[259] The majority of the delegations participating agreed that more studies on national experiences and domestic legislations in relation to the protection of TK/TCEs should be conducted by WIPO Secretariat by inviting WIPO member

254 WIPO Draft Article on Traditional Knowledge, arts 1 to 5.
255 Ibid, arts 6 to 11.
256 The WIPO Voluntary Fund for Accredited Indigenous and Local Communities was established by WIPO General Assembly in 2005.
257 WIPO 'IGC 40 Summary' 25 June 2019 available at *https://www.wipo.int/tk/en/news/igc/2019/news_0009.html* accessed on 30 December 2019.
258 WIPO *Draft Report* (30 September 2019) WIPO/GRTKF/IC/40/20 Document of the Secretariat for the 40th Session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Geneva, 17 June to 21 June, 2019.
259 WIPO op cit (n259) para 18.

states that has *sui generis* national frameworks on protection of TK to assist in the clarification of certain questions.[260]

The 41st session of the IGC was held on 31st August 2021. Due to the Covid-19 pandemic, this was the only session for 2020-2021.[261] At the session, the Committee agreed to recommend to the 2021 WIPO General Assembly that its mandate be renewed for the 2022-2023 biennium. However, the draft text on protection of TK was not discussed, the Secretariat was requested to make available online information on national and regional *sui generis* regimes for the IP protection of TK and TCEs.[262]

The Committee was requested to provide a factual report along with the recent texts to the General Assembly in 2022, and in 2023, submit to the General Assembly the results of the work in accordance with its objectives. The General Assembly is to consider the progress made and decide whether to convene a diplomatic conference or continue negotiations.[263]

There are several unresolved questions on developing a concrete international framework on the protection of TK. The first is the effect of the document, are all WIPO members obliged to comply (which would be advantageous to the Global South), or should it be in form of a non-binding framework, which may be voluntarily complied with by the Global North?[264] This dissertation opines that a binding framework which would be subject to the ratification of contracting member states would be ideal.

The second question is the form such international framework would take; should it be in form of a single document combining the protection of GR, TK, and TCEs or three separate documents on the protection of these subject matters?[265]

The current framework is for Member States to determine the international standard they wish to adhere to and take appropriate steps to domesticate as appropriately set out in the relevant international instrument.[266] As a result of this, there are international treaties

260 WIPO op cit (n259) para 97.
261 WIPO 'IGC 41 Summary' available at *https://www.wipo.int/tk/en/news/igc/2021/news_0003.html* accessed on 31 December 2021.
262 WIPO *Decisions of the Forty-First Session of the Committee* (31 August 2021) Geneva, 30 August to 3 September 2021.
263 Ibid.
264 AS Gazizova 'Protection of Traditional Knowledge: The Work and the Role of International Organisations and Conferences' (2020) 9(8) *International Journal of Higher Education* 95 at 96.
265 Ibid.
266 WIPO *Practical Means of Giving Effect to the International Dimension of the Committee's Work* 4 April, 2005 WIPO/GRTKF/IC/8/6 Document of the Secretariat for the 8th Session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Geneva, 6 June to 10 June, 2005.

formulated with the intention of having a binding effect on contracting parties, which have not yet entered into force due to insufficient ratifications.[267]

A close examination of Art 15 of the draft text on protection of TK shows that national treatment is available to eligible nationals of Member States or COP. It appears the IGC participants have particularly favoured an international binding instrument, which might necessitate the need to address questions on the interplay of the international dimension and the national *sui generis* legal frameworks, the preferred manner of recognition of foreign right holders, and the appropriate relationship with other international instruments and processes.[268] Negotiations are still ongoing, therefore it remains to be seen how the IGC navigates these fundamental policy issues.

Overall, the effort of WIPO at developing a legislative framework for *sui generis* protection of TK is commendable, however one has to question the pace of the effort and attention directed at the protection of other conventional forms of IP, which are mostly influenced by developed countries.

It would be interesting to see how the IGC navigates the cultural and conceptual divide across the world, which includes divergent customary beliefs, and difference in national legislative framework. This dissertation recommends that a key takeaway should be that a perfect legislative framework does not exist, member states should rather find a middle ground by adopting a balanced approach to promote innovation, creativity, and economic development for the benefit of all stakeholders. An ideal framework would include provisions on prior informed consent, control of commercial exploitation, preservation of moral rights for the benefit of communities, while providing exceptions which seek to enhance the utilisation of TK. It is understandable that limitations and exceptions could be a sore subject when discussing TK due to apprehension of misappropriation, however it could promote access to TK as long as the legitimate interest of the beneficiaries is not prejudiced. An ideal example of this is the IKS Act which provides that TK may be accessed without prior informed consent for academic review, news reporting, judicial proceedings, national emergencies or natural disasters, and for purposes incidental to the above purposes.[269]

267 Examples include *sui generis* protection systems such as the Washington Treaty on Intellectual Property in Respect of Integrated Circuits (1989), the Vienna Agreement for the Protection of Type Faces and their International Deposit (1973) and the Geneva Treaty on the International Recording of Scientific Discoveries (1978).
268 WIPO op cit (n259) para 3.
269 IKS Act, s 26(4).

4.3 Regional Approach: The ARIPO Swakopmund Protocol

ARIPO is an inter-governmental organisation established by the Lusaka Agreement, which was signed on 9 December, 1976.[270] The objective of the organisation is to facilitate cooperation among its member states on IP matters,[271] the current member states are Botswana, Eswatini, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mozambique, Namibia, Rwanda, Sao Tome and Principe, Seychelles, Sierra Leone, Somalia, the Sudan, the United Republic of Tanzania, Uganda, Zambia, and Zimbabwe.[272]

On 9 August 2010, ARIPO at a diplomatic conference in Swakopmund, Namibia pursuant to its Administrative Council's functions and powers under the Lusaka Agreement[273] adopted a legal framework known as 'the Swakopmund Protocol for the Protection of Traditional Knowledge and Expressions of Folklore'.[274] The Swakopmund Protocol is a regional *sui generis* instrument which was developed to protect TK and align ARIPO's initiatives for protecting TK with that of WIPO's, and serve as a model law for African countries.[275]

The Protocol is a normative instrument and unlike the continental framework, the African Model Law, it is binding on its contracting states.[276] Also, unlike the other ARIPO protocols,[277] the Swakopmund Protocol lays down minimum standards in broad norms for contracting states to follow.[278]

The objectives of the Protocol includes the recognition of local and traditional communities as holders of TK, empower holders with the legal certainty to enforce their rights, facilitate the use of TK knowledge for socio-economic development and wealth creation, preserve cultural heritage and diversity, and enable ARIPO to register TK in such a manner that reflects its trans-boundary and multicultural nature.[279]

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270 WIPO 'ARIPO' available at *https://www.wipo.int/export/sites/www/patent_register_portal/en/docs/aripo.pdf* accessed on 1 December 2021.
271 Ibid.
272 ARIPO 'Member States' available at *https://www.aripo.org/member-states/* accessed on 1 December 2021.
273 Art VII of the Lusaka Agreement on the creation of the African Regional Intellectual Property Organisation
274 MB Butera 'African Traditional Knowledge and Expressions of Folklore: Rethinking Swakopmund Protocol as a Model Law and Sui Generis System' available at *https://cipit.strathmore.edu/african-traditional-knowledge-and-expressions-of-folklore-rethinking-swakopmund-protocol-as-a-model-law-and-sui-generis-system/* accessed on 1 December 2021.
275 ARIPO 'Explanatory Guide to the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore' available at *https://www.aripo.org/wp-content/uploads/2020/04/Explanatory-Guide-to-the-Swakopmund-Protocol.pdf* accessed on 1 December 2021.
276 CB Ncube *Science, Technology & Innovation and Intellectual Property: Leveraging Openness for Sustainable Development in Africa* 1ed (2021) Juta 81.
277 Harare Protocol on Patents and Industrial Designs 1982; Banjul Protocol on Marks 1993.
278 ES Nwauche 'The Swakopmund Protocol and the Communal Ownership and Control of Expressions of Folklore in Africa' (2014) 17 *Journal of World Intellectual Property* 191.
279 ARIPO Explanatory Guide op cit (n276) 14.

The Protocol contains provisions on TK, and TCEs.[280] It makes distinction between TK and TCEs by defining them separately. The latter is defined as 'any forms, whether tangible or intangible, in which traditional culture and knowledge are expressed, appear or are manifested, and comprise the following forms of expressions.'[281] These include verbal expressions, musical expressions, expressions by movement, and tangible expressions.[282]

TK is in the Protocol defined as

> any knowledge originating from a local or traditional community that is the result of intellectual activity and insight in a traditional context, including that is the result of intellectual activity and insight in a traditional context, including know-how, skills, innovations, practices and learning, where the knowledge is embodied in the traditional lifestyle of a community, or contained in the codified knowledge systems passed on from one generation to another.[283]

The definition is not however restricted to a specific technical field as it encompasses areas such as agricultural, environmental, medical knowledge and knowledge associated with GRs.[284] The criteria for protection of TK is that it must be intergenerational in nature, it must be distinctively associated with a particular community, and it must be integral to the cultural identity of the holding community.[285] This provision is not dissimilar to the eligibility criteria for protection of TK in the selected African countries examined in the preceding chapter.

The ownership of TK rights is vested in local or traditional communities, and individuals within such communities who create, preserve and transmit TK in an intergenerational context. The Protocol did not however provide a definition of traditional communities, nor did it provide the criteria for identifying individual representatives from communities.[286] It is therefore possible TK could be misappropriated due to the lack of clarity in ownership/trusteeship, though it has been opined that identification of representatives could be determined through recourse to customary law and practice.[287]

It is also unclear if the use of the words 'local' and 'traditional' refers solely to indigenous communities or can be said to include settler or migrant communities. It is also noteworthy to mention that the Protocol used the phrases 'TK holders' and 'TK owners' interchangeably.

280 The terms 'TCEs' and 'Folklore' are used interchangeably in this dissertation.
281 Swakopmund Protocol, s 2.
282 Ibid.
283 Ibid.
284 Ibid.
285 Swakopmund Protocol, s 4.
286 ML Nkomo 'South Africa's proposed intellectual property law: the need for improved regional cooperation' (2013) 46(2) *The Comparative and International Law Journal of Southern Africa* 257 at 264.
287 Ibid.

Overall, it is commendable that the Protocol recognises local or ethnic communities as custodians instead of State authorities which would have been a form of misappropriation.[288] A challenge of most normative frameworks for the protection of TK is the participation of indigenous communities, thus the enhanced status of indigenous communities under the Protocol is partly due to their significant involvement in the control of third party use.[289]

Protection of TK under the Protocol is automatic, therefore would not be subject to any formality, and ARIPO offices may keep registers containing information on TK holders, as long as these registers do not compromise the TK.[290] There is however a term limit duration of 25 years for individually owned TK while communally owned TK shall be protected as long as it fulfils the criteria for protection.[291]

According to the ARIPO's Swakopmund Explanatory Guide,[292] 'where the term of protection expires, the TK falls into the public domain and becomes freely available for anyone to use'. The public domain is a flexible concept which could be difficult to ascribe a definite legal meaning,[293] it has however been defined as a body of knowledge or information 'that are not subject to exclusive IP rights and which are, therefore, freely available to be used or exploited by any person'.[294] It is important to be wary that appropriation under the guise of public domain may occur, therefore putting TK in the same category of public domain as other forms of IP may result in its dilution, disassociation, desecration and dislocation.[295]

The Protocol confers the right of attribution on the TK holders by mandating that where the TK is being used beyond traditional context, such user must acknowledge its source and origin, and must use said TK in a manner respectful of the TK holders' rights.[296]

The Protocol confers certain exclusive rights on TK holders to authorise the exploitation of their TK, and the right to prevent others from exploiting the TK without their prior informed consent which can be enforced by instituting legal proceedings against infringers.[297] The

288 Kuti op cit (n203) 58.
289 Nwauche op cit (n279) 198.
290 Swakopmund Protocol, s 5.
291 Swakopmund Protocol, s 13.
292 ARIPO Explanatory Guide op cit (n276) 27.
293 WIPO 'Note on the Meanings of the Term "Public Domain" in the Intellectual Property System with Special Reference to the Protection of Traditional Knowledge and Traditional Cultural Expressions/Expressions of Folklore' 24 November 2010 available at *https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=149213* accessed on 30 December 2021.
294 Ibid.
295 RL Okediji op cit (n68) 11.
296 Swakopmund Protocol, s 10.
297 Swakopmund Protocol, s 7.

former is a form of positive protection while the latter can be described as defensive, thus the Protocol was conceived to protect TK holders against infringement of their rights by means of positive and defensive protection.[298]

Striking a balance between positive and defensive protection is ideal since indigenous communities might want different forms of protection for their TK, for instance, some communities prefer positive protection because they want to benefit from the commercialisation of their TK while others might just want to protect the integrity of their TK in order to prevent its dissolution, hence the preference for defensive protection.[299]

TK owners have a right to assign and license their TK, and such license agreements and authorisations must be in writing otherwise it would be considered invalid.[300] However, TK belonging to local or traditional communities cannot be assigned.[301] There shall be fair and equitable sharing of benefits which may be non-monetary, arising from the industrial and commercial use of the knowledge, to be determined by mutual agreement, and where there is difficulty in arriving at a mutual agreement the appropriate national authority shall mediate between the parties.[302]

The Protocol provides an exception to the rights conferred on TK holders, which is the protection of TK shall not affect the continued availability of the TK to the TK holders for the practice, exchange, use and transmission of the TK within traditional context.[303] This exception essentially clarifies that the protection of TK should not affect its ongoing acts or use by TK holders which is required for the evolution of TK and promotion of innovation.

The Protocol acknowledges and confirms the importance of customary law in dispute resolution, and provides that eligible foreign holders of TK shall be afforded the same benefits available to national holders, in accordance with customary laws and protocols.[304] This is a recognition of trans-boundary cooperation.

The Protocol also made provision for compulsory licenses in situations where the TK is not being sufficiently exploited or where the TK holder has unreasonably refused to grant a license, or in the interest of public health and safety, then a contracting State may allow a

298 Swakopmund Protocol, s 1.
299 CJ Visser 'Making Intellectual Property Laws work for Traditional Knowledge' in Joseph Finger *et al* (eds) *Poor People's Knowledge: Promoting Intellectual Property in Developing Countries* 1ed (2004) 212.
300 Swakopmund Protocol, s 8.
301 Ibid.
302 Swakopmund Protocol, s 9.
303 Swakopmund Protocol, s 11.
304 Swakopmund Protocol, s 24.

third party use the TK without the consent of the TK holder subject to an agreement to be determined by a court of competent jurisdiction.[305]

The Protocol acknowledges the interrelationship between GRs and TK in its definition of the latter, however it provides that authorisation to access TK associated with GR does not imply authorisation to access GRs associated with TK.[306] This appears to be aimed at third parties to prevent misappropriation.[307] GR was not defined in the Protocol, though GR is defined in ARIPO's Regional Policy on Access and Benefit Sharing of GRs[308] as 'any genetic material of actual or potential value, which includes not only the plant, animal, and microbial material, but also material with other origins containing functional units of heredity'.

The Regional Policy is a complementary framework to the Protocol, and it defines TK associated with GRs as 'any knowledge or innovation in relation to genetic resources and their use that constitute part of the common, traditional or customary patrimony of indigenous peoples and local communities'.[309] There are however situations where the TK and GRs are inextricably linked and cannot be separated,[310] and it is also unclear how TK should be associated with GRs.[311] Therefore, this may create practical challenges, especially where TK and GRs are often used together.[312] The definition of TK and GRs, and their interrelationship apparently need more clarification under the Swakopmund Protocol.

The third part of the Protocol deals with the protection of TCEs. The criteria for protection of TCEs is 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, used or developed by such community in accordance with the customary laws and practices.[313]

305 Swakopmund Protocol, s 12.
306 Swakopmund Protocol, s 15.
307 ARIPO Explanatory Guide op cit (n276) 28.
308 ARIPO 'Policy Framework on Access and Benefit Sharing Arising from the Use of Genetic Resources in the ARIPO Member States: A Guide for ARIPO Member States' available at *https://www.aripo.org/wp-content/uploads/2018/11/Policy-Framework-on-ABS.pdf* accessed on 30 December 2021.
309 ARIPO op cit (n276) 7.
310 IIED, 'Regional laws on traditional knowledge and access to genetic resources' available at *https://biocultural.iied.org/regional-laws-traditional-knowledge-and-access-genetic-resources* accessed on 30 December 2021.
311 Y Ke and J Chen 'Interrelationship between Genetic Resources and Traditional Knowledge: An Example from Earthworm Fibrinolytic Enzyme' 39 *Biotechnology Law Report* 440 at 450.
312 IIED op cit (n311).
313 Swakopmund Protocol, s 16.

The above provision places a great deal of reliance on communal owned TK and anonymity of individual creators. It seems where the individual creator is known, the work cannot qualify for protection as an expression of folklore, unless customary laws and practices designate such individual creator as a representative of the community.[314]

The protection of TCEs shall not be subject to any formality, though certain categories of TCEs which are of significant spiritual value or sacred in nature may be notified to the relevant national competent authority, and such notification shall have a mere declaratory function and need not be in writing.[315]

The beneficiaries of the protection of TCEs are local and traditional communities; (a) to whom the custody and protection of the expressions of folklore are entrusted in accordance with the customary laws and practices of those communities; and (b) who maintain and use the expressions of folklore as a characteristic of their traditional cultural heritage.[316]The definition of local and traditional communities is not included in the Protocol, though it could be inferred that ‘local and traditional communities' refers to communities that are organised on the blood descent.[317] Nwauche pointed out that communities could also be organised around other social factors such as religion and language.[318] For example, the TK/CE Act identifies traditional community as a group of people who share the same attributes such as common ancestry, similar language, geographical and ecological space, or community of interest.[319]

TCEs may be shared by two or more communities in different countries, in such situation, the relevant national authorities of the Contracting State and ARIPO shall register such owners of the rights.[320] There is the issue of a scenario where TCEs is being shared between communities within an ARIPO member state and a non-member state, this might likely create conflict as to determination of ownership rights of the TCEs. It has been suggested that a regional authority should be set up to cater for issues relating to transnational folklore.[321]

314 Nwauche op cit (n279) 193.
315Swakopmund Protocol, s 17.
316 Swakopmund Protocol, s 18.
317 Nwauche op cit (n279) 193.
318 Ibid.
319 TK/CE Act, s 2.
320 Swakopmund Protocol, s 17.4.
321 LY Ngombe ‘'The Protection of Folklore in the Swakopmund Protocol Adopted by the ARIPO (African Regional Intellectual Property Organization' (2011) 14 *Journal of World Intellectual Property* 403 at 406

The Swakopmund Protocol provides protection of four categories of TCEs against all forms of misappropriation, misuse or unlawful exploitation.[322] These categories include TCEs of cultural or spiritual value, TCEs which are words, signs, names, and symbols, TCEs which are held secret, and miscellaneous TCEs. For the first category, the Protocol requires Contracting States to provide adequate and effective measures to ensure that the following does not take place without the relevant communities' prior informed consent.[323] First, the reproduction, publication, adaptation, broadcasting, performance, communication of the TCEs or its derivatives. Second, the relevant community must be acknowledged as the source of origin. Third, the distortion, mutilation, or any derogatory modification or treatment. Fourth, the acquisition or exercise of IPRs over the TCEs or adaptations thereof.[324] Essentially, the above stated are economic and moral rights which cannot be exercised without the prior informed consent of the relevant community.[325]

The second category is with respect to words, signs, names, and symbols. The relevant community can prevent the use of or acquisition of IPRs over the TCEs or derivatives thereof, in a manner that disparages or brings the community into disrepute.[326] This category is directed at the offensive use of TCEs in trademark registration, ARIPO Contracting States have the obligation to oppose or cancel trademark registration on this basis.[327]

The third category relates to TCEs which are held in secret. The Contracting States are charged with preventing the unauthorised disclosure, use, acquisition, and exercise of secret TCEs.[328]

The fourth category deals with miscellaneous TCEs for which Contracting States are obliged to provide adequate and effective legal measures to ensure that: (a) the relevant community is identified as source of origin of the TCEs (b) any distortion, mutilation, derogatory modification is subject to civil and criminal sanctions (c) any false, confusing or misleading indications or allegations which, in relation to goods or services suggests endorsement or linkage with the community shall be subject to civil and criminal sanctions (d) where the use of the TCEs is for gainful intent, there should be equitable remuneration or benefit-sharing

322 Swakopmund Protocol, s 19.1.
323 Swakopmund Protocol, s 19.2.
324 Ibid.
325 Nwauche op cit (n279) 195.
326 Swakopmund Protocol, s 19.2(b).
327 Nwauche op cit (n279) 195.
328 Swakopmund Protocol, s 19.4.

on terms to be determined by the relevant national authority in consultation with the relevant community.[329]

The above provisions has shown that the Swakopmund Protocol recognises the rights of communities in granting access to their TCEs. It is however worrisome that determination of remuneration has been left in the hands of relevant national authorities who are to merely 'consult' the communities. Nwauche suggested that a more appropriate language would be 'to obtain the consent' of the communities, otherwise these authorities may consult the communities while disregarding their opinions.[330] This dissertation is inclined to agree with her submission, the role of state authorities is to ensure royalties are paid to the communities or their representatives.[331]

Overall, the Swakopmund Protocol is a well drafted *sui generis* legislation that has been used as a model for national policy and legislative initiatives, which Zambia as discussed in the preceding chapter adopted fully, while other African countries such as Botswana, Egypt, Ghana, Kenya, Malawi, Mozambique, Namibia and Uganda have adopted legislations with components derived from the Protocol.[332] The Protocol can be described as progressive because it recognises the collective nature of TK while protecting it through the mandatory requirement of prior informed consent.

The major inadequacy of the Protocol as pointed out earlier is its inability to recognise indigenous people rights to GRs, which is often closely linked to their TK.[333] It is also important to note that while international and regional frameworks are crucial in setting standards for national *sui generis* legislations and frameworks, an ideal national framework on the subject matter should not be a slavish copy of the Protocol, rather it must be tailored towards the specific needs of the indigenous communities, and must be in accordance with their customary laws and practices.

4.4 The AU African Model Law

The TRIPS Agreement[334] sets out an obligation for all WTO members to protect their plant varieties through patents, an effective *sui generis* legislation, or a combination of both

329 Swakopmund Protocol, s 19.3.
330 Nwauche op cit (n279) 196.
331 Ngombe op cit (n322) 408.
332 UNESC 'A study to examine challenges in the African region to Protecting Traditional Knowledge, Genetic Resources and Folklore' available *https://www.un.org/esa/socdev/unpfii/documents/2014/2.pdf* accessed on 30 December 2021.
333 IIED op cit (n311)
334 TRIPS Agreement, art 27.3(b).

approaches.[335] The African Model law was adopted by the then Organisation of African Unity (OAU), now African Union (AU) in 1998 to provide for a TRIPS-compliant *sui generis* option which makes provision for access and benefit-sharing principles from the CBD.[336] The Model Law provides a *sui generis* model for Africa, it was primarily designed set standards and norms on rights of local communities over access to GRs and TK, and it could form the basis for the development of national laws on protection of TK.[337]

The Model Law adopts a community centred approach by recognising the rights of communities over their knowledge and biological resources, and their right to collectively benefit from the utilisation of their knowledge and resources.[338] The Law also recognises that there exists some form of formal or informal communal control over biological resources, African countries are not always protective of their indigenous communities' resources, and TK often differs from conventional IP system of protection, therefore warrants a different system of protection.[339]

The Model Law recognises that protection of TK should be in form of collective and communal rights, as opposed to the preamble of the TRIPS agreement which provides that 'intellectual property rights are private rights'. Feris opines that the Model Law as a result is not incompatible with TRIPS, rather it operates to fill a vacuum by covering aspects which do not fit within the conventional conception of IP.[340] This dissertation aligns itself with this view since it makes sense that the collective nature of TK was not considered in TRIPS, therefore the preamble will not apply to the *sui generis* system of protection of TK.

A *sui generis* legislation for the protection of TK could benefit from some of the components of the Model Law. These include its provisions on access and benefit-sharing which are quite comprehensive,[341] though these provisions seem to neglect the non-monetary benefits which

335 T Adebola 'Africa and Intellectual Property Rights for Plant Varieties' available at *https://www.oxfordbibliographies.com/view/document/obo-9780199796953/obo-9780199796953-0210.xml#:~:text=The%20African%20Model%20Law%20rejects,Varieties%20of%20Plants%20(UPOV).&text=No%20African%20country%20has%20adopted%20it* accessed on 9 February 2022.
336 Ibid.
337 P Munyi *et al* 'A Gap Analysis Report on the African Model Law on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources' available at *http://archive.abs-biotrade.info/uploads/media/GAP_Analysis_and_Revison_African_Model_Law_FINAL_2902.pdf* accessed on 9 February 2022.
338 African Model Law, art 16.
339 L Feris 'Protecting Traditional Knowledge in Africa: Considering African Approaches' (2004) 4 *African Human Rights Law Journal* 242 at 251.
340 Ibid at 252.
341 African Model Law, arts 12 to 15.

are well covered under Nigeria's ABS regulations.[342] The Model Law has also been criticised for neglecting issues of trans-boundary cooperation for regulation of access and exploitation of TK.[343]

The Model Law provides that a national competent authority would be established for the purpose of registering and maintaining national registries,[344] it also provides that protection of TK ought to be automatic and without registration.[345] Though this might not be feasible as this dissertation already highlighted practical challenges that may be faced with automatic registration of TK, such as difficulty in protecting an unregistered TK and its visibility to third parties for commercialisation purposes.

Overall, the Model Law recognises that farmers' rights include the right to protect TK relevant to plant and animal GRs,[346] its communal based approach in regulating access to use of TK and biological resources could be adopted while tailoring the law to the specific conditions, practices and legal systems of each country.[347]

4.5 Evaluation of suitability of *sui generis* protection and benefits to TK

This dissertation in chapter two highlighted the failure of the conventional IP system to protect TK satisfactorily in Nigeria. Therefore, in a bid to protect their invaluable resources, certain African countries (as examined in chapter three) have adapted their IP system to include the *sui generis* protection of TK.

A *sui generis* system could be implemented differently from country to country, it might consist some standard forms of intellectual property protections combined with other forms of protection, which includes customary laws, practices and protocols.[348]

The idea of a *sui generis* system does not necessarily mean building a system of protection entirely from the scratch, rather it means IP has evolved or adapted to remain an efficient mechanism to promote technological progress, transfer and dissemination of technology and to serve the rights and interests of TK holders, as well as of fairness in commerce.[349]

342 ABS Regulations, art 18(2).
343 Munyi op cit (n338) 53.
344 African Model Law, art 37.
345 African Model Law, art 23(3).
346 African Model Law, art 26(1) (a).
347 Feris op cit (n340) 252.
348 BS Kalaskar 'Traditional Knowledge and *sui-generis* law' (2012) 3(7) *International Journal of Scientific & Engineering Research* 2.
349 WIPO op cit (n5) para 35.

The reason for resorting to *sui generis* protection was succinctly captured by the WTO Secretariat in explanation of the *sui generis* protection of plant varieties under Art 27.3(b) of the TRIPS Agreement, '*Sui generis* protection gives Members more flexibility to adapt to particular circumstances arising from the technical characteristics of inventions in the field of plant varieties, such as novelty and disclosure'.[350]

According to a study conducted by WIPO,[351] existing IP mechanisms may be able to protect different aspects of TK, however a new system might be required in order to appropriately protect the holistic nature of TK. TK in its holistic nature can be said to contain four unique characteristics; the spiritual and cultural elements are intertwined and inseparable (it is therefore understandable that every element of TK serves as an inherent factor of cultural identification of its holders), TK is not a static set of knowledge, it is in constant evolution, TK covers different fields from artistic expression to technical domain, and TK is not formal in character, its nature can only be grasped with a greater understanding of the cultural contexts and rules that govern its creation.[352]

The *sui generis* approach is more or less often resorted to, when the conventional IP framework is inadequate in protecting a subject matter. The development of a *sui generis* framework offers indigenous people an opportunity to participate in developing frameworks that deal with knowledge control, use and sharing, establish a bridge between customary law and national legal systems in order to secure effective recognition and protection of TK.[353]

Participation essentially allows custodians of TK overcome their distrust of formal system of registration or protection by granting them an incentive to participate in a system specifically designed to cater for their needs, which ensures that they are able to protect, manage, and exploit the knowledge in line with their customary practices.

There is also a general consensus on all fronts that the *sui generis* approach caters for the complex nature of TK, as evidenced by the creation of the tiered approach, the evolution and elaboration on various principles such as prior informed consent, access and benefit sharing, collective and intergenerational nature of TK, trans-boundary TK, and disclosure of source and origin.[354]

350 *The Convention on Biological Diversity and the Agreement on Trade-Related Aspects of Intellectual Property Rights, Note by the Secretariat*, (3 October 2000) WTO document IP/C/W/216 at para 33.
351 WIPO op cit (n5) para 37.
352 WIPO op cit (n5) para 44.
353 Mogos op cit (n254) 154.
354 Oguamanam op cit (n247) 15.

TK as already discussed is intergenerational in nature, which under the conventional IPRs, would be considered to have failed the novelty test. The *sui generis* approach recognises this characteristic of TK, and it has been made as a criteria for protection in the national and regional frameworks examined in this dissertation.

The *sui generis* system of protection often combines the defensive and positive protection of TK. As examined earlier, the national and regional *sui generis* frameworks often provide defensive protection which is evident in the creation of a TK database to stop third parties from misappropriating indigenous resources, and positive protection is provided by empowering communities to promote their resources and exploit it commercially. It is important to note this right to exploit is not treated like a commercial right under the meaning of conventional IP system.

There have been serious concerns raised over the existence of a database or registry for TK which might make it susceptible to misappropriation, and identifiable for contractual exploitation.[355] It is submitted that while these concerns are not unfounded, it is important to distinguish between documentation of TK and entry into the public domain, TK may be documented yet removed from the public domain.[356] It would be a misconception to think said database would be an online platform which could be accessed without the custodians' prior informed consent. The main reason for documenting TK is to preserve it for future generations while restricting access to members of the community, elders, or initiates. This reinforces the necessity of prior informed consent in documentation of TK disclosed by communities.[357]

Overall, it has been established that it is difficult to protect all the aspects of TK through IPRs such as copyright, patents, trademarks, because most of these IPRs are focused on protection of individual interests for a fixed period of time, rather than collective interest.[358] Hence, the need for a *sui generis* system at the international level, which would set minimum standards and responsibilities for custodians and Member States.

355 I Mgbeoji 'Patents and Traditional Knowledge of the Uses of Plants: Is a Communal Patent Regime Part of the Solution to the Scourge of Bio Piracy' (2001) 9(1) *Indiana Journal of Global Legal Studies* 163 at 172.
356 WIPO *Draft Outline of an Intellectual Property Management Toolkit for Documentation of Traditional Knowledge* (20 October 2002) WIPO/GRTKF/IC/4/5 Document of the Secretariat for the 4th Session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Geneva, 9 to 17 December, 2002.
357 Ibid.
358 IP Byron 'The Protection of Traditional Knowledge under the *Sui Generis* regime in Nigeria' *International Review of Law, Computers & Technology* 7.

4.6 Conclusion

This chapter has examined the developments at the international and regional level, and the suitability of the *sui generis* approach for the protection of TK. The dissertation has highlighted a major flaw in Nigeria's protection of its indigenous knowledge, and it has recommended that any proposed *sui generis* legislation has to draw its elements from the Model Law, the Swakopmund Protocol, and the other national *sui generis* frameworks while highlighting areas that may need further amendments.

Overall, it is resolved that indigenous peoples' participation is principal in framing a *sui generis* legislative framework which apparently affects their interest. It is also acknowledged that while implementation of the framework would have its own challenges, it is undisputed that without said framework, misappropriation of TK in Nigeria would occur at an alarming and unchecked level.

CHAPTER FIVE

CONCLUSION

5.1 Summary of Analysis

This dissertation took on a central question of '**whether Nigeria ought to adopt a *sui generis* framework for the protection of its TK'**. The dissertation aimed at solving this overarching question ithrough an examination of regional and national African *sui generis* frameworks, and a thorough analysis of the suitability of *sui generis* protection to TK.

Chapter one sets out the background for this research by examining the nature of TK, introducing existing international framework for protection, and justifications for protecting TK. Chapter two addressed the research question (i) which is '**whether the existing system of protection of TK in Nigeria is adequate'**. In this chapter, the challenges associated with patenting TK were examined. Some of these challenges include the rigid defensive approach adopted by the PDA, the unsuitability of the patent offices, term limitation on protection of TK, and the requirement of compliance with formalities for registration. It highlighted the commendable efforts to promote Access and Benefit-sharing through the ABS regulations. The chapter drawing on the nature of TK, concluded that the patent system is not particularly suited to the protection of TK.

Chapter three makes an attempt at answering research question (ii) which is **'whether the *sui generis* system of protection of TK in other selected African jurisdictions is adequate and possible lessons and benefits Nigeria could draw from them**' by examining selected national *sui generis* frameworks which include the South Africa's IKS Act, Kenya's PK/CE Act, and Zambia's PTK Act. The chapter highlighted the significance of the positive and defensive approach for protection of TK adopted by these legislations. Some of the other noteworthy benefits include participation of indigenous communities in policy framing, recognition of the role of customary law in protection of TK, criteria for protection, identification of trustees, and existence of a specialised database or register. Some of the shortcomings highlighted include the absence of an adequate provision in addressing trans-boundary, prioritising criminal sanctions over civil remedies, and mandatory requirement of registration as seen in the IKS Act. This chapter concluded by recommending some of the

elements of these *sui generis* legislations especially the adoption of a defensive and positive protection of TK.

Chapter four starts off by examining the international developments on a *sui generis* framework for the protection of TK. The chapter partially answers the research question (iii) of '**How, if at all, do international and regional legal instruments seek to protect TK?**' by examining the Swakopmund Protocol and the African Model Law, and benefits Nigeria could derive from them. It also answers research question (ii) of **'whether *sui generis* protection of TK is adequate for adoption'** by examining the suitability of the *sui generis* system in protection of TK. *Sui generis* system of protection is essentially the modification of the conventional IP system to accommodate the peculiarities of TK. This chapter highlighted the benefits of the positive and defensive approach, importance of participation of the indigenous community in formulating said framework, and the importance of customary laws.

Chapter five is essentially going to proffer suggestions on what a proposed *sui generis* legislation in Nigeria ought to take cognisance of, while identifying conceptual issues which might likely arise in said framing.

5.2 Elements of proposed *sui generis* framework for protection of TK in Nigeria

The PDA as discussed in chapter two, has been ineffective in protecting Nigeria's rich indigenous resources since there is a dichotomy between the western conventional IPRs and TK.[359] A review of the PDA to accommodate TK is not feasible because most of the existing TK in Nigeria will not fulfill the requirement for patentability, which would render confidential TK into the public domain, since confidential TK is not available for protection under the PDA until patented.[360]

The peculiar nature of TK demands for a *sui generis* framework which certainly adopt certain elements from the national and regional frameworks in Africa, while taking into consideration the needs of stakeholders, and the communities' cultural and customary practices. It is therefore important to note that this dissertation is not proposing a one-size-fits-all approach nor is it ignoring the holistic nature of TK, rather it is merely analysing features which might be helpful in drafting a *sui generis* framework for Nigeria.

359 C Oguamanam 'Localizing Intellectual Property in the Globalization Epoch: The Integration of Indigenous Knowledge' (2004) 11(2) *Indiana Journal of Global Legal Studies* 135 at 137.
360 Amechi op cit (n48) 41.

(i) Objective of Protection

The objectives or purpose of a *sui generis* framework must be clearly defined, this will in turn shape the provisions of the legislation. These objectives may range from prevention of misappropriation to promotion of commercialisation of the TK.[361] There are however certain common objectives which could be found across the examined African frameworks.

(a) Protection of TK from infringement

This is the first objective in the Swakopmund Protocol and the IKS Act. It is a defensive approach which seeks to prevent the misappropriation by excluding others from making use of the TK without prior informed consent.[362] An issue might arise with the identification of 'others' for exclusion,[363] since misappropriation of resources could take place domestically by local companies or unscrupulous government officials.

This conundrum can be resolved by pinpointing the custodians of TK, which ideally should be the indigenous community where said TK has been developed, managed, and preserved for generations.

(b) Promote respect for spiritual and cultural values of the community

This objective is to promote the value of the TK while respecting the cultural heritage of the community. This is derived from the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage[364] and adopted by WIPO.[365] The Convention requires members to take measures to safeguard intangible cultural heritage within their territories.[366]

The proposed *sui generis* framework should seek to prevent culturally offensive use of the TK. This can be accomplished by ensuring that the proposed protection does not override the existing customary practices or protocol.[367]

361 WIPO op cit (n5) para 53.
362 JJ OseiTutu 'Emerging Scholars Series: A Sui Generis Regime for Traditional Knowledge: The Cultural Divide in Intellectual Property Law' (2011) 15(1) *Marquette Intellectual Property Law Review* 147 at 181.
363 Ibid.
364 UNESCO International Convention for the Safeguarding of the Intangible Cultural Heritage (2003) available at http://portal.unesco.org/en/ev.php-URL_ID=17716&URL_DO=DO_TOPIC&URL_SECTION=201.html accessed on 31 December 2021.
365 OseiTutu op cit (n363) 189.
366 UNESCO International Convention for the Safeguarding of the Intangible Cultural Heritage, art 11.
367 Swakopmund Protocol, s 4..

(c) Commercial Exploitation of the TK

The proposed framework should be aimed at the promotion of commercialisation of the TK, this should however be subject to the principles of prior informed consent, and equitable benefit sharing. The former has been sufficiently defined in chapter three, equitable benefit sharing is a means of 'promoting the fair and equitable sharing and distribution of monetary and non-monetary benefits arising from the use of TK'.[368]

These principles can be found in Art 8(1) *(j)* and Art 15(5) of the CBD. Nigeria is a signatory to the CBD, however it is yet to be domesticated. It is important to note that commercialisation of TK may be refused by some of the indigenous communities and may be accepted by others. It is however undeniable that commercialisation is not incompatible with the nature of TK.[369]

(ii) Subject Matter of Protection

There are two options for considering the subject matter to be included in a sui generis legislation.[370] The first option is to include both TK and TCEs without any limitation as to the subject matter, this approach leaves open the possibility of 'defining more precisely the restrictions on what specific criteria the subject matter would have to meet in order to be eligible for protection'.[371] This approach was adopted in the IKS Act which only recognised registered TK to include TK of functional nature, knowledge of natural resources, and TCEs.[372]

The second option is to separate the provisions of TK from TCEs, this approach has been criticised for ignoring the holistic nature of TK by breaking it up into components.[373] An example of this could be found in the Swakopmund Protocol, which separates the provisions of TK and TCEs into parts.

(iii) Criteria for Protection

368 OseiTutu op cit (n363) 183.
369 OseiTutu op cit (n363) 184.
370 WIPO op cit (n5) para 55.
371 Ibid.
372 IKS Act, ss 1 and 9.
373 WIPO op cit (n5) para 56.

The criteria for protection across the examined African frameworks are inherently similar. The subject matter must be intergenerational in nature, it must be associated with a community, it must be distinctively associated with or developed within a community, and it must be integral or associated with the social and cultural identity of the community.[374]

TK is intergenerational in the sense that it is being passed down through generations, this does not mean it is old, nor static. TK is rather being constantly 'revised, improved, and regenerated.[375]

The proposed framework must recognise that TK is collectively owned by communities, however it is important that to note that said protection must be anchored on indigenous peoples and not indigenous communities.[376] The assumption that TK is constantly in the possession of an entire community is wrong, rather TK is often in the hands of a select few within a community.[377] The indigenous people may be identified a group of individuals who are entitled through being descendants of guardians of the TK, to the rights accruing from the possession of the TK.[378] Therefore, TK may be owned by indigenous communities, yet possessed by a group of indigenous community members, and can be utilised to the benefit of the entire community. .

(iv) Registration of TK

This dissertation recommends the adoption of a formal system of registration. TK could be automatically registered upon a formal examination and registration with an established government agency.[379] This ameliorates problems associated with protection of unregistered knowledge and problems encountered by third parties in identifying origin of the TK.

Registration of TK could be done by maintaining a TKDR or a register, which should be accessed solely by custodians of the TK and approved government officials. A TK commons model as discussed in chapter three could also be adopted, though this would require the involvement of the government, in order to ameliorate the cost of setting up.

374 Swakopmund Protocol, s 4 ; IKS Act, s 11.
375 OseiTutu op cit (n363) 194.
376 Kuti op cit (n203) 90.
377 OseiTutu op cit (n363) 194.
378 Ibid.
379 IKS Act, s 9.

Documentation is in line with the objective of the *sui generis* framework to preserve TK for the use of generations. This could also aid countries in discovering TK shared in common, which might promote trans-boundary and regional cooperation.[380] The digital library developed by the NNMDA, as discussed in chapter two, could be used as a focal point of reference for preserving TK.

(v) Rights of Beneficiaries

A *sui generis* framework must maintain a balance between the rights and interests of those who develop, preserve and maintain TK, and those who use and enjoy them. The framework should combine material and moral rights. Moral rights could be in form of attribution of source and origin, and protection from mutilation, distortion or any derogatory act. Moral rights are integral to the framework, because it is linked to above stated objective of protecting and preserving the cultural identity of the community.[381]

The proposed features of this framework is not dissimilar to the conventional IP system which also provides for the right to assign, transfer, and license the TK. This approach was adopted in the IKS Act which provides exclusive rights for commercial use, acknowledgement of origin, and limitation of unauthorised use.[382]

(vi) Term of Protection

The duration for protection of TK is often in perpetuity, as long as the eligibility criteria for protection is still being fulfilled. The rationale for this is that TK is inextricably linked to the existence of the community, therefore, indigenous people should enjoy their benefits from their knowledge as long as their existence depends on same.[383] The IKS Act did not provide factors that might render TK to lose its eligibility, it is safe to assume that TK could be lost through a rigorous process of industrialisation or commercialisation, which could make it lose its intergenerational communal status.[384]

380 Kuti op cit (n203) 92.
381 WIPO op cit (n5) para 66.
382 IKS Act, s 13. Act.
383 Kuti op cit (n203) 90.
384 Amechi op cit (n48) 49.

It is important to note that once TK no longer meets the eligibility criteria for protection, it enters the public domain, and it might be difficult to recapture TK which has entered the public domain for protection.[385] Okediji stressed the importance of delineating the tiers of TK, she suggested that generic TK should not be afforded any form of protection, therefore should fall into a custom-built public domain which is territorial.[386] This dissertation concurs with the need for a custom-built public domain, however it is submitted that the occasional overlapping of these tiers should not be ignored, it is possible for generic TK to remain sacred.[387]

Overall, the boundaries of these tiers are constantly evolving, it is however undeniable that a clearly delineated tiered approach would contribute to generating a custom-built public domain for TK.

(vii) Recognition of Customary laws and Protocols

Nigeria is a heterogeneous society with a multiplicity of cultures, languages, and customary laws.[388] Customary law is often strictly observed especially in the Southern part of the country, which has a predominant non-Muslim population.[389] The proposed *sui generis* legislation must take into consideration, the indigenous communities' customary laws and practices. This presents a challenge considering the multiplicity of tribes and communities, this could be easily be resolved by creating workshops consisting of representatives of indigenous communities, while understanding that customary laws might be silent on certain issues such as external use.[390]

The provisions of the *sui generis* framework should reflect the identification of custodians in accordance with customary laws, determination of concurrent claims,[391] the TK must have developed in accordance with the indigenous community's customary practices,[392] and any use must be in accordance with the customary laws and practices. Overall, the protection of

385 WIPO op cit (n5) para 57.
386 Okediji op cit (n68) 14.
387 Oguamanam op cit (n247) 7.
388 ME Nwocha 'Customary Law, Social Development and Administration of Justice in Nigeria' (2016) 7 *Beijing Law Review* 430 at 435
389 Ibid.
390 K Swiderska 'Traditional knowledge protection and recognition of customary law: Policy issues and challenges' available at *https://pubs.iied.org/sites/default/files/pdfs/migrate/G01252.pdf* accessed on 6 January 2022.
391 TK/CE Act, s 7(7).
392 Swakopmund Protocol, s 4.

TK in accordance with customary laws and practices allows indigenous communities to assert their right to self-determination in controlling access and use of their knowledge.[393]

(viii) Enforcement of Rights

The rights provided in the proposed framework become moribund if they are not supported by enforcement mechanisms. These mechanisms include civil remedies for misappropriation, and the establishment of a dispute resolution committee as seen in the IKS Act.[394] Civil remedies may include injunctions, award of damages, ordering companies to pay for inappropriate use or commercialisation of TK.[395]

Methods of dispute resolution could be in form of mediation, alternative dispute resolution, or resolution in accordance with customary laws, practices, and protocols (where parties agree that the dispute should be settled under a particular custom). It is important to note there might be practical difficulties in enforcement, therefore it is recommended specialised government agencies could be established to oversee enforcement of these rights.[396]

5.3 Conclusion

The protection of TK is inextricably linked and inseparable from the customary and cultural values of indigenous communities. This is evident in the requirement for promotion and respect of these customs, and the participation of indigenous people in the drafting of the examined African frameworks.

Nigeria currently does not have an efficient system of protecting its invaluable indigenous knowledge. The country's failure to provide an appropriate system of protection for TK appears to stem from a combination of a lack of appreciation of its rich TK, and a misguided prioritisation of protection of conventional IP over TK. Nigeria could certainly modelled its *sui generis* framework after its neighbouring African countries, while using its numerous customary laws and protocols as a foundation for efficient protection of TK belonging to its indigenous communities.

393 Kariuki op cit (n165) 103.
394 IKS Act, s 27.
395 TK/CE Act, s 39.
396 WIPO op cit (n5) para 77.

BIBLIOGRAPHY

PRIMARY SOURCES

Treaties, International Agreements, Statutes and Regulations

African Model Law for the Protection of the Rights of Local Communities, Farmers, and Breeders, and for the Regulation of Access to Biological Resources 2000.

Agreement on Trade Related Aspects of Intellectual Property Rights of 15 April 1994.

Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization of 19 April 2002.

Convention on Biological Diversity of 29 December 1993.

Convention for the Safeguarding of the Intangible Cultural Heritage of 17 October 2003.

Draft Elements of A Code of Ethical Conduct to Ensure Respect for the Cultural and Intellectual Heritage Indigenous and Local Communities Relevant to the Conservation and Sustainable Use of Biological Diversity of 30 June 2010.

Model Law for Developing Countries on Inventions of 1, January 1965.

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 of 29, October 2010.

Report of the Ad Hoc Open-Ended Inter-Sessional Working Group on Art. 8(j) and Related Provisions of the Convention on Biological Diversity on the Work of its Second Meeting of 14, February 2002.

Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore of 9, August 2010.

Kenya

Environmental Management and Coordination Act of 1999

Constitution of Kenya of 2010.

Protection of Traditional Knowledge and Cultural Expressions Act No 33 of 2016

Nigeria

The Patents and Designs Act of 1970.

National Environmental Management (Access to Generic Resources and Benefit Sharing) Regulations of 2009.

South Africa

Intellectual Property Laws Amendment Act No 38 of 2013.

Protection, Promotion, Development, and Management of Indigenous Knowledge Act No 6 of 2019.

Copyright Amendment Bill B-13B 2017.

Zambia

Industrial Act No 22 of 2016

Patents Act No 40 of 2016.

Protection of Traditional Knowledge, Genetic Resources and Expressions of Folklore Act No 16 of 2016.

Secondary Sources

Books

Cocchiaro, Gino *et al* 'Consideration of a Legal Trust Model for the Kukula Healers' in Jeremy de Beer *et al* (eds) *TK Commons in South Africa' in Innovation & Intellectual Property Collaborative Dynamics in Africa* (2014) 151.

Mbeoji, Ikechi 'African Patent Offices not fit for purpose' in Jeremy de Beer *et al* (eds) *Innovation & Intellectual Property: Collaborative Dynamics in Africa* (2014) 236.

Ncube, Caroline Bongiwe *Science, Technology & Innovation and Intellectual Property: Leveraging Openness for Sustainable Development in Africa* (2021) Juta 81.

Ouma, Marisella 'The Policy Context for a Commons-Based Approach to Traditional Knowledge' in Jeremy de Beer *et al* (eds) *TK Commons in South Africa' in Innovation & Intellectual Property Collaborative Dynamics in Africa* (2014) 146.

Visser, Coenraad ‘Making Intellectual Property Laws work for Traditional Knowledge’ in Joseph Finger et al (eds) *Poor People’s Knowledge: Promoting Intellectual Property in Developing Countries* (2004) 212.

Articles, Reports and Papers

Amechi, Emeka ‘Biopiracy, Patent Law and a sui generis legislation for the protection of traditional knowledge on medicinal uses of plants’ (2020) 37 *The Journal of Private and Property Law* 32.

Ayodele, Oladiran and Damola, Falade ‘Patentability of Inventions under the Nigeria’s Patents and Designs Act: An Examination’ (2017) 8(2) *Nnamdi Azikwe University Journal of International Law and Jurisprudence* 52.

Bagley, Margo *Toward an Effective Indigenous Knowledge Protection Regime: Case Study of South Africa* (Centre for International Governance Innovation Papers No 207, 2018) 21.

Byron, Ibijoke ‘The Protection of Traditional Knowledge under the *Sui Generis* regime in Nigeria’ *International Review of Law, Computers & Technology* 7.

Carpenter, Kristen *et al* ‘In Defense of Property’ (2009) 118 *The Yale Journal* 1065.

Christian, Gideon ‘*Digitisation, Intellectual Property Rights and Access to Traditional Medicine Knowledge in Developing Countries- the Nigerian Experience’* paper presented at International Development Research Centre (IDRC) at 20.

Dagne, Tesh ‘The Protection of Traditional Knowledge in the Knowledge Economy: Cross Cutting Challenges in International Intellectual Property Law’ (2012) 14(2) *International Community Law Review* 162.

Du Bois, Mikhalien ‘Justificatory Theories for Intellectual Property Viewed through the Constitutional Prism’ (2018) 21 *PER / PELJ* 24.

Erstling, Jay ‘Using Patents to Protect Traditional Knowledge’ 15 (2009) *Texas Wesleyan Law Review* 300.

Ezejiofor, Gaius ‘The Law of Patents in Nigeria: A Review’ (1973) 9 *African Law Studies* 58

Feris, Loretta ‘Protecting Traditional Knowledge in Africa: Considering African Approaches’ (2004) 4 *African Human Rights Law Journal* 251.

Fisher, William ‘Theories of Intellectual Property’ in (2001) 168 *New Essays in the legal and political theory of property* 4.

Gazizova, Asiia ‘Protection of Traditional Knowledge: The Work and the Role of International Organisations and Conferences’ (2020) 9(8) *International Journal of Higher Education* 96.

Harrington, John and Deacon, Harriet ‘Traditional Knowledge and Culture Expressions Act 2016’ 3 December 2016 available at *https://www.the-star.co.ke/opinion/2016-12-03-traditional-knowledge-and-culture-expressions-act-2016/* accessed on 30 October 2021.

Kalaskar, Balavanth ‘Traditional Knowledge and *sui-generis* law’ (2012) 3(7) *International Journal of Scientific & Engineering Research* 2.

Kariuki, Francis ‘Ideological conundrums and technical challenges in protecting traditional knowledge using the intellectual property system’ (2019) 3(2) *Journal of Conflict Management and Sustainable Development* 16.

Kariuki, Francis ‘Protecting Traditional Knowledge in Kenya State: Traditional Justice Systems as Appropriate *Sui Generis* Systems’ (2019) 10 *WIPO-WTO Colloquium Papers* 93.

Ke, Yi-Chia and Chen, Jiun-Hong ‘Interrelationship between Genetic Resources and Traditional Knowledge: An Example from Earthworm Fibrinolytic Enzyme’ 39 *Biotechnology Law Report* 450.

Kuti, Temitope *Towards Effective Multilateral Protection of Traditional Knowledge within the Global Intellectual Property Framework* LLM (University of Western Cape) (2017) 73.

Mgbeoji, Ikechi *‘Bio-cultural Knowledge and the Challenges of Intellectual Property Rights Regimes for African Development’* (2011) Nigerian Institute of Advanced Legal Studies (NIALS) convocation lecture series 20.

Mgbeoji, Ikechi ‘Patents and Traditional Knowledge of the Uses of Plants: Is a Communal Patent Regime Part of the Solution to the Scourge of Bio Piracy’ (2001) 9(1) *Indiana Journal of Global Legal Studies* 163 at 172.

Mogos, Abiyot ‘Revitilizing Intellectual Property Right Protection for Traditional Knowledge and Cultural Expression in Ethiopia: A Lesson from Kenya’ (2021) 10(1) *Oromia Law Journal* 131.

Munzer, Stephen and Raustiala, Kal ‘The Uneasy Case for Intellectual Property Rights in Intellectual Property Rights in Traditional Knowledge’ (2009) 27(1) *Cardozo Arts & Entertainment Law Journal* 59.

Muzan, Menes ‘Some Insights on the Legal Measures for Access and Benefit Sharing of Genetic Resources in Nigeria’ (2017) 50(1) *Law and Politics in Africa, Asia and Latin America* 47.

Mwangi, Claude *Protecting traditional knowledge in Kenya through African Customary Law: an analysis of inclusive subordination* LLM (Strathmore University) (2019) 21.

Nandjembo, Lucia Pandulo *The Effectiveness of the Swakopmund Protocol on the Protection of Traditional knowledge in Namibia* (University of Western Cape) (2017) 55.

Nkomo, Marumo ‘South Africa's proposed intellectual property law: the need for improved regional cooperation’ (2013) 46(2) *The Comparative and International Law Journal of Southern Africa* 264.

Ngombe, Laurier 'The Protection of Folklore in the Swakopmund Protocol Adopted by the ARIPO (African Regional Intellectual Property Organization' (2011) 14 *Journal of World Intellectual Property* 403 at 406

Nwauche, Enyinna ‘The Swakopmund Protocol and the Communal Ownership and Control of Expressions of Folklore in Africa’ (2014) 17 *Journal of World Intellectual Property* 191.

Nwocha, Matthew ‘Customary Law, Social Development and Administration of Justice in Nigeria’ (2016) 7 *Beijing Law Review* 435

Oguamanam, Chidi ‘Localizing Intellectual Property in the Globalization Epoch: The Integration of Indigenous Knowledge’ (2004) 11(2) *Indiana Journal of Global Legal Studies* 137.

Oguamanam, Chidi ‘Tiered or Differentiated Approach to Traditional Knowledge and Traditional Cultural Expressions: The Evolution of a Concept’ (2018) 185 *Centre for International Governance Innovation Papers* at 7.

Okediji, Ruth ‘Traditional Knowledge and the Public Domain’ (2018) 178 *Centre for International Governance Innovation* (CIGI) Papers at 1.

OseiTutu, Jane ‘Emerging Scholars Series: A Sui Generis Regime for Traditional Knowledge: The Cultural Divide in Intellectual Property Law’ (2011) 15(1) *Marquette Intellectual Property Law Review* 181.

Ouma, Marisella ‘Protecting Traditional Knowledge and Traditional Cultural Expressions in Kenya’ (2014) 5 *WIPO-WTO Colloquium Papers* 79

Sikoyo, George *et al* ‘Intellectual Property Protection in Africa: status of laws, research and policy analysis in Ghana, Kenya, Nigeria, South Africa and Uganda’ (2006) 16 *African Centre for Technology Studies Ecopolicy Series* 19.

Sinkala, Ruth *Protection of Traditional Medical Knowledge in the Patent System: Is There Room?* LLM (Uppsala Universitet) (2017)

Swiderska, Krystyna ‘Traditional knowledge protection and recognition of customary law: Policy issues and challenges’ available at *https://pubs.iied.org/sites/default/files/pdfs/migrate/G01252.pdf* accessed on 6 January 2022.

The Crucible II Group, ‘Options for National Laws Governing Control over Genetic Resources and Biological Resources’ (2001) 2 *Seedling Solutions* 35.

Tong, Lee-Ann‘Aligning the South African intellectual property system with traditional knowledge protection’ (2017) 12(3) *Journal of Intellectual Property Law & Practice* 183.

Twarong, Sophia ‘*Preserving, Protecting and Promoting Traditional Knowledge: National Actions and International Dimensions*’ (United Nations Conference on Trade and Development 2004) 66.

Umahi, Okechukwu ‘Access to Medicines: the Colonial Impact of Patent Law in Nigeria’ (2011) 1(1) *Ben Idahosa University Law Journal* 4.

Waziri, Kasim and Awomolo, Folasade ‘Protecting Traditional Knowledge in Nigeria: Breaking the Barriers’ (2014) 29 *Journal of Law, Policy and Globalization* 178.

World Intellectual Property Organisation, *Elements of a Sui Generis System for the Protection of Traditional Knowledge* (30 September 2002) WIPO/GRTKF/IC/4/8 (2002)

World Intellectual Property Organisation, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders: WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge* (2001) 25.

Wynberg, Rachel *et al South Africa's Bioprospecting, Access and Benefit-Sharing Regulatory Framework: Guidelines for Providers, Users and Regulators* (The Environmental Evaluation Unit, University of Cape Town, 2012) 6.

Yauri, Shafiu 'The Patent System in Nigeria' (2012) 34 *World Patent Information* 213.

Zheng, Xiaoou 'Key legal challenges and opportunities in the implementation of the Nagoya Protocol: The case of China' (2019) 28(2) *Review of European, Comparative & International Environmental Law* 182.

Internet Sources

Adebola, Titilayo 'Africa and Intellectual Property Rights for Plant Varieties' available at *https://www.oxfordbibliographies.com/view/document/obo9780199796953/obo9780199796953-0210.xml#:~:text=The%20African%20Model%20Law%20rejects,Varieties%20of%20Plants%20(UPOV).&text=No%20African%20country%20has%20adopted%20it.* Accessed on 9 February 2022.

Alves, Monteiro 'Zambia and the Commencement Orders on new IP Acts' 26 January 2018 available at *https://inventa.com/en/ng/news/article/281/zambia-and-the-commencement-orders-on-new-ip-acts* accessed on 30 October 2021.

ARIPO 'Explanatory Guide to the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore' available at *https://www.aripo.org/wp-content/uploads/2020/04/Explanatory-Guide-to-the-Swakopmund-Protocol.pdf* accessed on 1 December 2021.

African Regional Intellectual Property Organisation, 'Member States' available at *https://www.aripo.org/member-states/* accessed on 1 December 2021.

African Regional Intellectual Property Organisation, 'Policy Framework on Access and Benefit Sharing Arising from the Use of Genetic Resources in the ARIPO Member States: A Guide for ARIPO Member States' available at *https://www.aripo.org/wp-content/uploads/2018/11/Policy-Framework-on-ABS.pdf* accessed on 30 December 2021.

Butera, Michael 'African Traditional Knowledge and Expressions of Folklore: Rethinking Swakopmund Protocol as a Model Law and Sui Generis System' available at *https://cipit.strathmore.edu/african-traditional-knowledge-and-expressions-of-folklore-*

rethinking-swakopmund-protocol-as-a-model-law-and-sui-generis-system/ accessed on 1 December 2021.

Convention on Biological Diversity, 'List of Parties', available at *https://www.cbd.int/information/parties.shtml#tab=0* accessed on 12, June 2021.

Benny, Helan 'The Need to Protect Traditional Knowledge' available at *https://thecompany.ninja/the-need-to-protect-traditional-knowledge-tk/* accessed on 25 January 2022.

Ezeanya, Chika 'Maurice Iwu and the sale of Nigeria's Collective Inheritance' 19 May 2011, available at *http://saharareporters.com/2011/05/19/maurice-iwu-and-sale-nigeria%E2%80%99s-collective-inheritance* accessed on 2 August 2021.

International Institute for Environment Development, 'Regional laws on traditional knowledge and access to genetic resources' available at *https://biocultural.iied.org/regional-laws-traditional-knowledge-and-access-genetic-resources* accessed on 30 December 2021.

Kimani, Paul 'Kenyan Reform on Traditional Knowledge and Traditional Cultural Expressions: Two Year On' 4 February 2019 available at *https://ipkitten.blogspot.com/2019/02/kenyan-reform-on-traditional-knowledge.html* accessed on 25 October 2021.

Kleyn, Madelein 'Comments on Draft Protection, Promotion, Development and Management of Indigenous Knowledge Bill, 2014' 12 May 2015 available at *https://blogs.sun.ac.za/iplaw/files/2015/05/Written-comments-on-the-Indigenous-Knowledge-Systems-Bill-2014-Dr-MM-Kleyn-May-13-2015.pdf* accessed on 20 October 2021.

Koopmans, Maarten *et al* 'Case Study on Traditional Knowledge Protection' available at *https://africaeurope-innovationpartnership.net/sites/default/files/202109/Case_9_AEIP_TraditionnalKnowledgeProtection_June_2021.pdf* accessed on 30 October 2021.

Munyi, Paul *et al* 'A Gap Analysis Report on the African Model Law on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources' available at *http://archive.abs-biotrade.info/uploads/media/GAP_Analysis_and_Revison_African_Model_Law_FINAL_2902.pdf* accessed on 9 February 2022.

Nigeria Natural Medicine Development Agency, 'Mandate of the Agency' available at *http://nnmda.gov.ng/mandate-of-the-agency/* accessed on 4 August 2021.

Ncube, Caroline Bongiwe 'Comments on the Draft Protection of Traditional Knowledge Bill' available at f*ile:///C:/Users/USER/Downloads/COMMENTS_TO_PARLIAMENT_ON_THE_DRAFT_PROT.pdf* accessed on 1 February 2022.

Ng'ombe 'Zambia's New Traditional Knowledge, Genetic Resources and Expressions of Folklore Act' 20 September 2016 available at *http://afro-ip.blogspot.com/2016/09/zambias-new-traditional-knowldeg.html* accessed on 31 October 2021.

Parliamentary Monitoring Group, 'Indigenous Knowledge Systems & IKS legislation overview' 19 February 2020 available at *https://pmg.org.za/committee-meeting/29831/*, accessed on 7 September 2021.

Oguamanam, Chidi 'Tiered or Differentiated Approach to Traditional Knowledge? Coast Salish Cowichan Sweater, Ghana Kente, Nigeria Adire and Arnhem Bark Paintings' 1 December 2016 available at *https://abs-canada.org/tiered-or-differentiated-approach-to-traditional-knowledge-coast-salish-cowichan-sweater-ghana-kente-nigeria-adire-and-arnhem-bark-paintings/* accessed on 30 December 2021.

Oguamanam, Chidi 'WIPO IGC 39: Unraveling the Tiered Approach to TK/TCEs' 28 March 2019 available at *https://openair.africa/wipo-igc-39-unraveling-the-tiered-approach-to-tk-tces/* accessed on 30 December 2021.

Ouma, Marisella 'Traditional knowledge: the challenges facing international lawmakers' available at *https://www.wipo.int/wipo_magazine/en/2017/01/article_0003.html* accessed on 30 December 2021.

Parliamentary Monitoring Group 'Indigenous Knowledge Systems activities & sui generis legislation: briefing by Department of Science and Technology' 12 June 2012 available at *www.pmg.org.za/committee-meeting/14560/* accessed on 1 February 2022.

Schonwetter, Tobias. L Jansen, and L Foster 'IKS BILL, 2014 (GG 38574, 20.03.2015) – Comments – Joint Submission' 19 May 2015 available at *https://naturaljustice.org/wp-content/uploads/2015/03/PPDM-Indigenous-Knowledge.pdf* accessed on 20 October 2021.

United Nations Social and Economic Council, 'A study to examine challenges in the African region to Protecting Traditional Knowledge, Genetic Resources and Folklore' available *https://www.un.org/esa/socdev/unpfii/documents/2014/2.pdf* accessed on 30 December 2021.

United Nations University, 'Traditional Knowledge Holders Formalize a Network for Community to Community Exchange' 9 October 2015 available at *https://ias.unu.edu/en/news/traditional-knowledge-holders-formalize-a-network-for-community-to-community-exchange.html* accessed on 2 August 2021.

USlegal '*Sui Generis* Law and Legal Definition' available at *https://definitions.uslegal.com/s/sui-generis/,* accessed on 7 September 2021.

Van Der Merwe, Andre 'South Africa: Comments On The Protection, Promotion, Development, And Management Of Indigenous Knowledge Systems Bill, 2016' 5 April 2017 available at *https://www.mondaq.com/southafrica/trademark/582918/comments-on-the-protection-promotion-development-and-management-of-indigenous-knowledge-systems-bill-2016* accessed on 28 January 2022.

World Intellectual Property Organisation, 'A Guide to Intellectual Property Issues in Access and Benefit-sharing Agreement' available at *https://www.wipo.int/edocs/pubdocs/en/wipo_pub_1052.pdf* accessed on 5 August 2021.

World Intellectual Property Organisation, 'ARIPO' available at *https://www.wipo.int/export/sites/www/patent_register_portal/en/docs/aripo.pdf* accessed on 1 December 2021.

World Intellectual Property Organisation 'Glossary of Key Terms Related to Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions' (27, April 2012) available at *https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_22/wipo_grtkf_ic_22_inf_8.pdf* accessed on 25 August 2021.

World Intellectual Property Organisation 'IGC 40 Summary' 25 June 2019 available at *https://www.wipo.int/tk/en/news/igc/2019/news_0009.html* accessed on 30 December 2019.

World Intellectual Property Organisation 'IGC 41 Summary' available at *https://www.wipo.int/tk/en/news/igc/2021/news_0003.html* accessed on 31 December 2021.

World Intellectual Property Organisation ‘IGC mandate 2020/21’ available at *www.wipo.int/export/sites/www/tk/en/igc/pdf/igc_manadate_2020_2021.pdf* accessed on 31 December 2021.

World Intellectual Property Organisation, ‘Note on the Meanings of the Term "Public Domain" in the Intellectual Property System with Special Reference to the Protection of Traditional Knowledge and Traditional Cultural Expressions/Expressions of Folklore’ 24 November 2010 available at *https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=149213* accessed on 30 December 2021.

World Intellectual Property Organisation, ‘The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore’ available at *https://www.wipo.int/edocs/pubdocs/en/wipo_pub_tk_2.pdf* accessed on 30 December 2021.

World Intellectual Property Organisation, ‘Traditional Knowledge’ available at *https://www.wipo.int/tk/en/tk/*, accessed on 8 June 2021.

World Intellectual Property Organisation, ‘Traditional Knowledge and Intellectual Property-Background Brief’ available at *https://www.wipo.int/pressroom/en/briefs/tk_ip.html* accessed on 2 September 2021.

World Intellectual Property Organisation, ‘Traditional Medicine as a Tonic for Development’ 29 October 2012, available at *https://www.wipo.int/ipadvantage/en/details.jsp?id=3229* accessed on 2 August 2021.