

# SOUTH AFRICAN CULTURAL OBSERVATORY

Indigenous Knowledge as Content for the Cultural and Creative Industries

Submitted to:

Department of Arts and Culture

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In Partnership with:

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**South African Cultural Observatory**

**Indigenous Knowledge as Content for the Cultural  
and Creative Industries**

**September 2020**

Submitted to the Department of Sports, Arts and Culture:



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# 1 EXECUTIVE SUMMARY

## 1.1 Introduction

Cultural and creative industries (CCIs) constitute a major feature of contemporary world economies. Many governments have developed policies and legislation around CCIs. On one hand, the rationale has been to maximise economic gains from the CCIs whose contributions constitute significant portions of national GDPs and employment sectors. On the other hand, there is an endeavour to protect Intellectual Property (IP) rights as the knowledge economy places value on information, individual talent and skills in ways that benefit individuals and countries economically. However, IP laws have encountered challenges particularly in respect to the use and commercialisation of Indigenous Knowledge (IK), including in the CCI. However, what exactly do we mean by Indigenous Knowledge (IK)? All indigenous communities have a cultural heritage based on their history, gives meaning to their lives and defines their humanity. This cultural heritage consists of tangible, immovable, underwater and intangible cultural heritage (World Bank, 1998; Ncube, 2019). This broad spectrum of cultural heritage contains Indigenous Knowledge (IK). In other words, cultural heritage is a broad concept of which IK is a subset. Some of the major characteristics of IK are that it

it is anchored in a specific community; is established within the boundaries of broader cultural traditions but still developed by a specific community; often consists of intangible knowledge that is not easily codified and is conveyed orally; consists of experimental knowledge as opposed to theoretical knowledge; is learnt through repetition; and changes continuously – created and recreated, discovered and lost – even though outsiders believe it to be static (World Bank, 1998: 9).

Different South African private CCI entities and government departments, more so the Department of Sports, Arts and Culture (DSAC), have positioned IK as an integral element of national and provincial developmental strategies through formal recognition of its centrality in the CCIs. For example, DSAC's predecessor, the Department of Arts and Culture initiated work on the promotion and copyright of indigenous music and art forms before adoption of the Indigenous Knowledge Systems Policy in 2004.

## 1.2 Aim and Objectives of the Report

The overarching aim of this research report is to explore how cultural and creative industries practitioners who utilise or are interested in using indigenous knowledge as a primary knowledge or data source for the production of their goods and services can engage with the indigenous knowledge system, policy and regulatory frameworks governing indigenous knowledge in South Africa. Accordingly, the research was guided by the following objectives:

- (1) Scoping indigenous knowledge systems policy environment
- (2) Determining the current state of indigenous knowledge systems
- (3) Exploring the potential of indigenous knowledge systems to contribute to the sector
- (4) Identifying the legal, institutional, and social requirements pertaining to the commercialisation of indigenous knowledge systems.

## 1.3 Methodology

This is a qualitative study based on secondary data. Through critical content analysis of relevant IK literature we were able to determine the policy, legislative and regulatory

frameworks governing the use of IK as a primary knowledge or data source for the production of goods and services by CCI practitioners. Given that existing literature is largely prospective in terms of its articulation and provisions, we proceeded to interrogate the implementation of the key provisions such as the establishment of certain structures and systems in relation to IK, and explore their functions. By so doing, we managed to explore in its fullest the policy, legislative and regulatory framework governing the use of IK. For a qualitative exploratory study, this is methodologically sufficient.

#### 1.4 Summary of Main Findings

South Africa has made some progress in terms of policy and developing a legal framework for the integration, regulation, utilisation and commercialisation of IK in the production of cultural goods and services. Among others, one of the most instructive policies in this regard is the IKSP of 2004. This policy captures government aspirations to exploit IK for the benefit of local communities who possess such special knowledge while at the same time protecting them from exploitative capitalist business systems. Its economic motivations of creating employment and income not only at individual but also at a national level consolidate endeavours expressed particularly by the DSAC that oversees the mandate on artistic and cultural productions. Accordingly, the policy responds to concerns that hamper IK development and usage under the prevailing socio-economic, legal and environmental context. Thus, it lays a solid foundation for the establishment of a complex IKS architecture and a legal environment within which CCI practitioners can produce their goods and services using IK without jeopardising individual and community IK holders.

The country has also made strides in terms of conceptualisation work regarding the integration and regulation of IK in the production of cultural goods and services. For example, as per policy imperatives, the National Recordal System (NRS) offers great potential of protecting individual and community IK holders at a national level while, at the same time, providing a one-stop shop for CCI practitioners who intend to use IK as primary content and data to produce goods and services. The NRS thus offers a strategic opportunity of empowering communities economically and boosting the national economy. However, the complex NRS needs to be refined, particularly at community and provincial levels where Indigenous Knowledge Documentation Centres (IKDCs) appear to be still struggling to perform to their best potential, with IK holders either reluctant to submit their IK or lacking sufficient understanding regarding the modalities and benefits of doing so. It appears apparent that, in addition to further resourcing of IKS structures and processes, public awareness needs to be raised among communities.

In the legal arena, the study found that there are various legal, institutional and social requirements in place to not only preserve IK for indigenous communities but equally to ensure that the commercial exploitation of such is not detrimental but beneficial to the indigenous communities. The Intellectual Property Laws Amendment Act of 2013 and the Promotion, Development and Management of Indigenous knowledge Act of 2019 on a broader scale sets out the legal requirements of how IK should be registered and how intended users should enter into benefit sharing agreements with indigenous communities. The purpose is to ensure that any commercial exploitation of IK does not happen without benefit to the community. Various mechanisms and institutions are set up by law to ensure transparency, efficiency and recording of IK. The Intellectual Property Laws Amendment Act of 2013 establishes a National Council in respect of indigenous knowledge, a National Database for the recording of indigenous knowledge and a National Trust and Trust Fund for purposes of indigenous knowledge. The Promotion, Development and Management of Indigenous knowledge Act of 2019 creates community representatives through trustees who are appointed by the curator. The curator is appointed by the Minister and is responsible for the control of the Registration Office, subject to the directions and instructions issued by the Minister or the Director-General as delegated by the Minister. Unfortunately both these crucial two pieces of legislation are yet to come into force. Therefore, presently any recourse for the

management of IKS for the benefit of indigenous communities has to be found in the existing traditional forms of intellectual property protection and promotion. Further, since these are national approaches the absence of a multilateral system deprives indigenous communities of any guarantee of the same legislative benefits when the IK is commercially exploited beyond national borders. It is therefore important for authorities to pursue multilateral approaches in line with national developmental plans in order to protect local indigenous knowledge.

Further, the current state of IKS in South Africa indicates that progress has been made and compares favourably with other countries particularly in Africa. The NIKSO has been established to accommodate the NRS. The NRS makes the NIKSO a potential one-stop shop for CCI practitioners who wish to use IK to produce their goods and services as it is devolved to provinces and various communities within the provinces. Communities can therefore create records of their IK via IKDCs that would process the data before submitting to NIKSO. Through the system, communities may therefore be protected and they may enter into mutually beneficial agreements with prospective users of their IK. However, the system still requires more resourcing, particularly at community levels. Communities need to be educated about the benefits of submitting their IK in order to protect themselves and also get economic rewards when CCIs make profits.

Lastly, the study argues that there is indeed great potential for IK to contribute tremendously in the CCIs sector and to South Africa's economy in general. Economic fortunes can be derived for the sector, country and for specific communities that hold IK. While challenges of piracy and abuse of IK exist, it was noted that a large local and global market can be created through enhanced marketing and advertising using modern media and technologies. The comparative IK benefits enjoyed in industries such as agriculture, food production and pharmacy were also instructive in showcasing how IK has great potential for the CCI sector. However, there is still more work that needs to be done with respect to the legal requirements, infrastructure, financial resources and community awareness in order to fully realise the benefits of IK in the CCI sector.

## 2 INTRODUCTION

Cultural and creative industries (CCIs) constitute a major feature of contemporary world economies. Many governments have developed policies and legislation around CCIs. On the one hand, the rationale has been to maximise economic gains from the CCIs whose contributions constitute significant portions of national GDPs and employment sectors. On the other hand, there is an endeavour to protect Intellectual Property (IP) rights as the knowledge economy places value on information, individual talent and skills in ways that benefit individuals and countries economically. However, IP laws have encountered challenges particularly in respect to the use and commercialisation of Indigenous Knowledge (IK), including in the CCI. What exactly do we mean by Indigenous Knowledge (IK)? To begin with, there is need to unpack the concept of indigenous community. In a broad sense, indigenous community refers to any recognisable community of people developing from, or historically settled in a geographic area or areas located within the borders of a Republic, characterised by social, cultural and economic conditions, which distinguish them from other sections of the national community; and who identify themselves as a distinct collective (Ncube, 2019). All indigenous communities have a cultural heritage based on their history, gives meaning to their lives and defines their humanity. This cultural heritage consists of tangible cultural heritage that includes movable cultural heritage (paintings, sculptures, coins, manuscripts), immovable cultural heritage (monuments, archaeological sites etc), underwater cultural heritage (shipwrecks, underwater ruins and cities) and intangible cultural heritage, oral traditions, performing arts and rituals (World Bank, 1998; Ncube, 2019). This broad spectrum of cultural heritage contains Indigenous Knowledge. In other words, cultural heritage is a broad concept of which IK is a subset. Some of the major characteristics of IK are that it

it is anchored in a specific community; is established within the boundaries of broader cultural traditions but still developed by a specific community; often consists of intangible knowledge that is not easily codified and is conveyed orally; consists of experimental knowledge as opposed to theoretical knowledge; is learnt through repetition; and changes continuously – created and recreated, discovered and lost – even though outsiders believe it to be static (World Bank, 1998: 9).

Because of these characteristics, IK tends to be unique. In a globalising world, its use presents tensions, as it tends to challenge the universality of knowledge, often attributed to the Global North. In past colonial contexts such as those of Africa, IK was associated with backwardness and hence marginalised from the modern economy and society in general. It is only in the post-colonial era that African governments and private CCI entities seek to affirm IK and integrate it in their developmental policies. In South Africa, this has presented prospects of boosting the CCIs and giving them a uniquely South African identity. Different South African private CCI entities and government departments, more so the Department of Sports, Arts and Culture (DSAC), have positioned IK as an integral element of national and provincial developmental strategies through formal recognition of its centrality in the CCIs. For example, DSAC's predecessor, the Department of Arts and Culture initiated work on the promotion and copyright of indigenous music and art forms before adoption of the Indigenous Knowledge Systems Policy in 2004.

At law, South Africa finds itself party to various international and regional arrangements that seek to address issues of Intellectual Property (IP) law including IK. However, in the absence of a multilateral approach to IK protection, the most relevant and applicable arrangements are found in national South African law since the country has legal instruments and mechanisms that cover a wide scope of IP and IK protection. The Constitution, that is the supreme law of the country, lays the foundation for the protection of IK. Although the fragmented approach to IK that existed before Act 6 of 2019 remains, attention henceforth is devoted to the legal, institutional and social requirements that are outlined in Act 6 as it is the primary statute for the promotion and protection of IK in South Africa. This *sui generis* approach to the regulation of IK approaches the matter from a tailor-made approach instead of locating IK within the realm of the traditional forms of intellectual property. For example, the law requires some form of registration of the IK for it to be protected. Trustees are appointed to represent the community(ies) and ensure that the community(ies) benefit from their IK through licencing agreements with those who seek to commercialise the IK subject to exceptions. The objective is to ensure that an indigenous community must establish rights in the source IK. They must exercise ownership and control through their own economic exploitation of IK or licensing others to do so. Most importantly, they are empowered to protect their rights from infringement.

Within this creative tension of law, culture and economics, the purpose of this report is to explore how CCI practitioners who utilise or are interested in using IK as a primary knowledge or data source for the production of their goods and services can engage with the indigenous knowledge system, policy and regulatory frameworks governing indigenous knowledge in South Africa. In so doing, the report firstly unpacks policies that mediate the IK space. These include, among others, the White Paper on Science and Technology (1996), Indigenous Knowledge System Policy (2004), Revised White Paper on Arts, Culture and Heritage (DSAC, 2017), White Paper on Science, Technology and Innovation (2019) etc. Secondly, it will explore the legal and institutional architecture that frames requirements for commercialising IK. Some of the principal legal pieces examined include the Intellectual Property Laws Amendment Act 28 of 2013 and the Protection, Promotion, Development and Management of Indigenous Knowledge Act 6 of 2019 etc. Thirdly, in view of the existing legal and policy terrain, the report consistently explores the current state of IK systems and their potential to contribute to further development of the CCIs.

### 3 AIM AND OBJECTIVES OF THE RESEARCH

The overarching aim of this research report is to explore how cultural and creative industries practitioners who utilise or are interested in using indigenous knowledge as a primary knowledge or data source for the production of their goods and services can engage with the indigenous knowledge system, policy and regulatory frameworks governing indigenous knowledge in South Africa. Accordingly, the research was guided by the following objectives:

- (1) Scoping indigenous knowledge systems policy environment
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- (4) Identifying the legal, institutional, and social requirements pertaining to the commercialisation of indigenous knowledge systems.

### 4 LOCATING THE RESEARCH WITHIN UNESCO DOMAINS

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) has several mandates that include encouraging collaboration in education, science and culture (UNESCO, 2015). This involves ensuring respect for diversity as well as promoting and supporting the preservation of culture and heritage in all United Nations member states (UNESCO, 2009; UNESCO 2015). In the interest of global culture and heritage, UNESCO has categorised culturally productive industries, activities and practices into various cultural domains. According to UNESCO (2009: 22), “the purpose of the cultural domains is to measure cultural activities, goods and services that are generated by industrial and non-industrial processes. Cultural goods and services encompass artistic, aesthetic, symbolic and spiritual values.” Given that IK is not limited to a single manifestation, but has multiple crosscutting elements, this study thus cuts across five UNESCO domains, namely, Domain A (Cultural and Natural Heritage), Domain B (Performance and Celebration), Domain C (Visual Arts and Crafts), Domain E (Audio-Visual and Interactive Media) and Domain F (Design and Creative Services). Further, this study also speaks to UNESCO’s five domains of intangible cultural heritage. These are “(1) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage (2) performing arts (3) social practices, rituals and festive events and (4) knowledge and practices concerning nature and the universe (5) traditional craftsmanship” (UNESCO, 2003).

### 5 SCOPE OF THE STUDY

At a global level, the CCIs sector is characterised by a terminological clutter and conceptual slippages. The terms cultural industries and creative industries are quite often used interchangeably and inconsistently. According to the ‘Revised White Paper on Arts, Culture and Heritage’ (DSAC, 2017):

It should be noted that the Creative and Cultural Industries are not treated as separate from the sub-sectors of art, culture and heritage ..., the CCIs are viewed as strategic components in an integrated approach which combines the inherent, social, cultural and economic values underpinning this policy. Hence, the CCI policies ... are to be implemented by DAC and the various ACH councils, institutions and organisations of the sector (DSAC, 2017: 41).

However, given the centrality of IK in the CCIs sector, the same policy document repeatedly affirms close ties between the DAC and the DST. However, the latter, whose is socio-economic development through scientific research knowledge, research and innovation, adopts a more embracing perspective regarding the utilising cultural resources for socio-economic development. Therefore, while this report adopts the DSAC’s (2017) scoping of CCIs, it does not exclude other industries that make use of cultural content or IK in the

production of their goods and services. Some of them fall under the agriculture, food production, health and pharmaceutical industries. These industries have invested significant resources regarding the use and protection of IK. Such scoping is consistent with the UNESCO (2009) framework which acknowledges “not only the traditionally recognised (or core) “cultural” occupations and industries, but also the more commercial, for-profit, “creative” sectors.

This research is primarily concerned with the policy, legislative and regulatory framework within which CCIs practitioners produce their goods and services using IK as primary content and data. It is an exploratory study, which limits it to exploring the policies, systems and legislations around IK in the CCIs. It does not extend itself to interrogating the effectiveness and efficacy of the policies, systems and legislations, which should constitute a vital future undertaking for the SACO. However, it suffices to note that although this were to be done, there would be challenges associated with gaps between policy formulation and policy implementation.

## 6 METHODOLOGY

This is a qualitative study based on secondary data. Through critical content analysis of relevant IK literature we were able to determine the policy, legislative and regulatory frameworks governing the use of IK as a primary knowledge or data source for the production of goods and services by CCIs practitioners. Given that existing literature is largely prospective in terms of its articulation and provisions, we proceeded to interrogate the implementation of the key provisions such as the establishment of certain structures and systems in relation to IK, and explore their functions. By so doing, we managed to explore in its fullest the policy, legislative and regulatory framework governing the use of IK. For a qualitative exploratory study, this is methodologically sufficient.

However, beyond the scope of this study and in future, it would be intellectually enriching to go beyond secondary data and use field based primary data collection techniques that include interviews and questionnaires to investigate practical implementation modalities from those managing IK systems and experiential information of CCIs practitioners working within the established frameworks. That way, it would be possible to generate crucial empirical evidence regarding the implementation of the relevant policies and legislation, as well as the efficacy of the systems that govern and facilitate the use of IK as primary content and data for the production of goods and services in the CCIs in South Africa.

## 7 INDIGENOUS KNOWLEDGE SYSTEMS POLICY ENVIRONMENT

South Africa takes prides in its rich cultural heritage that befits the cultural diversity of population making up the nation. However, this was not the case during the apartheid era where indigenous populations, their cultures and knowledge systems were suppressed, marginalised and ridiculed. The disregard and contemptuous attitude towards IK was consistent with the underlying principle of separate development that governed apartheid. Underpinned by core constitutional principles and democratic values, post-apartheid South Africa was obliged to pursue corrective measures of redress towards human dignity, the achievement of equality, the advancement of human rights and freedoms, and the pursuit of social justice, non-racialism and non-sexism. A conducive policy environment was necessary to recognise, affirm, promote, develop and protect IK in order to ensure that indigenous populations became an integral component of the democratic South Africa. Fig. 1 below illustrates the building blocks of this South Africa’s IK policy structure:

Fig. 1: Policy Building Blocks towards a Framework for the Use of IK



While the White Paper for Science and Technology (Department of Arts, Culture, Science And Technology (1996) reiterated the relevance of knowledge and innovation in the new economy that was also envisaged to be more inclusive of South African society, it did not give due prominence to IK beyond pondering on the possibility of using “local knowledge” together with “expertise and technology”. Similarly, the Revised White Paper on Arts, Culture and Heritage’ (DSAC, 2017) simply provides broad policy outlines for all the arts and heritage disciplines without sustained emphasis on IK. To its credit though, it “positions the sector to creatively respond to globalisation, environmental challenges, job creation and sustainable employment, arts, culture and heritage infrastructure development and improvements in education and training to strengthen the links between social, cultural and economic strategies” (DSAC 2017: 14). In addition, it calls upon all government departments to ensure that culture is integrated into sustainable development policies, plans and programmes at all levels (DSAC 2017: 16). The adoption of the Indigenous Knowledge Systems Policy (Department of Science and Technology (DST), 2004:9), henceforth the IKSP, was a watershed moment in IK sphere in South Africa as it articulated the following as anchors of the sphere:

(1) affirmation of African cultural values in the face of globalisation – a clear imperative given the need to promote a positive African identity (2) practical measures for the development of services provided by IK holders and practitioners, with a particular focus on traditional medicine, but also including areas such as agriculture, indigenous languages and folklore (3) underpinning the contribution of indigenous knowledge to the economy – the role of indigenous knowledge in employment and wealth creation; and (4) interfaces with other knowledge systems, for example indigenous knowledge is used together with modern biotechnology in the pharmaceutical and other sectors to increase the rate of innovation (DST, 2004:9)

Adoption of the Indigenous Knowledge Systems Policy was not only crucial for the recognition of the religious, cultural and linguistic rights of the indigenous populations, but also for inclusive development given the socio-economic potential of IK as primary content and data for the production of goods and services in the CCIs. This is more so given that the policy specifically speaks directly to the “[m]arginalisation of IK and its practitioners under apartheid” as an issue of concern that democratic South Africa needs to correct in line with its human development agenda. This was reinforced by

the then Minister of Science and Technology (2004-2008), Mosibudi Mangena, who argued that the IKSP seeks to provide “a basis upon which indigenous knowledge can be used to make more appropriate interventions” that would “lead to substantial improvements in the lives of many citizens and their living conditions”. This would include not only the CCIs practitioners, but also more importantly, the indigenous communities who are the custodians of IK.

However, the IKSP explicitly obliges other government departments not only to comply but also to develop their own policies in furtherance to the IKSP provisions. Accordingly, this means IKSP as an overarching policy framework has definite implications for several government departments, including the Department of Sports, Arts and Culture, Department of Basic Education, Department of Higher Education, Science and Technology, Department of Trade and Industry, among others, which harness IK in executing their own mandates. The respective roles of these departments emerge clearly in the IKSP implementation activities, which constitute the key elements and structures of IKS discussed in the next section of the report. The advisory and oversight function served by the IKS Inter-Departmental Committee, provided for by the IKSP, is a clear indication of all-embracing scope of the IKSP as a policy framework. Given such a scope, the IKSP development had to acknowledge the milestones and on-going work in other departments in which IK inputs are used:

For example, the Department of Arts and Culture has spearheaded a national language policy and is investigating the promotion and copyright of indigenous music and art forms. Traditional Health Practitioners legislation has been developed by the Department of Health and mandates the establishment of a regulatory body to be known as the Traditional Health Practitioners Council, that will preside over the activities of approximately 200 000 South African traditional healers. The Department of Science and Technology has established a programme to support research on medicinal plants and other aspects of IKS at the National Research Foundation (DST, 2004)

With its implications for other government departments, the IKSP would necessitate the development of legislation governing the use of IK as primary content and data, as shown in a later section of this report, as well as further sector-specific policy development. One relevant example is the Indigenous Knowledge Systems Trade Policy Framework (2006) developed by the Department of Trade and Industry. This policy outlines a framework for “the use of intellectual property as a tool for protecting indigenous knowledge systems” (Department of Trade and Industry, 2006:1). Recognising the potential of IK in South Africa’s economic development, this policy further advances the following overall recommendations for the different tiers of the government:

(1) embark on a legislative review based on the IP Policy deliberations (2) have a co-ordinated (departmental) approach when legislating for the protection of traditional knowledge (3) influence member states of the regional trading blocks such as SACU, SADC and others in legislating for the protection and commercialisation of traditional knowledge (4) adopt the IP Policy approach when it conducts trade negotiations and cultural relationship (5) approach the issue of traditional knowledge holistically and evenly, for example not promoting genetic issues at the expense of cultural issues (6) build appropriate capacity for implementing the IP Policy and legislation, including developing negotiation skills of communities, formation of development trusts, establishing national authorities and collecting societies, etc; and (7) do a benefit analysis of the traditional knowledge “industry (Department of Trade and Industry, 2006:20).

Most of the above recommendations pertaining to legislation are explored in more detail in subsequent sections of this report. For now, it suffices to note that beyond the IKSP, which provides a broad policy framework, South Africa has responded to the need of centering IKS in its society and economy through further policy instruments relevant to specific departments. The policy intent articulated in the White Paper on Science, Technology and Innovation (Department of Science and Innovation, 2019:33) reiterates the commitment “to strengthen the recording, protection and utilisation of this knowledge, to the benefit of the knowledge holders and the country”. As they produce goods and services within the CCIs, relevant practitioners need to work within the IKSP framework, the spirit of the 2019 White Paper on Science, Technology and Innovation and the framework for the Protection of Indigenous Knowledge through the Intellectual Property System. However, policies and debates are expressions of aspirations. In their endeavour to produce their goods and services using IK as primary content and data, CCIs practitioners have to deal directly with specific structures established to give effect to the spirit of the policy provisions. The exploration of the state of IKS in South Africa is thus even more vital.

## 8 LEGAL, INSTITUTIONAL AND SOCIAL ENVIRONMENT FOR COMMERCIALISATION OF IKS

In addition to the foregoing policy provisions, South Africa has legal instruments and mechanisms that cover a wide scope of IP and IKS protection. Although focus herein is more on the South African context, it is important to highlight international and regional instruments that have a bearing on the requirements pertaining to the commercialisation of IKS on South Africa. Therefore, an overview of the international and regional instruments and organisations that inform the national approaches is done before the discussion shifts to local mechanisms. It is also important to highlight from the onset that although the piecemeal approach to IKS that existed before Act 6 of 2019 somewhat remains, attention will be devoted to the legal, institutional and social requirements that are outlined in the Act as it is the primary statute for the promotion and protection of IKS in South Africa.

### 8.1 International Perspectives on Indigenous Knowledge Systems

South African is party to and subscribes to international instruments and mechanisms that provides various legal, institutional and social requirements pertaining to the commercialisation of IKS. At international level, the International Covenant on Civil and Political Rights (ICCPR) Art 1 provides for the “right of self-determination for all peoples, including the right to determine one’s political status and economic, social and cultural development.” (United Nations, 1976). This is reinforced in Article 1, 27 which contains the “right to enjoy their own culture, profess and practice their own religion and to use their own language” (United Nations, 1976). The ICCPR thus establishes the ground norms that informs some of the South African national approaches to the protection of IKS that have since emerged.

Together with the ICCPR and the Universal Declaration of Human Rights (UDHR), the International Covenant on Economic, Social and Cultural Rights (ICESCR) forms part of the International Bill of Human Rights Adopted and proclaimed by General Assembly resolution 217 A (III) of 10 December 1948. The ICESCR contains provisions that give effect to the protection of IKS. These are the

right to work, including the opportunity to gain a living through work freely chosen or accepted, as well as the right of everyone to the enjoyment of just and favourable conditions of work; right of everyone to take part in cultural life, to enjoy the benefits of scientific progress and its applications, and to benefit from the protection of the moral

and material interests resulting from any scientific, literary or artistic production of which he or she is the author (Arts 6, 7 and 15) (United Nations, 1966)

Yet, perhaps, the most direct and relevant is the United Nations Declaration on the Rights of Indigenous Peoples (United Nations, 2007). The declaration states that

indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions. (Art 31) (United Nations, 2007).

Although these rights are skeletal, they inform the application and implementation we find in practice. Apart from these United National instruments, there are other key international institutions and instruments for the protection of IKS. These include the World Intellectual Property Organisation (WIPO). The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore is currently undertaking text-based negotiations with the objective of reaching agreement on a text(s) of an international legal instrument(s), which will ensure the effective protection of traditional knowledge, traditional cultural expressions and genetic resources. Also important is the World Trade Organisation and its Trade related Aspects of Intellectual Property Rights (TRIPS Agreement). The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity is an international agreement which aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way; and also the Food and Agriculture Organisation (FAO) International Treaty on Plant Genetic Resources for food and Agriculture.

There are also instruments at continental level that must be kept in mind such as the African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources which aims to protect Africa's common biological diversity and the livelihood systems dependent on it with a common tool. South Africa is not yet party to the African Regional Intellectual Property Organization (ARIPO) Protocol on the protection of traditional knowledge and expressions of folklore. However, ARIPO approaches will have a bearing on the treatment of IK in the region in which South Africa belongs, even with or without adoption of its instruments. At SADC level, the Protocol for Protection of New Varieties of Plants in the Southern African Development Community aims to provide for the establishment of an effective system of plant variety protection; promote the development of new varieties of plants for the benefit of the region; and provide for the grant and protection of breeders' rights.

## 8.2 South African Legal Framework

In South Africa, the Constitutional protection afforded by section 25 of the Constitution is a fundamental right from which the recognition and protection of intellectual property flows from. There is a plethora of legislation that promotes and give effect to this right. Apart from the constitution, South African law has various pieces of legislation that deal with intellectual property. These are:

- Trade Marks Act 194 of 1993 which provides for the registration of trade marks, certification trademarks and collective trademarks; and to provide for incidental matters

- Patents Act 57 of 1978 which provides for the registration and granting of patents for inventions and for matters connected therewith.
- Copyright Act 98 of 1978 which regulates copyright and to provide for matters incidental thereto.
- Designs Act 195 of 1993 which provides for the registration of designs and for matters connected therewith.
- Intellectual Property Rights from Publicly Financed Research and Development Act 51 of 2008 which provides for more effective utilisation of intellectual property emanating from publicly financed research and development; establishes the National Intellectual Property Management Office and the Intellectual Property Fund; provides for the establishment of offices of technology transfer at institutions; and to provide for matters connected therewith.
- National Environmental Management: Biodiversity Act 10 of 2004 which provides for: the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act 107 of 1998; the protection of species and ecosystems that warrant protection; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and matters connected therewith.
- Merchandise Marks Act 17 of 1941 which makes provision concerning the marking of merchandise and of coverings in or with which merchandise is sold and the use of certain words and emblems in connection with business.
- Plant Breeders' Rights Act 15 of 1976 which provides for a system where plant breeders' rights relating to varieties of certain kinds of plants may be granted and registered.

This individualistic nature of intellectual property regimes creates several complications, when applied to local communities. They fail to take into account the fact that these communities have a holistic approach to their environment and do not separate the resources from which their livelihood stems into distinct economic and social assets (DST, 2004: 15). A number of linked legislative programmes apply in respect of IKS and will be administered by several Departments. For example, the Biodiversity Act provides for a National Authority that will grant approvals for access to, and collection and utilization of biological resources. This piecemeal approach has been largely necessitated by the absence of a singular approach. Unfortunately, not even the recent and upcoming laws seek to bring all IKS regulation under one statute. However, apart from these highlighted statutes, the most important instruments for IKS at this stage are the Intellectual Property Laws Amendment Act 28 of 2013 and the Protection, Promotion, Development and Management of Indigenous Knowledge Act 6 of 2019. The Act 28 of 2013 which has remained unimplemented approaches IK protection from an Intellectual Property perspective, i.e. it seeks to protect IK within the existing framework of Intellectual Property. The recent Act 6 of 2019 though, introduces a *sui generis* approach that treats IK as deserving protection in its own right and thus worthy of protection without having to fit in the current domains of intellectual property.

### 8.2.1 Intellectual Property Laws Amendment Act 28 of 2013

This Act aims to provide for the recognition and protection of certain manifestations of indigenous knowledge as a species of intellectual property. Thus it amends the Performers' Protection Act, 1967 to provide for the recognition and protection of performances of traditional

works. The Act amends the Copyright Act, 1978 to provide for the recognition and protection of indigenous works; to provide for the establishment of a National Council in respect of indigenous knowledge; to provide for National Databases for recording indigenous knowledge and to provide for the recording of indigenous works; and to provide for the establishment of a National Trust Fund for Indigenous Knowledge. The Trade Marks Act, 1993, is amended to provide for the recognition of indigenous terms and expressions and for the registration of such terms and expressions as trademarks; to create for this purpose a further part of the trademarks register; to provide for the recording of indigenous terms and expressions; and to provide for further protection of geographical indications. The Act also amends the Designs Act, 1993 to provide for the recognition and registration of indigenous designs; and to create for this purpose a further part of the designs register.

The Intellectual Property Laws Amendment Act also introduces statutory provisions to provide for the establishment of a National Council in respect of indigenous knowledge, a National Database for the recording of indigenous knowledge and a National Trust and Trust Fund for purposes of indigenous knowledge. Although the Intellectual Property Laws Amendment Act seeks to protect indigenous cultural expressions or knowledge by amending Copyright, Trademarks, Designs, Performers', there is some consensus that this approach is inappropriate as it seeks to fit IKS within the existing traditional forms of intellectual property. This Act is yet to come into force and others believe it may never do so. Therefore, for the purposes of this report, it is adequate to simply provide this overview of the Act.

#### 8.2.2 Promotion, Development and Management of Indigenous Knowledge Act 6 of 2019

In the absence of a multilateral approach to protect what has become known as “indigenous (or traditional) knowledge, or indigenous (or traditional) cultural expressions”, South Africa is taking a national approach to protect indigenous knowledge. The Promotion, Development and Management of Indigenous Knowledge Act 6 of 2019 takes an approach of its own kind to protect indigenous knowledge. It has created a special protection which is separate from the traditional forms of intellectual property (copyright, patent, trademarks and design). However, there is criticism of the same Act to the extent that it makes itself subject to other laws dealing with intellectual property in that it might very well be undermining the creativity of its own uniqueness. Moreover, though quite commendable and of its own kind, the national approach also means that only South Africans will be restrained from exploiting registered Indigenous Knowledge whilst other countries can use it without censure. Thus, it will also be crucial to push this matter at international stage through any suitable approaches available to the government including the regional and international platforms highlighted above. The Act intends to:

- to provide for the protection, promotion, development and management of indigenous knowledge;
- to provide for the establishment and functions of the National Indigenous Knowledge Systems Office;
- to provide for the management of rights of indigenous knowledge communities;
- to provide for the establishment and functions of the Advisory Panel on indigenous knowledge;
- to provide for access and conditions of access to knowledge of indigenous communities;
- to provide for the recognition of prior learning; and
- to provide for the facilitation and coordination of indigenous knowledge-based innovation (section 3)

It is important to note from the onset that although this Act is the accepted *sui generis* approach to the protection of IKS over the traditional approaches, the Act does not seek to override other instruments. In fact, it clearly states that it “does not alter or detract from any right in respect of any statute or the common law” and that “[c]ompliance with any procedures or requirements laid down in this Act does not constitute compliance with any procedures or requirements imposed in any other Act.” However, particular focus will be made to the requirements for commercialisations of IKS under this Act.

Under this Act, it is clear that for IKS to be protected they must be registered and protected as constituting property in terms of section 25 of the Constitution. (Section 9). An indigenous community wishing to register IK already in existence at the time of commencement of this Act, is also allowed to register. (Section 33). This protection can be perpetual as long as the IK has been passed on from generation to generation within an indigenous community; has been developed within an indigenous community; and is associated with the cultural and social identity of that indigenous community.(section 10 and 11). Otherwise, it will thus fall into the public domain from the date of proven ineligibility with this criteria. (Section 10). The custodianship of IK eligible for protection vests in the trustee of that indigenous community, who holds the IK in trust on behalf of the indigenous community and is responsible for and accountable to the indigenous community for the protection of their rights. Where the indigenous community of the relevant IK cannot be identified and designated, the NIKSO must act as custodian of that IK, with the rights and obligations of a trustee in respect of that IK. (Section 12). These indigenous communities have exclusive right to any benefits arising from its commercial use of the IK, to be acknowledged as its source, and to limit any unauthorised use of the IK.

In terms of s13 of this Act, a person wishing to make commercial use of indigenous knowledge must apply through NIKSO for a licence authorising the use of that indigenous knowledge and enter into a licence agreement with the trustee of the relevant indigenous community for the use of that indigenous knowledge as facilitated by NIKSO. (Section 26). The application must indicate the identity of the indigenous community; the place of origin of the indigenous knowledge; and whether prior informed consent of the indigenous community has been obtained and a benefit sharing arrangement entered into with that indigenous community. Even a member of the indigenous community holding indigenous knowledge who individually wishes to make commercial use of the indigenous knowledge is also required to obtain permission from the indigenous community and may only make commercial use of that indigenous knowledge in a manner and subject to the indigenous community imposed terms and conditions as formalised in an agreement with the trustee. (Section 13 (3)). Where a licence is issued for IK which of for a functional nature, royalties are payable for 20 years. This period is 50 years if the licence is for cultural expressions. However, no prior informed consent for the use of indigenous knowledge is required for criticism or academic review; reporting news or current events; judicial proceedings; any use that is incidental to the above purposes; and in circumstances of national emergencies or natural disasters, as long as the relevant indigenous community is compensated for the use of their indigenous knowledge. Thus, it is no excuse for lack of compensation that, for instance, the world is facing a COVID-19 pandemic. It is an offence to knowingly make commercial use of IK in a manner which is not in accordance with an agreement entered into with the indigenous community; and infringes the rights of that indigenous community. (Section 28). Also even where a licence has been granted a licence holder must acknowledge the relevant indigenous community by mentioning them or the geographical place from which the indigenous knowledge originated. (Section 26(5)).

As far as institutions are concerned, the Act provides for the establishment of a Registration Office for IK (section 17). The Act also creates a Curator of indigenous knowledge who is appointed by the Minister and is responsible for the control of the Registration Office, subject to the directions and instructions issued by the Minister or the Director-General as delegated

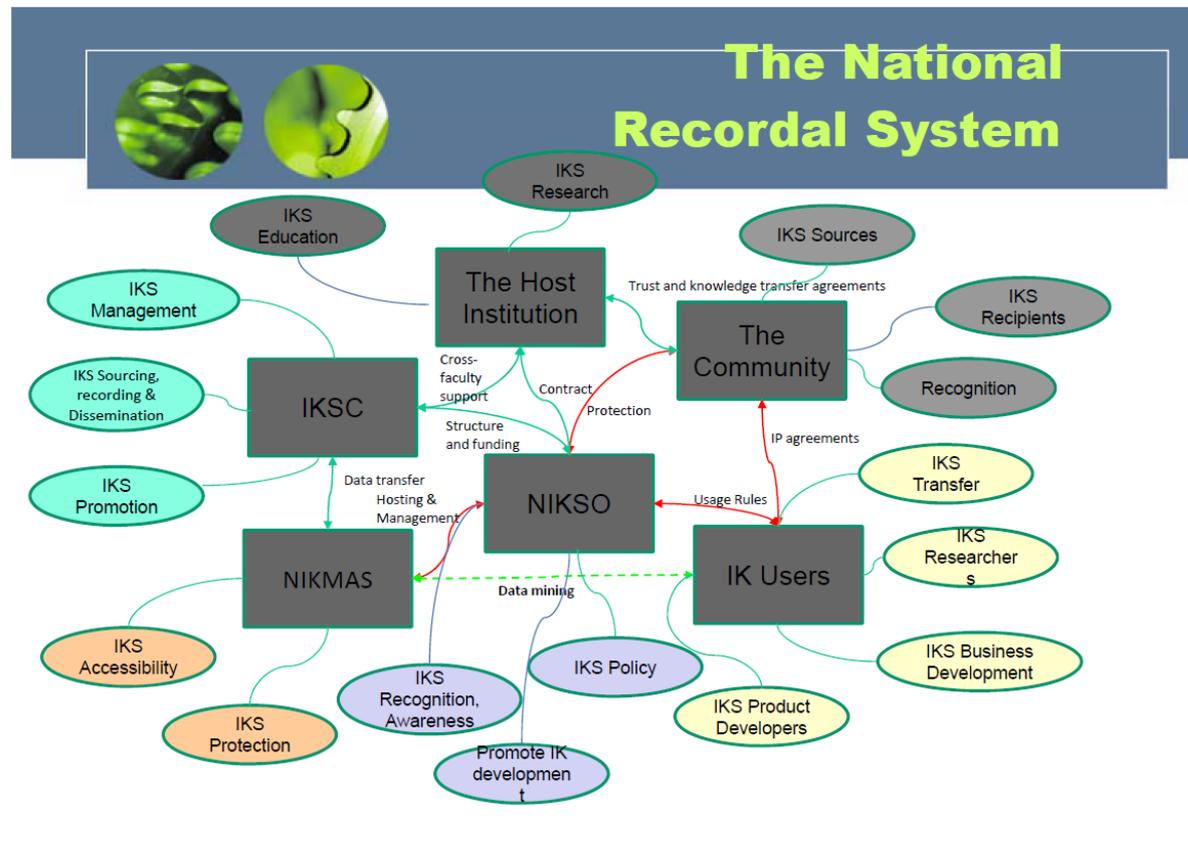
by the Minister. A person who wants to act as a trustee on behalf of an indigenous community gets his/her permission from the Curator. (Section 18). Further, if IK originates in a foreign jurisdiction, it must be given the same protection granted to indigenous knowledge originating in the Republic, if the laws of that foreign jurisdiction provide reciprocal protection to indigenous knowledge originating in the Republic. (Section 29(1)). Where IK originates from more than one indigenous communities of foreign jurisdictions the proceeds shall equitably be shared by the communities involved through a benefit sharing agreement. (Section 29 (2)).

Briefly, this *sui generis* approach to the regulation of IKS has largely been seen as the appropriate legislative approach to the protection of the rights of indigenous communities. The upcoming laws require some form of registration of the IKS for them to be protected. Trustees are appointed to represent the communities and ensure that the communities benefit from their IKS through licencing agreements with those who seek to commercialise the IK subject to exceptions. Although this recent legislation is yet to come into force, its objectives are very clear. Individual or indigenous community must establish right(s) in the source IK. They must exercise ownership and control through their own economic exploitation of IK or licencing others to do so. Most importantly they are empowered to protect their rights from infringement.

## 9 CURRENT STATE OF INDIGENOUS KNOWLEDGE SYSTEMS

The foregoing legal and policy environment thus provided the framework for South Africa to establish a comprehensive system that aims to facilitate the recording of IK at community level and ensure its protection at national level to facilitate its non-exploitative use, including in the production of goods and services in the CCIs. In essence, this means the use of IK has to benefit individual communities and protect them from exploitation while at the same time addressing human development challenges noted above. An analysis of existing structures, infrastructure and resource options is necessary in order to understand whether the legal and policy environment is translating into the creative and productive use of IK in the CCIs. To do so, one has to begin with an examination of progress regarding the establishment of relevant structures and infrastructure, the achievements and failures of the same. The totality of these structures and infrastructure constitute South Africa's National Recordal System (NRS) as captured in Fig 2 below:

Fig 2: South Africa's National Recordal System



The NRS represents an elaborate and complex system that we explain here in order to provide an understanding of the state of IKS in South Africa. At the core of this system is the National Indigenous Knowledge Systems Office (NIKSO), which was established in 2006 (Seleti, 2010) as the first major step towards the implementation of the IKSP. Its functions are:

- (1) to provide public resources according to identified priorities
- (2) to develop an implementation infrastructure for programmes related to these functions
- (3) to establish mechanisms for the nature and extent of relationships between IK holders and the research community, and the regulation of standards for information and material transfer agreements related to the IK
- (4) to consider application for intent to access IK and IKS and conditions of fair and equitable benefit sharing
- (5) to maintain liaison with other Government Departments, foreign governments, IK holders in other countries, technical experts representing foreign agencies, and members of the public and private sector concerned with the protection of IKS
- (6) to leverage funding to IKS laboratories and centres, and practitioners/holders for the purpose of research and development
- (7) to maintain and disseminate information on IKS; and
- (8) to advise indigenous/local communities/person on matters of dispute ... in collaboration with traditional leaders and other IKS stakeholders (DST, 2004: 22)

While the above were identified as long term responsibilities that will ensure developmental, beneficial and sustainable utilisation of IK in the CCIs, the NIKSO was charged with the following urgent priorities:

- (1) establishing the extent of IKS, the identity of IK holders and forms of social organization including the role of women
- (2) establishing a national IK register
- (3) auditing customary practices from the perspective of compliance with the Constitution
- (4) identifying IK and IKS information held in the databanks of public, academic and research institutions, and promoting the fair and equitable use of such IK
- (5) investigating and identifying in consultation with indigenous communities the different forms of ownership of IK, the

existing mechanisms for the protection of IK and IKS in terms of customary practices and laws of such communities; and (6) designing systems and procedures necessary for recognition and protection of each form of ownership and benefit sharing principles and guidelines. (DST, 2004: 23).

The NIKSO is thus the motherboard of the National Indigenous Knowledge Management System (NIKMAS), which facilitates IKS protection and accessibility. Although users can access IK directly through NIKMAS, Indigenous Knowledge Centres (IKSCs) were established at provincial levels and these facilitate the sourcing, recording and dissemination of IK at community level, within the confines of the above legal framework. Current IKSCs include: (1) Limpopo IKS Documentation Centre (Vuwani Science Centre) that covers Sinthimule, Mutale, Tsheda, Mpheni, Thengwe and Nsengeni communities (2) Northwest IKS Documentation Centre for Bakgatla Ba-Kgafela community (3) Free State IKS Documentation Centre (University of the Free State) that caters for Thaba Nchucu community (4) Eastern Cape IKS Documentation Centre (University of Fort Hare) that covers Tshengiwe community (5) KwaZulu-Natal IKS Documentation Centre (University of KwaZulu-Natal) for Warwick Muti Market (healers) and (6) University of Zululand (UniZulu Science Centre) that caters for Umhlabuyalingana, Nkandla and Mkwanzazi communities. All these IKSCs work with education and research institutions, libraries, museums, businesses, individuals who supply or use IK thus making possible IK access and recording at community level.

It is also important to note that for each element of the complex IKS architecture to serve its purpose, the IKSP envisaged a "holistic co-ordination and collaboration of all stakeholders and resources in the South African IKS" (IKSP, 2004: 25) sphere. To facilitate this within the national system, networking structures were created through which practitioners (IKSP, 2004: 9) can promote IK, its recognition, recording and progressive use within the dictates of South African law. These networking structures promote liaison within the national IKS architecture, including between IK holders, IKSCs.

Further, for IK to be productively utilised, investment has been crucial. An IKS Fund was established to support institutions that will assist indigenous and local communities in the categorisation and characterisation of their biological resources, innovations, practices and technologies (DST, 2004: 9). Since then, various funding streams have been developed to support, among others, curriculum development, small business development based on IK, public understanding of IK, IK practice and accreditation, research and development, IK innovation, IK protection, IKS Centres (DST, 2004: 25) In addition, the IKS Fund will remain at the forefront for local and indigenous communities, aimed at creating an enabling structure in order to yield high developmental and financial returns (DST, 2004: 26). Through the above, it is clear that South Africa has recognised the importance of IK by establishing a complex system through which the IKSP endeavour could be realised.

## 10 POTENTIAL OF INDIGENOUS KNOWLEDGE SYSTEMS TO CONTRIBUTE TO THE SECTOR

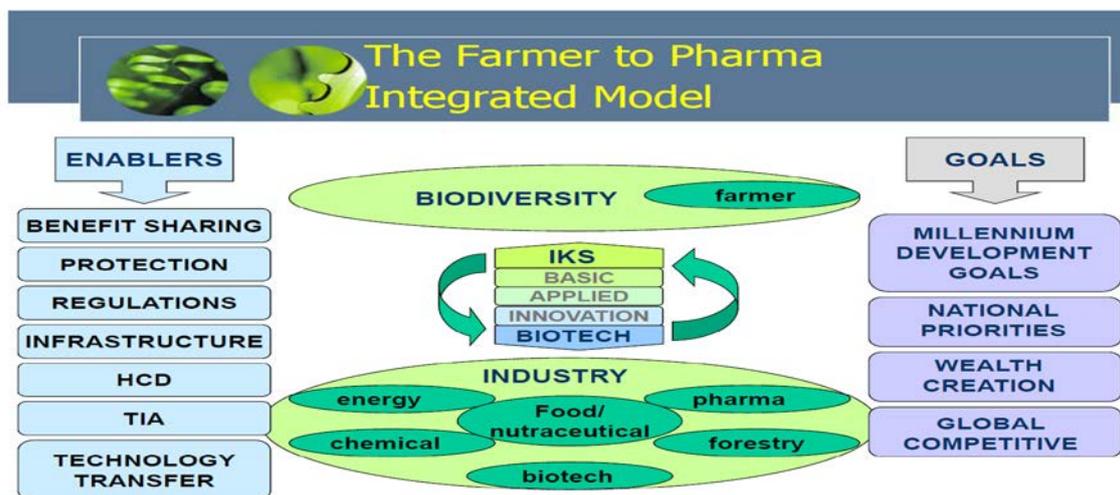
The potential of IK to contribute to the CCIs sector was realised from the early days of democracy with respect to projecting a demographically and culturally inclusive national outlook of a post-apartheid society. The greatest potential probably lies in the traditionally recognised (or core) cultural occupations and industries (such as performance and celebration, visual arts and craft, information, audio-visual and interactive media, design and creative services, as well as events, technical skills and production). Not only does this potential require harnessing through resourcing, but also through marketing and promotion, which will create consumers across the entire South African society. The consumption and appreciation of local artistic and cultural productions throughout the country would create that

sense of unity in diversity, and would strengthen a sense of belonging from previously marginalised African groups and the cultural minorities who continue to exist on the margins of society.

Since the major motivation behind CCIs from an economic perspective is creating employment and income for communities, marketing and promotion of artistic and cultural productions that utilise IK should also be promoted not only for social cohesion but in order to maximise earnings in the form of royalties. The potential for this exists locally because of a big market. Since local artists and practitioners face competition from around the world, especially with the growth of satellite television, digital television such as Netflix and social media affordances which expedite access to foreign content, it is therefore crucial to move “local is lekker” from being a cliché to an economic driver of utilising and consuming IK inspired goods and services. In so doing, South Africa needs to ensure that opportunities for income generation are not exploited by moguls who invest less only to reap more at the expense of community artists and IK holders. Extreme poverty in communities that are rich in IK and legendary artists who die as paupers indicate that the potential of IK and local talent generally is not capitalised for the greater good.

Further, the uniqueness of IK can be translated into unique products and services produced by practitioners in the CCIs. This could be true of either artistic and cultural productions, as well as goods that are produced through integrating IK in scientific value addition, production of material consumables like food, medicines, clothing material etc. The Farmer to Pharma Integrated Model (see Fig 4 below) proposed in the DST’s Ten Year Innovation Plan (2007) provides an example that CCIs can adopt and perfect, thereby not only serving national needs in a self-sustainable manner but also developing knowledge that can be patented as then exported to boost the economy.

Fig 4: The Farmer to Pharma Integrated Model



Source: Department of Science and Technology (2007)

Upon producing uniquely South African IK informed products, CCI artists and practitioners need to intensively exploit new technologies, including social media platforms to advertise and market their products and services globally. Benefit sharing agreements between CCIs or research institutions and specific communities who have been passing certain IK across generations may be mutually beneficial. An instructive example is the San community’s agreement with the Council for Scientific and Industrial Research (CSIR) regarding the Hoodia plant (Department of Science and Technology, 2004: 16).

However, some challenges regarding the optimal utilisation of IK remain, namely: contextual rhetoric and simplistic views of IK application; the focus on the knowledge content and assumption that IK is out there ready for harvesting; superficial and weak IKS research methodologies; inability to mainstream IKS within the education system at primary and tertiary levels; failure to accommodate IKS within the knowledge frameworks in private and public institutions; the lack of demonstrable success stories; piracy, misappropriation and misuse (Seleti, 2010: 18). Further, the integration of IK in education is among the issues associated with lack of curriculum transformation at all educational levels. For IK to be meaningfully integrated in education and in the relevant industries there is need to rise above rhetoric and simplistic approaches. Likewise, the challenges faced by IKSDCs in collecting and recording IK may be addressed with more public awareness and effective measures against piracy, misappropriation and misuse, which continue to undermine the positioning of CCIs as integral to the IK economy.

## 11 CONCLUSION AND RECOMMENDATIONS

South Africa has made some progress in terms of policy and developing a legal framework for the integration, regulation, utilisation and commercialisation of IK in the production of cultural goods and services. Among others, one of the most instructive policies in this regard is the IKSP of 2004. This policy captures government aspirations to exploit IK for the benefit of local communities who possess such special knowledge while at the same time protecting them from exploitative capitalist business systems. Its economic motivations of creating employment and income not only at individual but also at a national level consolidate endeavours expressed particularly by the DSAC that oversees the mandate on artistic and cultural productions. Accordingly, the policy responds to concerns that hamper IK development and usage under the prevailing socio-economic, legal and environmental context. Thus, it lays a solid foundation for the establishment of a complex IKS architecture and a legal environment within which CCIs practitioners can produce their goods and services using IK without jeopardising individual and community IK holders.

Alongside a progressive IK policy framework, there are various legal and institutional provisions in place to not only preserve IK for indigenous communities but equally so to ensure that the commercial exploitation of such is not detrimental but beneficial to indigenous communities. For example, the Intellectual Property Laws Amendment Act of 2013 and the Promotion, Development and Management of Indigenous knowledge Act of 2019 on a broader scale set out the legal requirements of how IK should be registered and how intended users should enter into benefit sharing agreements with indigenous communities. The purpose is to ensure that any commercial exploitation of IK does not happen without benefit to the community. Various mechanisms and institutions are set up by law to ensure transparency, efficiency and recording of IK. The Intellectual Property Laws Amendment Act of 2013 establishes a National Council in respect of indigenous knowledge, a National Database for the recording of indigenous knowledge and a National Trust and Trust Fund for purposes of indigenous knowledge. The Promotion, Development and Management of Indigenous knowledge Act of 2019 creates community representatives through trustees who are appointed by the curator. The curator is appointed by the Minister and is responsible for the control of the Registration Office, subject to the directions and instructions issued by the Minister or the Director-General as delegated by the Minister. Unfortunately, both these crucial two pieces of legislation are yet to come into force. Therefore, presently any recourse for the management of IKS for the benefit of indigenous communities has to be found in the existing traditional forms of intellectual property protection and promotion. Further, since these are national approaches the absence of a multilateral system deprives indigenous communities of any guarantee of the same legislative benefits when the IK is commercially exploited beyond

national borders. It is therefore important for authorities to pursue multilateral approaches in line with the national IKSP in order to protect local indigenous knowledge.

Further, the current state of IKS in South Africa indicates that progress has been made and compares favourably with other countries particularly in Africa. The NIKSO has been established to accommodate the NRS. The NRS makes the NIKSO a potential one-stop shop for CCI practitioners who wish to use IK to produce their goods and services as it is devolved to provinces and various communities within the provinces. Communities can therefore create records of their IK via IKDCs that would process the data before submitting to NIKSO. Through the system, communities may therefore be protected and they may enter into mutually beneficial agreements with prospective users of their IK. However, the system still requires more resourcing, particularly at community levels. Communities need to be educated about the benefits of submitting their IK in order to protect themselves and also get economic rewards when CCIs make profits.

Lastly, the study argues that there is indeed great potential for IK to contribute tremendously in the CCIs sector and to South Africa's economy in general. Economic fortunes can be derived for the sector, country and for specific communities that hold IK. While challenges of piracy and abuse of IK exist, it was noted that a large local and global market can be created through enhanced marketing and advertising using modern media and technologies. The comparative IK benefits enjoyed in industries such as agriculture, food production and pharmacy were also instructive in showcasing how IK has great potential for the CCI sector. However, there is still more work that needs to be done with respect to the legal requirements, infrastructure, financial resources and community awareness in order to fully realise the benefits of IK in the CCI sector.

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