

INTELLECTUAL PROPERTY APPROACHES TO THE PROTECTION OF TRADITIONAL KNOWLEDGE IN THE AFRICAN REGION

Emmanuel K. A Sackey¹
Ossy MJ Kasilo²

- 1 African Regional Intellectual Property Organization (ARIPO)
- 2 World Health Organization, Regional Office for Africa

Corresponding author
Emmanuel KA Sackey
E-mail esackey@aripo.org; yofisackey@yahoo.com



Traditional knowledge has played a significant role in the healthcare systems in countries of the African Region for centuries. Traditional medicines are presently used by nearly 80% of the population. Owing to the global resurgence in the use of natural products and the advent of the biotechnological industry, traditional knowledge is increasingly becoming a source of modern drug development and biotechnological inventions. Despite the important role of traditional knowledge, traditional communities are unable to protect their knowledge through the existing intellectual property system owing to the failure of the knowledge to satisfy the requirements for intellectual property protection, incompatibility in most cases between the traditional knowledge concepts and intellectual property as well as the prohibitive costs involved in patent registration. Studies conducted recently and the outcomes of global debates have suggested some policy and legal approaches that can be used to effectively protect traditional knowledge, including traditional medicine. This paper discusses concepts of traditional knowledge and provides policy and legal measures that have been developed at the international and regional levels for the protection and utilization of traditional knowledge for the benefit of the knowledge holders and society at large.

RÉSUMÉ

Pendant des siècles, les connaissances traditionnelles ont joué un rôle important dans les systèmes de soins médicaux des pays de la Région africaine. A l'heure actuelle, les médicaments traditionnels sont utilisés par près de 80% de la population. En raison de la réapparition dans le monde entier de l'utilisation de produits naturels et de l'arrivée de l'industrie biotechnologique, les connaissances traditionnelles deviennent de plus en plus une source de développement des médicaments modernes et d'inventions biotechnologiques. Malgré le rôle important des connaissances traditionnelles, les communautés traditionnelles sont incapables de protéger leurs connaissances en ayant recours au système de propriété intellectuelle existant, cela en raison de l'insuffisance des connaissances pour répondre aux exigences en matière de protection de la

propriété intellectuelle. Dans la plupart des cas, il y a incompatibilité entre les notions de connaissances traditionnelles et la propriété intellectuelle. Les coûts d'enregistrement des brevets sont également prohibitifs. De récentes études ainsi que les conclusions des débats conduits au niveau mondial, ont suggéré que certaines approches politiques et juridiques pourraient être utilisées pour protéger efficacement les connaissances traditionnelles, y compris la médecine traditionnelle. Ce document aborde les concepts des connaissances traditionnelles. Il propose des mesures politiques et juridiques qui ont été développés à l'échelle internationale et régionale pour la protection et l'utilisation des connaissances traditionnelles au profit des détenteurs de savoirs et de la société dans son ensemble.

SUMÁRIO

O conhecimento tradicional tem desempenhado durante séculos um papel significativo nos sistemas de saúde em países da Região Africana. Os medicamentos tradicionais são presentemente utilizados por cerca de 80% da população. Devido ao ressurgimento global do uso de produtos naturais e ao advento da indústria biotecnológica, o conhecimento tradicional está a tornar-se cada vez mais numa fonte de desenvolvimento e invenções biotecnológicas de fármacos modernos. Apesar do importante papel do conhecimento tradicional, as comunidades tradicionais são incapazes de proteger o seu conhecimento através do sistema de propriedade intelectual existente, devido ao facto deste tipo conhecimento ser incapaz de satisfazer os requisitos de protecção da propriedade

intelectual, à incompatibilidade na maioria dos casos entre os conceitos do conhecimento tradicional e da propriedade intelectual, assim como aos custos proibitivos envolvidos no registo de patentes. Estudos conduzidos recentemente e os resultados dos debates globais sugeriram algumas abordagens políticas e legais que podem ser utilizadas para proteger eficazmente o conhecimento tradicional, incluindo a medicina tradicional. Este documento discute os conceitos de conhecimento tradicional e apresenta medidas políticas e legais que foram desenvolvidas aos níveis internacional e regional para a protecção e utilização do conhecimento tradicional em benefício dos detentores do conhecimento e da sociedade em geral.

Intellectual Property (IP) is a legal concept which deals with creations of human ingenuity. Such creations, whether they be inventions, designs, trademarks or artistic works such as music, books, films, dances, sculpture or photography are considered and protected as property for a certain period in time provided that the creations meet a certain criteria. The intellectual property system is dynamic, characterized by its ability to evolve and adapt to current technological advances, especially in information technology and biotechnology as well as the evolution of society itself.

Traditionally, IP laws have been made as state-facilitated contracts between the public and the creators. Yet Intellectual property rights (IPRs) are not ends in themselves but provide humanity with a decentralized system of innovation in science and culture as well as give us a way of protecting and rewarding innovators thereby encouraging firms to produce quality products and allowing consumers to rely on the identity of the products they purchase.

As intellectual property protection has expanded exponentially in breadth, scope and terms over the last 30 years, the fundamental principle of balance between the needs of the public and the creators have been questioned. The various forms of IP protection are generally tailored to fulfil various legal, economic and social functions. These terms of protection can vary from one jurisdiction to another so long as they comply with the minimum requirements set forth in international agreements such as the TRIPs

Agreement. The primary purpose of most branches of the intellectual property system (excluding trademarks and geographical indications) is to promote and protect human intellectual creativity and innovation. IP law and policy does so by striking a careful balance between the rights and interests of innovators and creators on the one hand, and of the public at large on the other (1). Thus, by granting exclusive right in an invention, for example, the IP system encourages further innovation, rewards, creative effort and protects the investment necessary to make and commercialize the invention. The promotion and protection of IP can also spur economic growth, create new jobs and industries and enhance the quality and enjoyment of life.

However, IP regimes have been based on notions of individual property ownership, a concept that is often alien and can be detrimental to many local and traditional communities. An important purpose of recognizing private proprietary rights is to

enable individuals to benefit from products of their intellect by rewarding creativity and encouraging further innovation and invention. Many traditional communities experience difficulties in attempting to protect their knowledge through the existing IP system due to the failure of traditional knowledge (traditional knowledge) to satisfy the requirements for IP protection. In cases where this is possible, the prohibitive costs of registering and defending patents and other IPRs may curtail effective protection. Many incompatibilities between traditional knowledge and IPRs have begun to surface with the rapid global acceptance of the conventional IP concepts and standards. These incompatibilities occur when ownership of traditional knowledge is inappropriately claimed or traditional knowledge is used by individuals or corporations that belong to local communities primarily in developing countries.

This article discusses the know-how aspect of traditional

knowledge which includes traditional medicine. The broader concept of traditional knowledge incorporating elements of folklore and traditional cultural expressions has not been covered in this paper. The aim of the article is to create awareness on this subject and what has so far been done by the various stakeholders including countries, the African Union, regional organizations on intellectual property, WIPO and the world health organization.

GLOBAL RESURGENCE IN THE USE OF TRADITIONAL KNOWLEDGE AND ITS ASSOCIATED GENETIC RESOURCES

Over the past two decades, biotechnology, pharmaceutical and human healthcare industries have increased their interest in natural products as sources of new biochemical compounds for medicines, chemical and agro-product development. This has brought about the resurgence of interest in traditional knowledge and associated genetic resources. This interest has been stimulated by the importance of traditional knowledge as a lead in advancing the frontiers of science and technology. Traditional knowledge has been extensively used to gain useful understanding of how ecological

systems generally work and interrelate. This knowledge has contributed to the production in modern economy and played significant role in the Research and Development programmes of industry. Traditional knowledge has been and continues to be an element in the commercialization of natural products. It is currently supplied to commercial interests through databases, academic publications or field collection. This undue exploitation needs to be paid for in some form. Concern over the growing interest in and economic importance of traditional knowledge has generated a wide range of public policy issues including those associated with IP protection.

In spite of the important role traditional knowledge plays in sustainable development, it continues to be largely disregarded in development planning. It currently plays only a marginal role in biodiversity management and its contribution to the society in general is neglected. Furthermore, traditional knowledge is being lost under the impact of modernization and the ongoing globalization processes, yet, it may contribute to improved development strategies in several ways. These include helping identify cost-effective and sustainable mechanisms for poverty alleviation that are locally manageable and

locally meaningful; a better understanding of the complexities of sustainable development in its ecological and social diversity, and helping to identify innovative pathways to sustainable human development that enhance local communities and their environment.

CHARACTERISTICS OF TRADITIONAL KNOWLEDGE

The swell of academic and institutional interest surrounding traditional knowledge has resulted in a wide array of terms and definition that attempt to gather within their meaning all that indigenous people know including indigenous science, traditional knowledge, local knowledge, traditional ecological knowledge and traditional environmental knowledge. Nonetheless, there are working definitions that have been developed by researchers, institutions and indigenous people's organizations that attempt to cover the range of meanings associated with traditional knowledge such as Brooke (1993) (3) and ARIPO Protocol on the Protection of traditional knowledge and Expressions of Folklore (2009). This later defines traditional knowledge 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" (4).

In considering the characteristics of traditional knowledge, it is to be understood that humankind has used this informal knowledge system for thousands of years, being transmitted and developed by one generation to the next. It refers to the human tradition of passing down knowledge throughout the ages and improving it with experience over time; and is the basis for local level decision making in areas of contemporary life, such as natural resource management, nutrition, food preparation and health. The existence of traditional knowledge is dependent on and determined by the maintenance of the culture from one generation to the other.

In order to effectively protect traditional knowledge, a deeper

understanding is required to enable the determination of appropriate policy choices for its protection. There are two schools of thought about how traditional knowledge is perceived: one views traditional knowledge holistically and believes that the various component of traditional knowledge cannot be segregated; the other views traditional knowledge as having different components that could be considered on their own merits, for example traditional medicine. In determining the most appropriate means of protecting traditional knowledge, these views should be carefully considered and taken into account.

THE INTERSECTION BETWEEN MODERN SCIENCE AND TRADITIONAL KNOWLEDGE

It is widely acknowledged that the development of modern science in leaps and bounds was substantially bolstered by the input of traditional knowledge. At the core of mainstream science is the desire to negotiate nature through sequential processes such as hypothesis formulation, experiment and prediction. Knowledge production in mainstream science includes phases of experimentation through trial and error or

otherwise. But there are some areas of non-convergence between traditional knowledge and mainstream science. Traditional knowledge seems to be relatively less transferable than conventional science, given its holistic socio-cultural and even spiritual dimensions. Traditional knowledge appears to be largely communitarian in terms of discovery and experimentation and the mode of transmission and sharing is often collective rather than individualistic. Embedded in the products and services associated with traditional knowledge are proprietary systems which are often more flexible and negotiable than modern science. The engine of growth and sustenance is neither the market nor the profit motive nor is it prone to large-scale mass production and economies of scale.

The main difference between mainstream science and traditional knowledge systems is in format. The scientific knowledge is essentially in an explicit format. The knowledge is articulated in a formal language including grammatical statements, mathematical expressions, specification etc. It is therefore easy to be transmitted between individuals formally and has been the dominant mode of knowledge accumulation and transfer. With respect to the traditional knowledge, the format

is mostly tacit. It is embedded in the experiences in the form of beliefs, perspectives and value systems of indigenous people and in most cases not articulated in formal language. For instance, in biomedicine, the knowledge is well documented with scientific evidence whereas evidence of safety and efficacy of traditional medicines has not been well documented. However, these have been field-tested for centuries and a lot of empirical knowledge has been accumulated in local communities and has been maintained and transmitted orally from generation to generation by traditional health practitioners (THPs) and knowledge holders. Traditional knowledge provides excellent examples of community-based research. Its weakness lies in its close reliance and over dependence on demographic stability and morality. The community is a source of strength for traditional knowledge in terms of the discovery process and knowledge production.

TRADITIONAL KNOWLEDGE SYSTEMS IN THE AFRICAN REGION

Countries of WHO African Region are endowed with rich and highly diverse biological resources and traditional knowledge which have been practiced centuries before



the advent of colonialization. This knowledge reflects the cumulative body of knowledge and beliefs handed down through generations by cultural transmission and the relationship of the local people with their environment. The development of African traditional systems has developed as a matter of survival of the communities in the management of socio-economic and ecological facts of life. It has been generally believed that centuries of association with the environment by traditional/local peoples have produced a deep understanding of the inter-relationship among the different elements of the habitat and helped in the preservation, conservation and sustainable

biodiversity management. This has enabled local communities to acquire expertise in the development and adaptation of plants and crops to different ecological conditions. It has been reported that most of the ecological systems of traditional/local communities were codified through language and culture (6).

The strength of traditional knowledge systems can best be seen at the level of economic sustainability, self-reliance and cost-effectiveness. It is within this context that the African traditional knowledge continues to derive its viability and strength. The survival of the informal sector is testimony of the strong capacity for resilience

and growth of African traditional knowledge which invariably persists not only at the level of material culture and natural environment, but also fields such as business management, banking and hospitality services. The development of traditional knowledge systems in the African Region has been a matter of survival to the communities that generated these systems. The oral and rural nature of traditional knowledge had made it largely invisible to the developments community. Traditional knowledge has often been dismissed as unsystematic and therefore has not been captured and protected under any international treaty or stored in a systematic way. In grappling with the question of their agricultural and biological heritage, which constitute the bedrock of traditional knowledge, Africans have staked out clear positions in favour of protecting communities' rights over their resources and knowledge.

AFRICAN TRADITIONAL MEDICINE AND TRADITIONAL MEDICAL KNOWLEDGE

Since colonial times, Western medicine was the only formally accepted medicine in the African Region. All traditional medicine practices were categorically

condemned as witchcraft or sorcery and banned. Yet the practice of traditional medicine has survived in countries of the African Region for many centuries and today 7% of the household health budget goes to traditional medicines. One of the main reasons Africans favour traditional medicine is because they cannot afford pharmaceuticals or conventional medical care. The 2002 Report from the Ministry of Public Health in Cameroon confirms that the economic crisis and the failure of the Social Security System have created an intense return to traditional health services (7). The second reason for the continued use of or reliance on traditional medicines is one of heritage and custom. THPs understand the social problems and cultural experience of the communities, they use this knowledge in their diagnosis to better treat the sick. THPs in the Region view sickness as the failure of complex social and spiritual relationships, and begins with an examination of both human and supernatural interactions. Unlike conventional medical practitioners who are expected to restore their patients' physical health only, THPs are also responsible for re-establishing social and emotional equilibrium based on traditional community rules and relationships.

Undoubtedly, modern science and technology has revolutionized

human health. In spite of the development of resistant strains of micro-organisms, mortality associated with common infectious diseases has declined significantly with attendant increase in life expectancy. The eradication of smallpox globally is further evidence of the efficacy of orthodox medicine. According to WHO, over 33% of the world's population has no regular access to the most basic essential medicines and in the poorest countries in Africa and Asia, over 50% of the population lack access to major healthcare services. However, THPs far outnumber western-trained medical doctors; for example, in Ghana and Zambia the ratio of medical doctors to the population is 1 to 20,000 while the corresponding figure of THPs to the total population is 1 to 200. Unlike in China, South Korea and Vietnam, African traditional medicine is not sufficiently integrated into the health systems despite the policy directions that have been provided through the adoption of various resolutions and declarations by WHO governing bodies (8-11).

International and regional block protection systems cannot affect local communities without national legislation. To this end, a number of countries have started preparing pieces of legislation on genetic resources and indigenous knowledge. Most of these appear to be fragmentary and will need

to be more comprehensive. Even then, most countries have not yet made significant progress on protecting intellectual property rights of traditional medicine and indigenous knowledge. Some of the national experiences include Eritrea which has integrated access and benefit sharing provisions into its broader regime on biological diversity, Uganda that has prepared detailed regulations on Access and Benefit Sharing. The Zimbabwe Traditional Medical Practitioners Act (revised 1996) that established the Council only provides for the registration and regulation of the practice of THPs. The Act only limits itself to the administrative issues related to the functions of the Council and its members. However, South Africa developed the indigenous knowledge systems (IKS) policy and a Biodiversity Act in 2004 and established a national office of IKS in 2006 (12).

Nigeria developed national legislation and Bill on IPRs in 2006 and 2007 whereas between 2005 and 2007 Mali organized a series of national and sub-regional sensitization workshops for the protection of traditional medical knowledge. Tanzania organized sensitization workshops on IPRs in 2007 and is in the process of developing a national policy on protection of biological diversity of medicinal value. Cameroon developed a framework for

the protection and valuing of inventions and innovations related to traditional medicine and the following year Ghana developed a national policy on protection of IPRs (12). It is worth noting that currently IPR issues are handled by the Ministries of Trade and Industry which are working in collaboration with other stakeholders including the ministries of health (MOH). However, because of the implications of IPRs on public health, the MOH should be involved from the outset in all discussions related to this subject.

POLICY AND LEGAL OPTIONS FOR THE PROTECTION OF TRADITIONAL KNOWLEDGE

The call for an effective and equitable protection of traditional knowledge is a broad policy challenge that requires critical analysis of the issues and concepts that are central to the policy debate about traditional knowledge protection. This section therefore examines the various policy options and discusses how each of the options can effectively strengthen, protect and nurture traditional knowledge so that the fruits can be enjoyed by future generations and enable the traditional communities to

continue to thrive. In order to assess the policy options and develop appropriate protection mechanisms for the protection of traditional knowledge, clear policy objectives would need to be defined as well as understand the special characteristics of traditional knowledge that is intended to be protected. A good protection system for traditional knowledge in the African Region has to define where the priorities or interests lies-legal or economic. Clarifying these issues is a prerequisite to the development of any possible forward-looking policy objective. Some possible objectives of protection of traditional knowledge could be to:

1. Preserve and conserve traditional knowledge
2. Enable communities to continue using traditional knowledge in the context of their traditional lifestyle
3. Safeguard against third-party claims of IP rights over traditional knowledge subject matter
4. Protect distinctive traditional knowledge related commercial products
5. Encourage and promote traditional-knowledge-based innovations
6. Encourage sustainable use of traditional-knowledge-related biodiversity and equitably share the benefits arising from the commercial use of traditional knowledge, etc.

It has been argued that a one-size-fit-all approach will not be practical and operational. Instead, an analysis of composite approaches and exchanges of best practices and worst experiences on the protection of traditional knowledge may be a good way to develop participatory and long lasting solutions (13). So far as IP protection is concerned, the main options are:

1. Making better use of existing IP rights – by capacity building, administrative initiatives, community-based initiatives, and programs for better recognition and defending traditional knowledge as legitimate and valuable IP assets of the communities that have developed them.
2. Extending or adapting the conventional systems of IP rights, to include *Sui generis* elements that are especially designed to improve the

way these systems serve the particular interests of traditional knowledge holders

3. Creating a distinct category of rights in traditional knowledge as such, through *Sui generis* IP systems designed specifically for this subject matter.
4. Using customary laws and establishing contractual arrangements for benefit-sharing should the traditional knowledge become commercially exploited.

USE OF EXISTING INTELLECTUAL PROPERTY RIGHTS

IPRs provide legal protection in the form of exclusive rights to individuals or corporate entities over their creative endeavours for a limited period of time. It focuses on the promotion

of economic exploitation of human creativity with the view to advancing the frontiers of knowledge through further research and development. Article 1 of the Paris Convention for the Protection of Industrial Property (1883) defines the scope of industrial property (14). It states in para 3 that “Industrial property shall be understood in the broadest sense and shall apply not only to industry and commerce proper, but likewise to agricultural and extractive industries and to all manufactured or natural products...” It is thus possible for innovations of traditional and local peoples to be protected. Patents, utility models, trademarks, industrial designs, geographical indications and trade secrets have therefore been extensively used to protect traditional knowledge subject matter. Article 7 also provides for the protection of collective marks belonging to associations the existence of which is not contrary to the law of the country of origin, even if such associations do not possess an industrial or commercial establishment.

Many materials developed in traditional context have been successfully patented under the existing IP system. These include formulations of traditional medicines that show synergistic or new effects, extracts from plants and animals, process technologies, agricultural and



industrial tools, plant varieties, nutritional formulations and ecological managements systems. The key to realizing benefits from the existing IP rights is the understanding of how the IP system works and identifying those kinds of traditional knowledge that can be protected.

The relationship between traditional knowledge and IP rights has however become the subject of many debates. Many incompatibilities have begun to surface as a result of increasing misappropriation and bio-piracy. It is also argued that the existing IP systems increase the risk of misappropriation and therefore, may be partly responsible for the loss of traditional knowledge. There is also concern that the current IP regimes fail to provide positive incentives for local and traditional communities to preserve and, if they wish, to capitalize on the traditional knowledge. It is clear that existing IP instruments such as patents are largely inappropriate to protect traditional knowledge: they are often expensive and difficult to access, and are unable to safeguard traditional knowledge that is often communally held and passed through generations. Other forms of IP instruments such as geographical indications, copyrights and trademarks may offer some promises but their effectiveness have proven to be limited. Furthermore, it is also

held that the existing IP rights are not suitable for the protection of traditional knowledge due to its holistic nature, and the fact that it has generally been free-flowing and not bound by space and time.

There are a number of obstacles that have been identified in applying the existing IP regimes to protect traditional knowledge. These include the difficulty of identifying ownership (most traditional knowledge is held by the community at large), the long period of time the knowledge has existed, IP rights are protected for a limited time and the requisite legal standards for IP Protection (such as novelty and inventive step in industrial property law) which some traditional knowledge may not easily satisfy. The utilitarian objective of the IP system also presents some difficulty for protecting traditional knowledge which is deeply embedded in the social and religious life of the communities.

CREATING AN INTERNATIONAL *SUI GENERIS* SYSTEM

A *sui generis* option has been suggested by many interested parties as the most appropriate alternative for the protection of traditional knowledge. In this case, *sui generis* (the

Latin for, “of its own kind”) indicates that the protection granted exists independently of other categorizations (such as existing patent, copyright or trademark systems) because of its singularity. Such a system would enable a focus on defining values and standards that could be applied to the protection of traditional knowledge. The need for *sui generis* protection of traditional knowledge arises from the perceived shortcomings of the existing IP system. Potentially, a *sui generis* system could be defined and implemented differently from one country to another. In addition, a *sui generis* system may adopt measures of protection specific to traditional knowledge.

In spite of the efforts made to provide a comprehensive *sui generis* framework for protecting traditional knowledge, a number of constraints need to be overcome. These are problems of dysfunctional equivalence of terms, the legal doctrine that could form the basis of protection of traditional knowledge, scope of the subject matter, formal requirements for acquisition of rights, substantive eligibility for protection and limitation of rights (15). In countries of the African Region, the expertise in legal drafting required under a *sui generis* system, the lack of public enlightenment and institutional structures are some of the major

constraints in the design and implementation of an effective administration and enforcement of *sui generis* protection of traditional knowledge.

USE OF CUSTOMARY LAWS AND PROTOCOLS

For many traditional knowledge holders, their own customary laws should form the basis of the legal protection of their traditional knowledge. A number of existing *sui generis* systems utilize references to customary laws and protocols as an alternative or as a supplement to the creation of modern IP rights over traditional knowledge. For example, the African Model Law (16) and the *sui generis* laws of Peru (17) and the Philippines (18) incorporate by reference certain elements of customary laws into the *sui generis* protection of traditional knowledge. The relation between modern *sui generis* laws and customary laws ranges between two principles: on the one hand, independence of the rights granted by the modern and traditional systems, and on the other, the direct recognition by the state of rights as they are enshrined and protected under the customary law found in the concerned local and traditional communities, whether such law is written or not. One important function of customary law is to

determine ownership of elements of traditional knowledge, other responsibilities and equitable interests associated with traditional knowledge, rights of customary use of traditional knowledge that should be permitted to continue (and indeed encouraged) under a traditional knowledge regime, and entitlements to share benefits from the use of traditional knowledge. Customary law may help clarify how these various rights and entitlements are identified and distributed within traditional communities.

At the community level, customary laws and protocols continue to be maintained and form part of the legal systems which rule daily life including distribution of communal work and access to biological resources (19). This legal system has been transmitted orally from generation to generation and has been used to regulate various forms of traditional medical knowledge and the use of traditional medicines. Even though customary laws of traditional communities have been recognized in different constitutions in countries of the African Region, there is no precise definition. The International Labour Organization Convention 169 (20) recognises the rights of indigenous peoples to conserve their customs and institutions and provides that when applying

national legislation, customs and customary law should be taken into account without necessarily defining what is understood by customs or when customary law is required. Unfortunately, the lack of impact of customary laws on African traditional medicine has led to high levels of secrecy by THPs. These secret behaviours of the Practitioners are attributable to lack of effective protection system and low levels of income generated from their practise. It has however been argued that within traditional communities, the customary laws and protocols have rather enabled THPs to succeed in various medical applications, among them are bone setting, child delivery, herbal medicine and inoculation. The implication is that there is need to conduct intensive research into the activities of this group as contributors to economic growth (21).

It is commonly reported that traditional societies often have highly-developed, complex and effective customary systems for protecting traditional knowledge. This approach has therefore been put forward as possessing long standing mechanisms for producing some practical measures for traditional knowledge protection. The shortcomings, however, in this option is that it is based on inadequate enforcement measures and adherence to

them are seen as a voluntary matter. The challenge to the use of customary laws and protocols relate to the creation of an international practice and the institutionalisation of such laws in national legal systems.

INTERNATIONAL AND REGIONAL CONTEXT

International and Regional organizations dealing with the issues of IP and traditional knowledge have over the years engaged themselves to find answers to the complex issues involved in the legal protection of traditional knowledge. Policy objectives and principles relevant to the protection of traditional knowledge are under discussions in international forums to provide the foundation and elements for the development of international instruments to protect the knowledge and its manifestations. The World Intellectual Property Organization (WIPO), a specialized UN body with the mandate to deal with IP matters has for the past 9 years engaged its member states on international norm setting for the Protection of traditional knowledge. At the Sixteenth Session of the Intergovernmental Committee on IP and genetic resources, traditional knowledge and Expressions of Folklore (IGC) that took place in Geneva from

3 to 7 May 2010, the Committee agreed to undertake text-based negotiations with the view to developing international instrument or instruments for the protection of the resources by 2011 (22). This historic decision will enable for the establishment of an international framework for the protection of traditional medicines.

Efforts by international organizations such as the United Nations Environmental Programmes' Convention on Biological Diversity (CBD), the Food and Agricultural Organization (FAO), the World Trade Organization (WTO), the WHO and United Nations Conference on Trade and Development (UNCTAD) have all developed frameworks or are in the process of doing so

in their quest to providing a comprehensive protection for genetic resources, traditional knowledge and expression of folklore. At global level, the 61st and 62nd World health Assembly adopted the Global Strategy on Plan of Action (GSPOA) on Public Health, Innovation and Intellectual Property in 2008 (23).

The OAU Model Law (14) was developed in 2002 and WHO has developed four documents with effective participation of the WHO Regional Expert Committee on traditional medicine, African Union's Scientific and Technical Research Commission, the African Regional Intellectual Property Organization (ARIPO) and l'Organisation Africaine de la Propriété Intellectuelle (OAPI). These documents are *Tools for documenting African traditional*



medicine, Guidelines on Policy (24) and Regulatory Framework for the Protection of traditional Medical Knowledge and Access to Biological Resources (25) as well as Public Health, Innovation and IP: Regional Perspective to implement the GSPOA (26) adopted by the 59th session of WHO Regional Committee for Africa. It has been widely stressed that any protection for the benefit of traditional knowledge holders should be both effective in practice and tailored to the specific needs and resource constraints of the communities. It should also ensure that the necessary institutional mechanisms including capacity building, documentation initiatives and infrastructural development will enable for realization of the economic potential of the resources.

For its part, ARIPO and its sister organization, OAPI, have developed harmonized Regional legal instruments for the protection of traditional knowledge and expressions of folklore. These instruments cover all manifestations of traditional knowledge including traditional medicines and have been used as a basis for the international normative process at WIPO. The OAPI instrument was adopted through a Diplomatic Conference in 2007 while ARIPO Protocol on the Protection of traditional knowledge and Expressions of

Folklore were due to be adopted at a Diplomatic Conference at Swakopmund, Namibia from August 9 to 10, 2010 (3). ARIPO has also developed draft regulations for implementing the ARIPO Protocol on traditional knowledge and Expressions of Folklore, which will be adopted by the Administrative Council at its Thirty-fourth Session in November, 2010 (27). These instruments address issues on trans-boundary traditional knowledge, Misappropriation, Bio-piracy, Illicit claim on traditional knowledge in patent application, Prior Informed Consent (PIC), Benefit Sharing and Commercial and Industrial uses of the knowledge and its associated genetic resources. The Protocol has been used as a model for national policy and legislative initiatives in Botswana, Ghana, Kenya, Malawi, Mozambique, Namibia, Uganda and Zambia.

The Protocol aims to provide protection for the holistic forms of traditional knowledge that have been generated, maintained and transmitted from generation to generation. It recognizes the intrinsic value of traditional knowledge including its intellectual, scientific, medical, technological and industrial values. The protection under the Protocol will also encourage and reward authentic creativity and innovation resulting from traditional knowledge systems.

The Protocol has also addressed the issues of misappropriation, bio piracy and unlawful grant and exercise of IPRs over traditional knowledge and its associated genetic resources. It will also empower ARIPO to administer traditional knowledge that are multi-cultural in nature and cuts across national boundaries – the so-called “regional traditional knowledge’. For example, if a traditional knowledge is held by one community that extends across national borders such as the case of *Hoodia*, the appetite suppressant, which is held by the San tribe in Botswana, Namibia and South Africa, then the community will need to have its rights recognized in each of the different countries in which the community dwells. This would raise the question of whether the community would have the same legal protection in the different jurisdictions. In this case, the ARIPO Protocol provides a regional mechanism for the administration and management of such rights.

CHALLENGES FACED BY MEMBER STATES

Challenges include:

- (a) *The oral nature of the knowledge transmitted in various forms from past generations, which are largely shared in*

unstructured contexts. This has made it largely invisible to the development of the community and to science. However, there is need for documenting and verifying this knowledge and this requires collaboration between modern and THPs, so that they can develop a framework for deciding which herbal medicines are valid and putting in place an education scheme for effective contribution of THPs to mainstream healthcare (28).

(b) *The formalities or registration of the knowledge by a competent authority (29).* This challenge can only be overcome if national legislations on the protection of traditional knowledge are operationalized to provide best practices. Identifying appropriate right holders has been generally considered one of the most difficult elements in establishing effective IP protection for traditional knowledge especially regional traditional knowledge. Countries have taken diverse approaches to this aspect of traditional knowledge protection. Most IP rights are originally vested in the individual originators, who can then transfer their rights through contracts or legal arrangements. But traditional knowledge is generally understood as a

collective product of the community even though individual traditional knowledge holders may have distinct personal rights within the community structure. This ownership question has engaged international community for some time and forms part of the contentious issues that have not been fully resolved.

(c) *The utilization and commercialization of the technologies associated with the knowledge,* the lack of international standards and harmonized frameworks on the protection of the knowledge.

THE WAY FORWARD

As we strive to develop a comprehensive framework and strengthen our capacities to safeguard, protect and develop traditional knowledge, action will be required to:

1. Develop well-considered legislative framework and/or complementary arrangements to protect traditional knowledge that recognize the collective nature of local innovation, promote its documentation, development and application, encourage individual innovation within this community framework,

and shield biodiversity and traditional knowledge from privatization.


2. Establish institutional structures needed for effective protection and utilization of traditional knowledge through the establishment of regional measures to administer and enforce trans-boundary and multicultural traditional knowledge, the establishment of supportive mechanisms and capacity building activates at the country level as well as the development of registries and databases on traditional knowledge.
3. Coordinate and develop partnerships among stakeholders and communities to present a united body of opinion.
4. Create awareness especially among traditional holders including Traditional Health Practitioners on their rights and obligations.
5. Efforts should be made by Governments in the African Region to integrate traditional medical practice into the Health Delivery System as a matter of urgency.

CONCLUSION

Some developing countries have taken steps to establish *Sui generis* system of protection of

traditional knowledge including traditional medicines and would be important for countries in the African Region to take initiatives to protect African traditional knowledge for the exploitation by the knowledge holders. There is the need to develop appropriate policies and legislative frameworks to enable custodians of traditional knowledge to derive maximum benefits from their knowledge. In our quest to realize this noble objective, it would be critical for

countries in the African Region to establish institutional structures to support the protection, documentation, development and promotion of the innovation and creative aspects of the knowledge. Strengthening the innovative capacity of traditional and local communities to further develop their traditional knowledge can offer potential for addressing problems for rural and urban development. It would be essential for national governments to create special

supportive mechanisms and enabling environment to facilitate collaborative research on useful herbs and traditional medicines, exchange of experiences and skills among local communities and commercialization of traditional knowledge-based innovative products including traditional medicines. This would generate the economies of scale needed for national development and poverty alleviation. 

REFERENCES

- Correa C., (2002). *Protection and promotion of traditional medicine; Implications for public health in developing countries*. University of Buenos Aires.
- The Scientific, Technical and Research Commission of the Organization of African Unity (OAU) (2002). *Publication on 2001-2010: Decade for African Traditional Medicine*.
- Brooke, Lorraine F. (1993). *The participation of indigenous peoples and the application of their environmental and ecological knowledge in the Arctic Environmental Protection Strategy*, Vol. 1. Inuit Circumpolar Conference: Ottawa.
- ARIPO Protocol on Protection of Traditional Knowledge and Expressions of Folklore (2009).
- Agrawal. Arun. (1995). "Dismantling the Divide Between the Indigenous and Scientific Knowledge." *Development and Change* 26(3): 413-419.
- Johnson, Martha (ed). (1992) *Lore: Capturing Traditional Environmental Knowledge*. Dene Cultural Institute and International Development Research centre: Hay River, NWT & Ottawa, Ontario. 190 pp.
- World Bank (1991) "traditional medicine in Sub-saharan Africa: its importance and potential policy. Options by Jocelyn Dejong. Washington D.C, World Bank.
- World Health Organization (1978) *Alma-Ata 1978. Primary Health Care: Report of the International Conference on Primary Health Care*. Alma-Ata, USSR, 6-12 September 1978, Geneva, 1978 (Health for All Series, No.1).
- World Health Organization (2001) *Promoting the Role of Traditional Medicine in Health Systems. A Strategy for the African Region*. WHO Regional Office for Africa, Temporary Location, Harare, Zimbabwe (Document Reference AFR/RC50/9 and Resolution AFR/RC50/R3).
- Declaration on Traditional Medicine being an undertaking of the ministers of health attending the fifty-seventh session of WHO Regional Committee for Africa. Regional Office for Africa, Brazzaville, 31 August 2007.
- Traditional Medicine Resolution (WHA56.31). World Health Organization, Geneva.
- Mid-term Review of the African Union Decade of African Traditional Medicine (2001-2010), Yaoundé, August 2008 prepared by African Union and World Health Organization.
- The Sixteenth Session of the Intergovernmental Committee on intellectual property and genetic resources, traditional knowledge and Expressions of Folklore (IGC), Geneva, Switzerland, 3-7 May, 2010 (Document reference, WIPO/GRtraditional knowledgeF/IC/16/4 and WIPO/GRtraditional knowledgeF/IC/16/5).
- Paris Convention for the Protection of Industrial Property; Published by the World Intellectual Property Organization, 1883.
- The Thirteenth Session of the Intergovernmental Committee on intellectual property and genetic resources, traditional knowledge and Expressions of Folklore (IGC), Geneva, Switzerland, (13-17 October, 2008 (Document reference, WIPO/GRtraditional knowledgeF/IC/13/5(A) and WIPO/GRtraditional knowledgeF/IC/13/5(B)).
- The OAU Model Law for the Protection of the Rights of Local Communities and the Regulations of Access to Biological Resources (1998).
- Peru Law 28216 relating to the Protection of Peruvian Biodiversity and Traditional Knowledge of Communities, 2001.
- Christoph Antons (2009). *Traditional Knowledge, Traditional Cultural Expressions and Intellectual Property Law in the Asia-Pacific Region: Max Plank Series on Asian Intellectual Property Law*. Published by Kluwer Law International, Netherlands.
- Manuel Ruiz Muller (2006). *The Protection of Traditional Knowledge: Policy and Legal Advances in Latin America*. IUCN BMZ, SPDA, Lima-Peru
- Article 8 of the International Labour Organization Convention 169 on Indigenous and Tribal Peoples in Independent Countries, 1989.
- Nwokeabia H.U. (2001). *Why Industrial Revolution Missed Africa: A traditional knowledge perspective*. Published by United Nations Economic Commission for Africa.
- The Sixteenth Session of the Intergovernmental Committee on intellectual property and genetic resources, traditional knowledge and Expressions of Folklore (IGC), Geneva, Switzerland, 3-7 May, 2010 (Document reference, WIPO/WO/GA/26/6).
- World Health Organization (2008). *Global strategy and plan of action on public health, innovation and intellectual property*. WHA61.21; Sixty-First World Health Assembly. Agenda item 11.6 (24 May).
- World Health Organization. *Guidelines on Policy for the Protection of Traditional Medical Knowledge and Access to Biological Resources*. WHO Regional Office for Africa, Brazzaville (To be published).
- World Health Organization. *Regulatory Framework for the Protection of Traditional Medical Knowledge and Access to Biological Resources*. WHO Regional Office for Africa, Brazzaville (To be published).
- Public Health, Innovation and Intellectual Property: Regional Perspective to implement the Global Strategy and Plan of Action. Fifty-nine session, Brazzaville, Republic of Congo, August, 2009
- Draft Regulations for Implementing the ARIPO Protocol on Traditional Knowledge and Expressions of Folklore within the Framework of the African Regional Intellectual Property Organization (ARIPO)", 2009.
- Onatola A. *Traditional medicine must be documented*. SciDev. Net, 2006.
- Sackey EKA (2008). *Protection of Traditional Knowledge in Africa*, Lecture notes delivered to Postgraduate Students at the Africa University, Mutare, Zimbabwe.