

# THE POSITION OF INTELLECTUAL PROPERTY SYSTEMS IN THE PROTECTION OF INDIGENOUS KNOWLEDGE

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## Abstract

*In any indigenous community, indigenous knowledge is crucial for survival. For so many years, African indigenous people have had their own ways of survival through knowledge of access to medicine, health, protecting of the local flora and fauna, food and other societal needs. The emergence of modern ways of survival like modern pharmaceuticals has not led to the abandonment of the traditional practices as locals have continued relying on their traditional remedies. However, what has worried local development practitioners and community leaders is the over-exploitation of indigenous knowledge systems and in some cases the movement of such knowledge systems and tools abroad. Developed nations are continuing to benefit at the expense of the local indigenous Africans. In some instances, the rural indigenous people are being exploited by their urban counterparts and the super-rich multi-national organisations leading to the deterioration and disappearance of indigenous resources and the breaching of privacy. This paper analysed how the exploitation of such indigenous knowledge by non-indigenous people could be prevented by the intellectual property protection system. The research was carried out through document analysis and interviews. Interviews were carried out with six local Zimbabwean experts in indigenous knowledge that include a sample of two lecturers, two information practitioners and two law experts in intellectual property. The results indicated that protection of indigenous knowledge in most African communities is crucial and while efforts by the current intellectual property policies are positive, there is still a lot that communities and governments can do.*

**Keywords** Indigenous Knowledge, Intellectual Property, Traditional Knowledge, Law

## 1. Background to the study

Indigenous knowledge is a crucial element that is necessary for the socio-economic development of any society. Due to the realization of its importance, many knowledge societies are recognizing its importance despite the continued disappearance and exploitation. African indigenous people are very much worried about the misappropriation and misuse of their knowledge systems by western outsiders without their consent and without respect for their customary practices. There are a lot of efforts that have been done by different communities, organisations and government to try and protect indigenous knowledge. While some of the efforts are bearing fruits, some remain a challenge due the nature of indigenous knowledge.

Indigenous knowledge is not inferior to other knowledge systems particularly the western ones. Colonialism and African missionaries that promoted Christianity as a religion undermined African practices such as banning of burial rites, agricultural charms and observance of clan taboos. Scholars (Goduka, 1992; Prah, 2001 and Shiva, 2002 as quoted by Ngulube, 2002) believe that the onslaught of African knowledge systems perpetuated by colonialists and western intellectuals created a false impression that African knowledge was unscientific, inferior, pagan heathen thus perhaps implying that there was no need for its preservation.

There are several definitions of indigenous knowledge systems (IKS) in literature. Lwoga, Ngulube and Stilwell (2013) defined IKS as a cumulative body of knowledge created over decades. This body of knowledge is peculiar to a particular community. Mapara (2009) defined IKS as ‘a body of knowledge or bodies of knowledge of the indigenous people of a particular geographical area that they have survived on for a very long time’. Similarly Payle and Lebakeng (2006) viewed IK as a local knowledge which is born out of the environment and as a result of people interacting with their environment across cultures and geographical spaces. The concept of IKS is rather used interchangeably with community knowledge, traditional knowledge, aboriginal tradition, folklore and others (WIPO, 2002). Several authors (du Plessis, 2002; Ellen and Harris, 2002; Ngulube, 2002) have defined IK as tacit, orally communicated, experiential, unique and embedded in the hands of individuals. Thus summarily IKS can be regarded as knowledge and skills possessed by inhabitants of a certain geographical area. Such skills and knowledge will have been shared for generations and have been adopted by every generation. IKS are dynamic and unique to a particular community.

Knowledge is organized body of information. Probst, Raub and Ranhardt (1998) argued that knowledge is the whole body of cognition and skills which individuals use to solve problems. It includes both theories and everyday rules and instruction for action. For example, the Karanga community in Zimbabwe has always possessed tacit knowledge on rain making (*mukwerera*), a practice which is still being done. Thus such knowledge is used to solve challenges of shortages of rain. In the context of indigenous communities, knowledge can be regarded as that knowhow within people’s minds that can be used to solve their community and personal challenges for survival and community development. Among the Karanga people, they possess medicinal skills that include how to cure chickens using indigenous trees like gvakava (**alovera**), use of *chifumoro* which is believed to expose the nature of an illness through tying onto a fiber or a string prepared from a bark of a tree, geometry skills like use of stars (*nyeredzi and kugara kwemwedzi*) in predicting the coming of rains and as a way of noticing the changes of seasons

Intellectual Property Systems (IPS) refers to the legislative and policy frame towards the protection of knowledge, ideas, innovations, inventions and other. It is a legal concept which deals with creations of human ingenuity (Sackey and Kasilo, 2010). Indigenous communities need their knowledge systems to be protected not only for financial gains but for their ethical, religious, moral and cultural dimensions. This is concurred by Sackey and Kasilo (2010) who argued that IPR are not ends in themselves but provide humanity with a decentralized systems of innovation in science and culture as well as give us a way of protecting and rewarding innovators. Inappropriate use of sacred cultural artifacts, for example, may not result in financial loss but may be significant in causing considerable offence to the community that would have been offended (Anderson, 2010).

Exploitation of resources by westerners can be done through biopiracy. This is increasing rapidly and resources and knowledge are being privatized by others through intellectual property rights and used in ways that run counter to indigenous worldviews and culture and with no benefits for the ancestral rights-holders (Andes, 2006). Indigenous medicine has also been appropriated. Western nations come to developing countries and take away plants for analysis. Sometimes, local people are interviewed and they reluctantly give information about a particular subject. Westerners would take such knowledge like medicinal plant and go and make millions in their homelands without any acknowledgements or payments to the indigenous people. In the event of trying to sue the western exploiters, it would be very difficult to establish the legality of such frameworks. Mazunde (2007) concurred that the researcher and the manufacturing company will argue that they did not need the consent of the community or individual who gave them the indigenous knowledge before developing the drug from the plant. This therefore means that there is need for protection of indigenous knowledge.

The World Intellectual Property Organisation (WIPO) established the Intergovernmental Committee in 2002 upon realization that the misappropriation of IKS was becoming increasingly rampant. Many western organisations, companies and individuals exploit other communities IKS by appropriation for financial gains particularly by global drug dealers. IKS is vulnerable both because it is exploitable and has been exploited (IFLANET, 2004 as quoted by Masango, 2010). As such many governments are looking to IPS laws and policies as a means to securing their legitimate rights (Anderson, 2010).

Most communities would require the protection of their IKS to be holistic and to be developed with their full participation. The aim of this paper is to do a review of the current intellectual property rights protection framework and assess their effectiveness in protecting IKS. Efforts made by countries in the Southern African region will be reviewed.

## **2. Statement of the problem**

The massive exploitation of indigenous communities' knowledge practices has led to many countries questioning the applicability of western intellectual property systems in the protection of IKS. IKS is also being exploited without any financial gains to the community. If continued exploitation is done, there is a risk of non-disappearance of the knowledge practices. Communities that are supposed to be benefiting from their knowledge systems are not doing so because of the exploitation of their knowledge systems leaving them poorer. Many African governments are therefore concerned with the legal questions involved in copyright, patents, trademarks and others in protecting the indigenous communities. While there is recognition by the international organisations of the value of IKS, there is no consensus about how indigenous knowledge system can be secured.

## **3. Purpose of the study**

This study aims to analyse the position of the intellectual property system in the protection of indigenous knowledge practices in Zimbabwe and selected African countries.

## **4. Methodology**

In this paper, a qualitative descriptive research design was adopted. A combination of both theoretical literature and empirical evidence gathered from semi-structured interviews carried from indigenous knowledge and intellectual protection experts. Researcher's six work colleagues

that include 2 lecturers from Bindura University of Science Education who teaches IKS and 2 information practitioners who also had experience in IKS were interviewed. 2 interviews were also carried with the intellectual experts' officials. Purposive sampling was used to choose the respondents.

The qualitative approach was used because as argued by Cresswell (2014), it is a useful method to study human action in their natural settings, attempting to make sense of, or interpreting phenomena in terms of meaning people bring them. The respondents were first asked for their consent before interviewing them. Respondents were also asked to consent to recording of the interview process.

## **5. Findings and discussion**

All the six respondents that the researcher wanted to interview were successfully interviewed indicating a 100% response rate. The interview guide had six questions focusing on the reasons on why IKS should be protected, the current Zimbabwean and regional efforts that are being done. The interview questions were similar for all the respondents and validity and reliability was ensured through making the interviewing zone as conducive as possible. The recorded data was coded into different main subject categories.

### **5.1 Rational for protection of IKS**

Respondents noted that the protection of IKS was imperative in any community. It was noted by one of the interviewees that communities that are being affected by the disappearance of their IK should lobby their governments so that protection can be enhanced. Protection of IKS should be done to preserve and conserve the traditional knowledge systems. For example, it was noted that in countries such as Zimbabwe where two thirds of the population live in rural areas but relies on the traditional medicines and the traditional healers on a daily basis, then protection needs to be seriously considered. Secondly, all the six respondents noted that the protection of IKS enable African communities to continue using traditional knowledge in the context of their lifestyle. Thirdly, it was noted that the protection would enable communities to safeguard their knowledge against outsiders who might want to claim ownership of the knowledge systems. One of the reasons given for protection of knowledge systems was for the communities can invent more products thus benefiting the communities through such innovations.

There have been many success stories of the protection of IKS in Africa. These include formulations of traditional medicines that show synergistic or new effects (Sackey and Kasiso, 2010). Nutritional formulations and some ecological management systems have been noted too. One of the key to realising the intended benefits of using the existing IP rights is the understanding of how the IP systems in a particular country works and the identification of knowledge that can be protected. In South Africa, indigenous knowledge was successfully protected by the IP facet of trademark. This was the case with the Rooibos brand. The name 'Rooibos' serve as 'mark of assurance'. (Ismail and Fakir, 2004 as quoted by Masango, 2010).

### **5.2 National efforts**

Respondents were asked on the current IPS that tries to protect IKS. One of the respondents noted that while the arguments about the difficulties of IP protection are true, efforts to protect such knowledge systems are still being enhanced by both developing and developed countries. In

Zimbabwe, there have been various efforts to protect the IKS. IP law is to protect the knowledge systems against any unauthorised trading of such knowledge. This was also agreed by Hinz (2011) who noted that the need to create so-called *sui generis* protection for traditional knowledge has been seen in Zimbabwe to be logical. Different legislations have been enacted in Zimbabwe and these include such acts like Copyright and Neighbouring Rights Act, Patent Act and Trademark Act. Most of the laws are as a result of Zimbabwe's obligations under the Agreement on Trade Related Aspects of Intellectual Property (TRIPs). Most of the Acts have shown the seriousness that the government has shown towards the protection of traditional knowledge such as folklores (as covered in the Copyright Act). Indigenous knowledge can be protected within the IP facet of patents when it deals with exploiting for financial gains the medicinal properties in plants.

The enactment of the Traditional Medicinal Practitioners Council Act of 1981 in Zimbabwe was a positive step in the protection of medical knowledge. The act allowed traditional practitioners to effectively utilize traditional medicinal plants and remedied to treat health related diseases. For example, the African Potato (*Hypoxis Hemeracallidae*) was popular in Zimbabwe in the year 2000 as a remedy to stomach aches alongside other *muti* like ginger. In Zimbabwe, individual practitioners provide services based on medicinal knowledge of local plants and do not seek profit or patent for these medicinal knowledge practices.

Through documents analysis, the researcher also found out that efforts that are being done by regional and international countries are worth mentioning. South Africa made its intention known to the outside world when they proposed the Intellectual Property Laws Amendment Bill in 2007 which has since been passed into a law in 2013. The Act was enacted to ensure effective protection mechanisms for indigenous knowledge as a form of intellectual property. To this end, it makes amendments to such South African Acts as the Copyright Act of 1978, Trade Marks Act of 1963 and Performers Protection Act of 1967. One of the positives about the South African intellectual laws is that they have managed to protect their indigenous knowledge through patenting. One such initiative has been the well documented case of the San people benefiting from the *Hoodia Cactus*, a plant that was used to develop an anti-obesity drug. The San people were able to receive royalties from Pfizer, an America company that had bought the patent from Pytopharm, who were the original owners of the patent. Several countries like Botswana, Swaziland, Mozambique and Zambia have also enacted legislation enforcing the protection of indigenous knowledge.

### 5.3 International efforts

Another significant result shown by this study was the role of the international organisations and treaties. Document analysis has shown that the efforts by the World Intellectual Property Organisation should be appreciated. Having started the debate on the importance of having the traditional knowledge protected, respondents noted that the WIPO needs to continue voicing its concerns. UNESCO recently formulated the Convention on the Protection of the Diversity of Cultural Contents and Artistic Expressions to try and protect indigenous knowledge systems.

The UN has also been forthcoming in the protection of IKS with the most notable move being the adoption of the Declaration on the Rights of Indigenous Peoples in 2007. According to Article 31 of the declaration, indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestation of their sciences, technologies and cultures, including human and genetic resources,

seeds medicines, knowledge of the properties of fauna and flora, oral traditions, literature and designs, sports and traditional games and visual and performing arts. Nations are thus mandated to control, maintain and protect and develop their IP to cover these knowledge systems.

At the regional level, it was noted that African Regional Intellectual Property Organisation (ARIPO) was assisting in the protection of intellectual indigenous knowledge. ARIPO has about 17 member African countries. In 2007, the Legal Instrument for the Protection of Tradition Knowledge and Expressions of Folklore was adopted. Again, in 2010, the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore was adopted. The protocol addressed issues on trans-boundary traditional knowledge, misappropriation, biopiracy, illicit claim on traditional knowledge on patent claim and prior informed consent. Sackey and Kasiso, (2010) noted that the protocol has been used to administer traditional knowledge that are multi-cultural in nature and cuts across national boundaries, for example, if a traditional knowledge such as Hoodia (*appetite suppressant*) is held by one community that extends borders among the San tribe of Botswana, South African and Namibia, then the all the communities will need to be protected. The protocol has been used for policy directive in such countries as Zambia, Botswana and Malawi.

#### **5.4 Holistic approach towards protection of IKS**

80% of the respondents expressed that there was need for a holistic approach towards the protection of IKS. It was noted that efforts to protect IKS should be a prerogative of every community member, community leader, government official and the international players and every facet should be consulted. The protection of community knowledge requires the engagement of the indigenous people as they are more knowledgeable in their practices. This was noted as a crucial way forward for the development of IKS. Communities need to be engaged as they are familiar with their local practices and rituals. Through such engagement, policy makers will then get to understand what can be protected and what cannot.

#### **5.5 Protection versus promotion**

Respondents were also asked their views on the promotion of IKS. 50% of the respondents interviewed stated that there was need for promotion of IKS first before thinking about its protection. Whereas protection was acknowledged to be important, the argument that was put forward by respondents was that there is need for first of all to widely promote IKS after which the next stage would be protection. 50% of the respondents indicated that there was need for indigenous communities to consider documenting their knowledge systems so that it could be patented, copyrighted or any of the intellectual property laws.

#### **5.6 Challenges of protecting IK with IP**

Due to its uniqueness, IK has presented challenges to knowledge practitioners. This is so because knowledge is a much contested field. Indigenous knowledge is sometimes difficult to classify. Ownership status is difficult to ascertain. This was also concurred by Sackey and Kasiso (2010) who argued that most traditional knowledge is held by a community at large. Most knowledge practices of communities are spread on from generation to generation such that patenting them becomes difficult as they might not be considered novel innovations. However, foreign researchers can appropriate indigenous knowledge and claim to have invented a new product and thus applying for patenting.

IPRs also provide legal protection in the form of exclusive rights to individual or communities over their creative endeavors for a limited period of time. For example, Patent Laws would want to protect novel inventions or innovations which contradict the concept of IKS which has been there in communities. Some other western forms of IPRs have a limited time frame for protection yet IKS can be there for generations. Such challenges might be compounded by the need for renewal of protection which in some instances is costly to communities as most African communities will not money.

Intellectual property law is largely European. While there is need for protection of IKS, challenges about what can be protected and how should they be protected will arise. Furthermore, indigenous peoples do not necessarily interpret or conceptualize their knowledge systems and practices in the same way as advocated for by the western IPS. The western IPS concept stresses much importance on ownership, authorship and private property and monopoly privileges (Anderson, 2010).

## 6. Conclusion

Intellectual property can be the way to go in the protection of some knowledge systems. Patents, utility models, trademarks, copyrights, industrial designs, trade secrets and geographical indication can be extensively used to protect indigenous knowledge systems. However, because of the nature of IKS, challenges will always arise since it is community owned, some knowledge will not be novel and some practices are not documented.

## References

- Anderson, J. (2010) Indigenous/Traditional knowledge and intellectual property. Durham, North Carolina: Centre of Study of the Public law.
- Hinz, M. (2011) The Swakompmund Protocol on the protection of traditional knowledge and expressions of folklore. *Namibia Law Journal*, 3 (1).
- Lwoga, E. T., Ngulube, P., & Stilwell, C. (2010). Managing indigenous knowledge for sustainable agricultural development in developing countries: Knowledge management approaches in the social context. *The International Information & Library Review*, 42 (3), pp.174-185.
- Mapara, J. (2009). Indigenous Knowledge Systems in Zimbabwe: Juxtaposing Postcolonial Theory. *The Journal of Pan African Studies*, 3 (1), pp. 139-155.
- Masango, Charles A. (2010). Indigenous traditional knowledge protection: prospects in South Africa's intellectual property framework? *South African Journal of Library and Information Science*, 76 (1).
- Ngulube, P. (2002), Managing and preserving indigenous knowledge in the knowledge management era: challenges and opportunities. *Information Development*, 18:2, pp. 95-100.
- Payle, K. D. and Lebakeng, T.J. (2006), The relevance of indigenous knowledge for sustainable socio-economic development in South Africa: Is globalisation a threat? *Africa Insight* 36(1), pp. 40-45.

Probst, G.; Raub, S. and Ramhardt, K. (1998). *Managing knowledge: building blocks for success*. Chichester: John Wiley.

Sackey, E and Kasilo, O (2010) Intellectual property approaches to the protection of traditional knowledge in the African region. *The African Health Monitor*. pp. 89-102.

World Intellectual Property Organization (WIPO). (2002). *Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore* (Online). (Available at <http://www.wipo.int/edocs/mdocs/tk/en/>).