



Level of Access and Benefit Sharing with Respect to Indigenous Medicinal Knowledge in Baringo County, Kenya

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ABSTRACT

This study assessed the level of Access and Benefit Sharing (ABS) with respect to indigenous medicinal knowledge (IMK) in Baringo County, Kenya. This study was grounded on two theories; Legal pluralism and Equitable benefit sharing/distributive justice theory. This study adopted an exploratory research design. The study employed the use of both primary and secondary sources of data collection. Primary data was gathered through Key Informant Interviews (KII) while secondary data was obtained through documentary reviews. The target population for this study comprised traditional healers, elders, local community, county government officials, and representatives from relevant institutions and organizations that are involved in ABS and the implementation of the Nagoya Protocol. This study targeted a total of 50 respondents. Qualitative data was analyzed through thematic content analysis, which involved transcription, coding, and categorization of the interview data. The patterns and themes that emerged in relation to the status of domestication of the Nagoya Protocol in Kenya, ABS and the legal and institutional gaps were interpreted. The study found mixed perceptions of ABS in Baringo County, with low awareness of the Nagoya Protocol and Kenya's ABS Regulations (2014) limiting participation and trust. ABS has minimally improved IMK documentation or commercialization, with benefits often captured by intermediaries due to weak enforcement. Key barriers include low literacy, complex licensing, and weak institutional support, requiring capacity building and simplified systems.

Keyword: Nagoya Protocol; Indigenous Medicinal Knowledge (IMK), Access and Benefit Sharing (ABS)

BACKGROUND TO THE STUDY

The 21st century has seen growing recognition of biodiversity and associated traditional knowledge in international environmental governance. The United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992, produced key agreements including the Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). The CBD grants countries control over their biological resources while requiring them to distribute the benefits that result from resource usage between themselves and other parties (United Nations, 1992). The system needs more complete methods to manage genetic resource access and safeguard traditional knowledge. The gap required the establishment of the Nagoya Protocol which started its implementation in 2014 after its 2010 adoption (Secretariat of the CBD, 2011). The Protocol implements CBD Articles 15 and 8(j) through its establishment of rules for prior informed consent (PIC) and mutually agreed terms (MAT) and benefit-sharing obligations which apply especially to indigenous and local communities.

Plant-based medicines and pharmaceuticals and cosmetics have become commercial products which create new problems of biopiracy together with the unauthorized use of indigenous medicinal knowledge (IMK) according to Robinson (2010) and Wynberg, Schroeder, and Chennells (2018). Traditional healthcare systems of indigenous African and Asian and Latin American communities depend on the biodiversity found in their environments. WHO (2019) estimates that about 80% of the global population depends on traditional medicine for primary healthcare. The communities receive minimal advantages from their valuable resources because legal protections in their area are deficient. The Nagoya Protocol aims to address this imbalance by promoting equity and sustainable development (Morgera, Tsioumani, & Buck, 2015). The process of domestication has



occurred in an uneven manner because intellectual property systems and customary laws and biodiversity regulations have not been able to be aligned (Bagley & Rai, 2014).

The process of implementing PIC together with equitable benefit-sharing faces practical difficulties which become more complicated when knowledge exists as common property and people pass it down through oral traditions (WIPO, 2020). The African continent has introduced two policy frameworks: the African Model Law and Agenda 2063 which establish conservation objectives while ensuring fair management of resources (African Union, 2015). The countries of South Africa and Ethiopia have established complete ABS systems but other nations face challenges with their institutional abilities and their knowledge levels and their regulatory patterns (AUC & UNEP, 2019). The combination of customary and statutory systems creates confusion about who has power to provide access rights which leads to increased risk of exploitation for indigenous medicinal knowledge (IMK) because it remains poorly documented.

The East African nations of Kenya, Uganda, and Tanzania share their biodiversity which includes their ecosystems that contain valuable medicinal plants. The EAC Protocol on Environment and Natural Resources Management (2006) establishes environmental legislation standards which member states must follow to achieve their ABS objectives through their cooperative efforts. The different legal systems and community involvement practices between member states create legal disparities according to EAC Secretariat (2020) report. The existence of cross-border pastoralist groups creates obstacles for benefit-sharing systems while the majority of herbal medicine trade operates through informal channels which restricts monitoring efforts.

Through its ratification of the CBD (1994) and the Nagoya Protocol (2014) Kenya demonstrates its dedication to protecting biodiversity and sharing benefits in a fair manner according to the Government of Kenya (2014) report. The national legal framework establishes ABS through traditional knowledge protection under the Constitution (2010) and EMCA(1999; revised 2015) and WCMA(2013) and Protection of Traditional Knowledge and Cultural Expressions Act(2016). NEMA established ABS rules and the National Biodiversity Strategy and Action Plan (2019–2030) requires traditional knowledge to be used in conservation efforts according to (Ministry of Environment and Forestry, 2019). The execution of projects continues to face obstacles because institutions have overlapping functions and financial resources are insufficient and customary systems have not been effectively incorporated into existing systems (Kamau, Winter, and Stoll, 2015).

The Baringo County location functions as a suitable area to investigate how communities practice ABS domestication. The Tugen, Pokot, and Ilchamus communities together with their diverse ecosystems require the IMK system as their primary healthcare solution. The combination of commercialization activities and climate change impacts together with environmental degradation processes creates a dual threat which endangers both biodiversity and knowledge systems (CBD, 2011; GoK, 2016). Environmental management in Kenya operates through a system where national and county governments share responsibility according to the devolved governance framework (GoK, 2010). The national institutions that exist to oversee environmental protection through NEMA face operational difficulties because counties need to handle local execution, which generates problems with working together and defining their operational boundaries (NEMA, 2018; Mutta, 2020).

The implementation of ABS faces more difficulties because traditional governance systems lack full integration with existing legal frameworks. The absence of established methods to capture IMK knowledge and create community protocols raises the possibility of unauthorized use. The current obstacles demonstrate the requirement to evaluate how local regions implement the Nagoya Protocol. This study investigated assessed the level of Access and Benefit Sharing (ABS) policy with respect to indigenous medicinal knowledge Baringo County, Kenya.

Statement of the Problem

The protection of indigenous medicinal knowledge (IMK) in Kenya remains insufficient after the country ratified international agreements including the Convention on Biological Diversity (CBD) and the Nagoya Protocol on Access and Benefit Sharing (ABS). The domestic implementation of these frameworks remains weak which prevents effective enforcement of their provisions. The delivery of health services to the public in Kenya faces challenges because the country uses devolved governance structures which give power to county governments



but reserve national functions for policy development and national referral facility administration to the central government. The national government holds power to implement international treaties within all community levels but the process has stopped because of inadequate coordination and insufficient operational development.

Research shows that the legal system needs to improve enforcement and coordination efforts for the Protection of Traditional Knowledge and Cultural Expressions Act (2016) according to existing studies. Indigenous communities experience ongoing threats because of biopiracy and knowledge theft and they suffer from a loss of indigenous knowledge systems. Research across Africa demonstrates that indigenous communities encounter institutional difficulties because their organizations lack both technical expertise and knowledge about their rights (Kamau, Fedder, & Winter, 2010). The devolved governance system in Kenya has established complex systems to control genetic resources and traditional knowledge which results from agencies sharing authority to manage those resources (Mutta, 2019). The IMK system transmits information through oral methods which restricts documentation while communities have insufficient legal knowledge (Chennells, 2013). Unclear ABS frameworks and weak community engagement hinder conservation and knowledge sharing in Baringo County, where IMK is central to healthcare and cultural identity, (Wynberg et al., 2009). Most literature focuses on national policy, with limited empirical attention to county-level implementation. This study addresses this gap by assessing the level of Access and Benefit Sharing (ABS) with respect to indigenous medicinal knowledge in Baringo County, Kenya.

Specific Objective

To assess the level of Access and Benefit Sharing (ABS) with respect to indigenous medicinal knowledge in Baringo County, Kenya.

Significance of the Study

This study is academically significant as it examines how international environmental law fails to address the socioeconomic needs of local communities. Researchers need to conduct additional studies on the economic advantages of the Nagoya Protocol which Kenya has ratified for its indigenous population. Baringo County serves as an ideal research site because its diverse ecosystems and established indigenous medicinal traditions enable researchers to study actual Access and Benefit Sharing (ABS) system operations. The study investigates whether international legal systems protect local knowledge holders while adding research material about legal pluralism and community rights and sustainable development.

The research holds significance for public policy because it evaluates how Baringo County Indigenous Medicinal Knowledge holders experience Access and Benefit Sharing under the Nagoya Protocol which the country has implemented. The research results show deficiencies in three areas which include legislation and coordination and enforcement and community involvement. The findings will guide reforms for Kenya's bio-diversity laws and intellectual property regulations and traditional knowledge policies while creating synergies between national and county governmental bodies. The study provides practical recommendations which help communities safeguard their rights against bio-piracy while improving their compliance with the Convention on Biological Diversity and creating equitable benefit-sharing systems which work effectively.

LITERATURE REVIEW

The Access and Benefit Sharing (ABS) mechanisms enable fair and equitable sharing of benefits which result from using genetic resources and their associated traditional knowledge including Indigenous Medicinal Knowledge (IMK) and other traditional knowledge systems. The recognition of ABS mechanisms globally was facilitated by the Convention on Biological Diversity (CBD, 1992) and the Nagoya Protocol (2010), which requires equitable sharing of benefits from the use of genetic resources for indigenous and local communities. Despite the establishment of formal frameworks, many challenges remain, and include legal shortcomings and limited institutional capacities to ensure that the holders of Indigenous Medicinal Knowledge benefit from its commercial or scientific use.



Studies around the world show that ABS is an important tool to promote biodiversity conservation and social justice for Indigenous peoples. For example, Ten Kate and Laird (2002) argue that, if not implemented through well-designed ABS agreements, communities may suffer from the exploitation of their traditional knowledge by pharmaceutical and biotechnology companies. Examples of ABS agreements concluded between indigenous communities and external actors in Latin America, Asia and the Pacific have shown to generate both financial and non-financial benefits to indigenous communities, including co-authorship in scientific publications, capacity building and improvement of health care facilities (Posey, 1998; Dutfield, 2004; Laird et al., 2010).

However there is little empirical evidence available about the impact of ABS frameworks on the livelihoods of indigenous knowledge holders, especially concerning IMK. Most of the existing studies focus on genetic resources generally and do not break down the data to investigate the specific difficulties experienced by holders of medicinal knowledge. Also, due to the lack of comparative analyses of the operation of ABS mechanisms in different legal and cultural contexts, it is difficult to identify best practices applicable in the context of African countries.

As a result of the commitments assumed by African countries under the CBD and the Nagoya Protocol, ABS mechanisms were progressively introduced into national legislations. Examples of African countries that established regulatory frameworks for the protection of indigenous knowledge and equitable benefit sharing are South Africa, Uganda and Ghana (De Beer & Wynberg, 2006; Chigona, 2015). Such legislative frameworks typically require prior informed consent (PIC) and benefit-sharing agreements before any commercial use of genetic resources and associated traditional knowledge. As reported in various studies conducted on the continent, African countries experience difficulties in implementing ABS mechanisms, especially concerning IMK. Among the main difficulties reported by African states are the weakness of the enforcement mechanisms, the unclear roles and responsibilities of institutions, and the limited participation of indigenous communities in decision-making processes (Wynberg et al., 2012; Chigona, 2015). Oral transmission of medicinal knowledge makes it highly vulnerable to misuse and bio-piracy. Researchers from Africa also noted that although legislative frameworks exist, they lack mechanisms to translate the legal obligations into tangible benefits for the indigenous communities.

The operationalization of Access and Benefit Sharing (ABS) frameworks remains limited in Africa and therefore, the tangible economic benefits to local communities are few. Documentation of orally transmitted Indigenous Medicinal Knowledge is poor and leaves much traditional knowledge unprotected. Furthermore, the limited involvement of local communities in the formulation of ABS policies contributes to top-down approaches, and hinders the equitable participation of indigenous knowledge holders and the effective safeguarding of their knowledge in local communities, like Baringo.

Across the East African Community (EAC), including Kenya, Uganda, Tanzania, Rwanda, Burundi and South Sudan, ABS frameworks are becoming increasingly recognized as crucial elements of sustainable development and cultural preservation. The East African Community Treaty (1999) and subsequent regional policies have encouraged the harmonization of biodiversity conservation and benefit-sharing policies among Member States. Several efforts have been made to align national laws with the Nagoya Protocol, for example, Kenya's draft ABS regulations and Uganda's National ABS Guidelines. Research carried out in the EAC indicates that despite the existence of ABS laws, there is a disconnect between national laws and customary laws in certain instances, which may affect the benefit-sharing arrangements with indigenous communities (Wynberg & Laird, 2007; Chigona, 2015; Nchanji & Tchoundjeu, 2016).

Rural communities across the globe depend on medicinal plants for primary healthcare, and ABS arrangements often seem to neglect the peculiar conditions under which medicinal plants are being utilized by indigenous communities. The complexity also arises when there is the exchange or trade of genetic resources and traditional knowledge between two or more countries, and the lack of harmonized ABS laws within the EAC that consider the customary laws of indigenous communities regarding the ABS laws. The lack of ABS law enforcement across borders, especially when the medicinal plant migrates across borders, is also an issue in the EAC region. There is also a lack of empirical evidence on the socio-economic effects of ABS agreements on indigenous communities with indigenous medicinal knowledge.



At the national level, Kenya has progressed in the implementation of the Nagoya Protocol. The National Biodiversity Strategy and Action Plan (2016) and Bio-Safety and Access to Genetic Resources Regulations (2019) provide guidelines on ABS, which include PIC and benefit-sharing agreements, as well as the recognition of indigenous knowledge. The National Policy on Traditional Medicine (2005) recognizes traditional healers and promotes the utilization of medicinal plants. The indigenous people of Baringo County have acquired medicinal knowledge that has been passed down from generations orally. Various studies conducted at the local level have indicated that medicinal plants are important for primary healthcare as well as for the identity of the local community. They contribute to the local economy (Cheplogoi et al., 2015; Koech et al., 2019).

Despite the fact that there is legislation on ABS that has been formulated by the country, there are challenges that affect its implementation at the local level. At the local level, many traditional knowledge holders lack awareness of their ABS rights and procedures, thereby limiting their ability to negotiate reasonable benefits from the commercial or scientific use of their knowledge. Local authorities lack the necessary resources and expertise to effectively enforce ABS compliance, thereby increasing the likelihood of exploitation of knowledge holders by researchers and companies. Additionally, much of the indigenous medicinal knowledge in Baringo County is un-documented, and customary knowledge-sharing practices sometimes conflict with formal ABS frameworks, thereby complicating the process of legally recognizing community rights in Baringo County.

Despite the existence of large gaps in the literature regarding ABS and IMK globally and regionally, there is a relative lack of comparative and/or empirical studies in Africa as a whole. However, there are numerous obstacles to the effective implementation of ABS laws in Africa, mainly that there is little to no protection afforded to oral knowledge, and even less engagement with communities to share the benefits of ABS. Within the EAC, customary laws have been poorly incorporated into national legal frameworks, and there are few studies investigating the socio-economic implications of ABS applications in the EAC. In addition to these regional issues, in Kenya and Baringo County, awareness, institutional capacity and documentation related to ABS are all extremely low.

THEORETICAL FRAMEWORK

This study was anchored on two theoretical frameworks; Legal pluralism theory and Equitable benefit sharing/distributive justice theory.

Legal Pluralism Theory

The theory of legal pluralism explains the coexistence of multiple legal and normative systems within a single social and political setting. Unlike traditional legal frameworks that prioritize state law, legal pluralism recognizes the role of societal norms and customs alongside formal legislation. Early scholars such as Malinowski (1926) demonstrated that so-called “primitive” societies possessed binding normative systems, while Ehrlich (1936) emphasized that law is often reflected in everyday social practices. Moore (1973) introduced the concept of semi-autonomous social fields, and Griffiths (1986) distinguished between “weak” and “strong” pluralism, establishing legal plurality as a social reality. Later theorists, including Santos (1987) and Tamanaha (2008), expanded the concept to include interactions between local, national, and international legal systems.

Legal pluralism is essential for the Nagoya Protocol because the protocol functions through international and national and customary legal systems. The researchers Morgera (2018) and Morgera Tsioumani and Buck (2020) demonstrate that indigenous governance systems must be integrated to fulfill requirements which include prior informed consent (PIC) and mutually agreed terms (MAT) and community protocols. Bavikatte and Robinson (2017) De Jonge (2019) and Coolsaet (2020) demonstrate that statutory ABS frameworks create ongoing conflicts because they do not recognize customary tenure rights and collective knowledge systems.

The Indigenous Medicinal Knowledge (IMK) of Baringo County Kenya exists under traditional systems which follow unwritten rules about communal ownership and inheritance rights that elders and traditional healers enforce. The Environmental Management and Coordination Act together with ABS regulations shows how legal pluralism helps researchers study the relationship between these systems and state laws. The system shows how



communal activities create clashes with established legal systems while it provides methods to incorporate traditional governance systems into ABS execution.

Equitable Benefit Sharing/Distributive Justice Theory

The Equitable Benefit Sharing theory explains how structural barriers function to prevent fair results because parties involved in the process lack proper legal knowledge and institutional resources which limit their negotiation strength. The research examines if National Environment Management Authority (NEMA) together with county governments create systems that enable all individuals to take part in decision-making processes, with special focus on those who belong to marginalized groups.

The Equitable Benefit Sharing (EBS) framework which operates through distributive justice theory establishes guidelines for resource benefit distribution in situations where societies experience power differences and historical injustice. The theory originates from Aristotle’s notion of proportional equality and is further developed by John Rawls (1971), who argued that inequalities are only justified if they benefit the least advantaged. The capabilities approach which Amartya Sen (2009) and Martha Nussbaum (2000) developed treats freedom and opportunity as core human rights. Distributive justice serves as a framework for biodiversity governance and Access and Benefit Sharing (ABS) research conducted by Edith Brown Weiss (1992) and Klaus Bosselmann (2008) and Chidi Oguamanam (2015).

The EBS framework establishes its main principles through its fundamental values of fairness and indigenous rights recognition and corrective justice and procedural justice and intergenerational sustainability which the Convention on Biological Diversity (1992) establishes and the Nagoya Protocol (2010) implements through Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT). The Baringo County framework assesses whether Kenya's ABS policies distribute all financial and non-financial benefits equally to Indigenous Medicinal Knowledge (IMK) holders through compensation and capacity building and technology transfer. The combination of legal pluralism with distributive justice creates a complete system that describes how native and official legal systems interact while assessing the fairness and inclusivity of those interactions in ABS implementation.

RESEARCH METHODOLOGY

This study adopted an exploratory research design that was purely qualitative. The study employed the use of both primary and secondary sources of data collection. Primary data was gathered through Key Informant Interviews (KII) while secondary data was obtained through documentary reviews. The target population for this study comprised traditional healers, elders, local community, county government officials, and representatives from relevant institutions and organizations that are involved in ABS and the implementation of the Nagoya Protocol. This study selected a total of 50 respondents. The main research instruments in this study were interview guides with open ended questions. Qualitative data was analyzed through thematic content analysis, which involved transcription, coding, and categorization of the interview data. The patterns and themes that emerged in relation to the level of Access and Benefit Sharing (ABS) policy with respect to indigenous medicinal knowledge Baringo County, Kenya.

Analysis, Interpretation and Presentation of Findings

Response Rate

The study selected 50 informants for field interviews, with 43 responding, representing a response rate of 86% which was quite adequate for a qualitative study in terms of validity and reliability of study findings (Baruch & Holtom, 2008; Saunders et al., 2019).

Table 1.1 Response Rate

	Category of Informant	Sampled	Responded	Not Responded	Response Rate %
1	Local Residents	10	10	0	100%



2	Traditional Healers	10	8	2	80%
3	Elder and community IMK holders	10	9	1	90%
4	County Government Officials	10	7	3	70%
5	Local Administrators (Chiefs/Sub-Chiefs)	5	5	0	100%
6	NGOs	5	4	1	80%
	Total	50	43	7	86%

Demographic Characteristics of Informants

Table 1.2 Gender Distribution

	Category of Informant	Responded %	Male	Female
1	Local Residents	10	7 (70%)	3 (30%)
2	Traditional Healers	8	5 (62.5%)	3 (37.5%)
3	Elders and Community IMK holders	9	9 (100%)	0 (0%)
4	County Government Officials	7	5 (71.4%)	2 (28.6%)
5	Local Administrators	5	4 (80%)	1 (20%)
6	NGOs	4	2 (50%)	2 (50%)
	Total	43	32 (74.1%)	11 (25.6%)

The study

found that most respondents were male (74.1%), while females constituted 25.6%, which demonstrated that men held more leadership positions than women in Baringo County. The research observed that patriarchal systems maintain control over natural resource management in this region. The male study participants examined access procedures and benefit-sharing and legal frameworks because they took part in negotiations, while female study participants studied indigenous medicinal knowledge (IMK) transmission and household conservation. The results show that women who play essential roles as custodians and practitioners in Access and Benefit Sharing (ABS) processes remain underrepresented which demonstrates the need for gender-sensitive approaches in implementing the Nagoya Protocol.

Table 1.3 Level of Education

	Level of Education	Frequency	Percentage
1	No Formal Education	7	16.3%
2	Primary Level	13	30.2%
3	Secondary Level	10	23.3%
4	Diploma Level	7	16.3%
5	University Level	4	9.3%
6	Post-Graduate Level	2	4.7%
	Total	43	100%

The study found that most respondents had low to moderate levels, which included 30.2% of participants who had primary education and 23.3% who completed secondary education and 16.3% who had no formal education while only a small group achieved higher education. The study shows that IMK custodians who live in rural areas use their practical knowledge to maintain their traditional customs. The less-educated respondents provided valuable indigenous knowledge, but their understanding of legal systems, including ABS, was limited. The more educated respondents used their understanding of domestication links and benefit-sharing systems to assess legal and policy issues.



Level of Access and Benefit Sharing (ABS) with Respect to Indigenous Medicinal Knowledge in Baringo County, Kenya

The study investigated five research questions regarding Access and Benefit Sharing (ABS) policies which protect Indigenous medicinal knowledge in Baringo County, Kenya. The five thematic areas included; Community perceptions of current abs policies, impact of ABS regulations on documentation, use, and commercialization, challenges faced by traditional healers and community members, effectiveness of existing legal frameworks and strategies for improving equitable benefit sharing and sustainable use.

Community Perceptions of Current ABS Policies

According to the study findings, Baringo County residents display diverse attitudes toward Access and Benefit Sharing (ABS) policies. Most people do not know about ABS legislation which some people believe will stop biopiracy and protect indigenous knowledge from being misappropriated while they understand national and international frameworks such as the Nagoya Protocol and Kenya's ABS Regulations (2014). Formal institutions create perceptions which people feel toward them because they direct their trust toward researchers and corporations and government officials who present themselves as authorities on local knowledge systems. Traditional healers, in particular, have limited understanding of how to access benefits or register their knowledge, generating guarded optimism about the potential of ABS to protect and recognize indigenous knowledge if awareness and participatory mechanisms are strengthened.

Impact of ABS Regulations on Documentation, Use, and Commercialization

The research found that ABS frameworks created a small yet essential impact on both their documentation activities and their use of traditional herbal medicine expertise. Ethnobotanical inventories have encouraged some documentation efforts, though traditional healers refuse to share their complete knowledge because they fear misappropriation and lack adequate intellectual property protections. People use medicinal plants as their main healthcare source because they cannot access formal medical services. Theoretical ABS systems support sustainable resource management through controlled resource access and sustainable harvesting. Organizations need enforcement authority while local communities require additional support to manage their environmental resources. Indigenous knowledge commercialization remains uncommon, and intermediaries receive all economic benefits which should go to actual knowledge holders. ABS frameworks provide community recognition but fail to produce fair economic benefits and commercial success for indigenous communities.

Challenges Faced by Traditional Healers and Community Members

The study observed that traditional healers face multiple challenges which include structural obstacles and social obstacles and institutional obstacles that limit their ability to apply their expertise. People find it difficult to understand complex licensing systems which require advanced reading skills to use because this knowledge remains unknown to the general public about ABS processes. Organizations face two operational challenges that stop their work because they lack essential financial resources and necessary infrastructure, which prevents organizations from executing large production runs and obtaining intellectual property rights. It was noted that social and cultural norms restrict knowledge sharing beyond trusted networks, which decreases the public's use of formal ABS systems. Companies exploit communities through weak agreement enforcement, which results in communities receiving fewer advantages from their agreements.

Effectiveness of Existing Legal Frameworks

The study noted that the legal system of Kenya which includes the 2010 Constitution together with the ABS Regulations (2014) and various sector-specific regulations establishes prior informed consent requirements and mutually agreed terms which create a legal framework that should protect rights while enabling benefit sharing. The system fails to function properly because communities do not know about it and the enforcement activities are not strong enough and the institutional capabilities do not meet necessary standards. The legal system protects individual intellectual property rights but it does not provide complete protection for communal knowledge systems that are transmitted through oral traditions. National authorities and county officials fail to work together



effectively which results in different approaches to implementation and unfair distribution of benefits. The ABS frameworks show strong theoretical support but their actual results in Baringo County show weak effectiveness.

Strategies for Improving Equitable Benefit Sharing and Sustainable Use

It was observed that to improve ABS results, the local community needs better empowerment through easier regulatory pathways and the creation of systems that allow community members to manage their resources. The training programs together with awareness initiatives for traditional healers will help them understand ABS together with intellectual property rights better. The involvement of community members in developing policies and monitoring their implementation together with making decisions will enhance both transparency and accountability. Community-based enterprises together with cooperatives and revenue-sharing initiatives will achieve fair benefit distribution while community intellectual property trusts protect shared knowledge. The combination of ABS with conservation programs and sustainable resource extraction methods will protect biodiversity together with cultural heritage and native knowledge which will lead to a more inclusive system that protects ABS rights in Baringo County.

DISCUSSIONS OF FINDINGS

The experience of Baringo County, Kenya in implementing Access and Benefit-Sharing (ABS) for Indigenous Medicinal Knowledge (IMK) reflects broader trends across Africa, where countries have adopted Nagoya Protocol-aligned laws but face uneven implementation due to structural, institutional, and social barriers. In South Africa, communities face difficulties obtaining economic advantages from ABS rights which the Biodiversity Act (2004) establishes because they lack knowledge about the rights and they encounter difficulties with the licensing system and they lack the ability to create Mutually Agreed Terms (MAT) (Chennells, 2012). Baringo faces identical obstacles because its legal safeguards only provide minimal advantages to knowledge holders.

Traditional knowledge holders in Uganda refuse to share their ethnobotanical knowledge because they fear that others will steal their work and because intellectual property rights in Uganda are poorly protected (Byakika et al., 2017). The Baringo case shows that ABS processes face two major barriers which result from distrust and people worrying about receiving unfair compensation. The two situations both struggle to preserve knowledge which belongs to multiple people and exists as oral traditions within established legal frameworks. The Nigerian ABS system faces limitations because cultural practices and governmental procedures and public mistrust of outsiders prevent people from participating in it (Egbuta et al., 2019), a situation comparable to Baringo.

African experiences demonstrate improvement opportunities which exist despite these difficulties. The community-based conservancies of Namibia use traditional knowledge to manage resources which result in economic advantages and environmental protection according to Shikongo 2015). The intellectual property rights system of Ghana which centers on community involvement has improved participatory methods while delivering direct advantages to the community according to Osei-Tutu and his co-authors 2018). The models show decentralized governance systems which operate through easy-to-use methods that guarantee shared rights among all parties involved.

The findings are grounded in compliance theory, which explains variation in community responses to Access and Benefit Sharing (ABS) policies in Baringo County. The theory argues that people follow international and national laws because of three factors which include coercion and capacity and legitimacy. The study discovered that traditional healers in Kenya face two main obstacles which prevent them from compliant with Nagoya Protocol requirements that his country has adopted. The main limitations involve three factors which include low literacy levels that restrict organizational ability and financial limitations and weak institutional support and legitimacy issues that stem from people who distrust official systems and believe that external researchers and commercial entities receive most of the advantages. The system loses its ability to ensure compliance because of poor enforcement methods and monitoring systems.

Legal pluralism complements this viewpoint by demonstrating how formal ABS systems and traditional governance methods operate together yet compete with each other in Baringo County. Indigenous Medicinal



Knowledge (IMK) governance depends on oral traditions and elder custodianship and community protocols which establish different rules compared to state-based intellectual property systems that require documentation and individual ownership. The different decision-making processes together with the different benefit-sharing practices create obstacles to proper ABS regulation implementation while traditional healers avoid sharing their knowledge.

CONCLUSION

The study found that community perceptions of Access and Benefit Sharing (ABS) policies in Baringo County are mixed, with some recognizing their potential to prevent biopiracy, while many remain unaware of key frameworks such as the Nagoya Protocol and Kenya's ABS Regulations (2014). Distrust in formal institutions and limited awareness among traditional healers reduce participation in ABS processes, although there is cautious optimism if awareness improves. ABS regulations have had limited impact on documentation, use, and commercialization of Indigenous Medicinal Knowledge (IMK). While some ethnobotanical documentation exists, fear of misappropriation and weak intellectual property protection limit knowledge sharing. Commercial benefits rarely reach communities, often being captured by intermediaries, and resource use remains largely unregulated due to weak enforcement.

The study noted that traditional healers face structural challenges including low literacy, complex licensing procedures, financial constraints, and weak institutional support. Cultural norms restricting knowledge sharing and ineffective enforcement further limit benefit-sharing outcomes. Although Kenya's legal frameworks provide for PIC and MAT, implementation remains weak due to low awareness, poor coordination, and inadequate enforcement mechanisms. The study further identified strategies such as capacity building, simplified ABS systems, community participation, and collective intellectual property models to improve equity.

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