PROTECTING TRADITIONAL KNOWLEDGEIN SRI LANKA: A FIGHT AGAINST BIOPIRACY

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Introduction

The precise definition of traditional knowledge (hereinafter referred to as TK) is still a debate. The Convention on Biological Diversity (hereinafter referred to as CBD) reflects the diverse nature of TK when it refers to it as "…knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles…" It has been suggested by WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (hereinafter referred to as IGC) that TK could be characterized as "…the content or substance of knowledge that is the result of intellectual activity and insight in a traditional context, and includes the know-how, skills, innovations, practices and learning that form part of traditional knowledge systems, and knowledge that is embodying the traditional lifestyle of a community or people, or is contained in codified knowledge systems passed between generations…" It further states that TK is not limited to any technical field, and may encompass medicinal knowledge, agriculture, environmental knowledge and knowledge associate with genetic resources.

Bio piracy has become a crucial issue which desires a deep analysis. The Cambridge English Dictionary defines bio piracy as "the act of taking living things, especially plants, from an area or taking the knowledge of local people about these living things, and using them or it to make money for a particular company or organization." Developed countries battle to gain free access to gain biological resources in developing countries with their advanced technologies and in return they have no willingness to pay compensation. The fact that developing countries are not in a position to afford protection for their biological resources is a miserable state indeed. This paper intends to focus on importance of protecting TK, different mechanisms in order to do protect and preserve TK and sufficiency of current Sri Lankan legislation in protecting TK in comparison with India.

Importance of Protecting TK

A community's innovative advancements in TK at times may meet the requirements to qualify as patentable which is one main way of protecting TK. This is because the existence of a relationship between a particular invention and its underlying TK. In such circumstances the holders should be asked whether they wish to obtain the advantage of patent protection and whether it is in their best interest to do so. If the answers are affirmative then they should be inquired whether they possess necessary

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resources to file, prosecute and enforce patent applications.

One can argue then how the link between TK and the patent system can be exploited. The answer can be found in the objective of the patent system says Professor Erstling (2008). Although the objective of patent law is affirmative on the other hand, there is also a defensive objective of the patent system which is to ensure the denial of rights to inventions that are already known or lack of sufficient level of inventiveness. Further, an informational objective of patent system is to guarantee the disclosure to third parties of all relevant information concerning the invention in order to grant exclusive rights to patent applicant. Therefore, countries wishing to protect TK through patents shall enforce legislative mechanisms to provide for defensive protection of TK, disclosure of TK, with consequent provision for benefit sharing and affirmative protection of qualified TK through granting patent rights.

According to Professor Erstling "communities should have the right to make use of their own TK pursuant to their own customs and policies, free from misappropriation or misuse by others." Moreover, the holders of TK may be motivated by the economic, social and environmental interests derived from it. Accordingly, the TK holders opt to protect TK in moral, economic, social and environmental aspects. Professor Graham Dutfield (2004)has examined that "some indigenous and local communities depend on traditional knowledge for their livelihoods ad well-being, as well as to sustainably manage and exploit their local ecosystems." Therefore, protecting TK not only help indigenous and local community to maintain livelihood security and physical well-being but also provides opportunities for economic development.

The International Framework

The Convention on Biological Diversity (CBD) constitutes the central global framework for the governance of access and benefit sharing. (ABS) The CBD and its Nagoya Protocol on Access and Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their Utilization regulate ABS and thereby address the issue of biopiracy. Article 8 (j) of the CBD mentions that the countries should respect, preserve and maintain knowledge, innovation and practices of indigenous and local communities which are connected to the conservation and sustainable use of biological diversity. It also requires wider application with the prior consent of knowledge holders with additional provision to equitable benefit sharing for the utilization of genetic resources and associated knowledge.

On the other hand, Nagoya Protocol provides a "much better resolution on international rules and procedures for access and benefit haring."(Kumar, Lakshman 2014) Since the Protocol applies to genetic resources within the scope of Article 15 of the CBD and to the benefits arising from the utilization of such resources and to TK associated with genetic resources it indicates that the scope attempts to realize the contents of Article 15 and 8 (j) of the CBD. Nevertheless, critics argue that CBD was produced "at the behest of interests mostly from the North." (Micheal, 2003) Vandana Shiva, an Indian environmentalist states that the US agenda was to have the CBD pave way for free access to the South's biodiversity while

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ensuring intellectual property rights to USA's own technology are protected. Critics have also pointed out that CBD is strong on patents but weak in protecting the rights of indigenous people to their biodiversity and knowledge. For example, Article 8 (j) merely calls for respect and protection of indigenous knowledge but does not mention any rights at all. Since the Convention has no mechanism to control outsider's access to biological resources and to determine equitable sharing of benefits critics argue that the Convention "lacks teeth."

The Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of the Utilization (hereinafter referred to as the Bonn Guidelines) counsel contracting states to consider measures that would "encourage the disclosure of the country of origin… of traditional knowledge, innovations and practices of indigenous and local communities in applications for intellectual property rights…" The Agreement on Trade Related Aspects of Intellectual Property (TRIPS) sets the "global minimum for patentability" (Lakshamn, 2014) since it sets the basic framework which protects the intellectual property rights of individuals and corporations across the member states of the World Trade Organization. Although it does not expressly cover patent protection for TK, it includes several provisions such as Article 7, 8, 27, 29, 32 and 62.1 which are especially relevant to the issue of disclosure of the source of TK in patent applications.

Different approaches to protect TK

TK may be protected not only through patents but also through several other alternative protection strategies. One such example would be using geographical indications (GI). This is because if local people register their products under GIs, their consumers may rely on the origin of the product, and purchase only them due to their authenticity. GI may be widely used to protect TK relating to agriculture productions for reasons such as they can be granted for a group of people and for perpetuity, they are aimed at particular characteristics of a good, they reward producers in a particular region and producer qualifies for the protection irrespective of whether he is an individual or a group. Another option to protect such products would be Trade Marks (TM). TM assures of authenticity and it required for registration if protection is needed. Protection lasts for perpetuity and may be granted for a class of people. Since TMs are meant to distinguish goods of a particular producer from another, the mark indigenous people use will serve as an indication to consumers that the product is manufacture by them.

While copyright protection can be used protect artistic manifestations of holders of TK which may include legends, myths, poems, theatrical works, musical works and textile compositions. Trade Secrets may also be used protect TK. However, one main limitation in protecting TK through an IPR regime is that the rights cannot be enforced outside the country and hence, fails to solve the problem of bio piracy since appropriation of TK is mostly committed by foreign entities. Therefore,

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another considerable option would be a *sui generis* regime of IPR. The term refers to 'of its own kind' and it is based on this law several countries have designed their own distinct laws to deal with the rights of holders of TK.

Challenges faced when protecting TK

"Developing countries now understand that developed countries have not ended their rush for acquisition of spheres of influence in the Third World." (Dountio, 2010) Developed countries battle to gain free access to gain biological resources in developing countries with their advanced technologies and in return they have no willingness to pay compensation. The fact that developing countries are not in a position to afford protection for their biological resources is a miserable state indeed. Therefore, in this part of the paper the reasons for powerless developing countries to be unable to afford protection will be discussed.

Firstly, developed countries being unwilling to participate in assisting to find a solution to this issue remain a huge challenge. For instance, United States has not ratified International Treaty on Plant Genetic Resources on Food and Agriculture. (ITPGRFA) Further, US patent law does not seem to support protection of traditional knowledge since it requires documentary proof when an objection is made to an application for patent rights. This is not advantageous for the holders of TK since a greater part of TK is undocumented. Secondly, the fact that bulk of TK is available in the public domain since greater part of TK is used by the members of the indigenous community and as such is part of 'prior art.' TRIPS agreement provides that in order for an invention to be patented it must be 'new' (Article 27.1). Thirdly, TRIPS Agreement provides that an applicant for a patent shall disclose an invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art and may require the applicant to indicate the best mode for carrying out the invention known to the inventor at the filing date. This provision indicated the necessary of documentation and TK is often undocumented is yet another obstacle for protecting the same.

Fourthly, holder of TK often find it difficult to protect TK due to the high cost involved in it. This is often an unaffordable price for the indigenous and local communities. According to Hansen & Van Fleet (2003) the cost of obtaining a patent under US law is estimated to be $5,000 to $10,000 or even higher. Fifthly, Article 27.1 of the TRIPS Agreement provides that an invention to be patented it must be new, involve an inventive step and are capable of industrial application. The fact that TK is often held collectively and does not recognize individual ownership of it. A further challenge is absence of an international TK regulation regime. "A framework treaty is the first step in this process because it creates the contracting space for the evolution of more specific and enforceable obligations." (Drahos, 2004) Since WTO seems to be the only international organization to provide a solution for this problem during the discussion sessions on the review at Doha, Qatar some developing countries such as India suggested for the amendment of IP laws to accommodate harmonization of the CBD and TRIPS developed countries like US opposed and

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this led to the collapse of the negotiations Finally, one of the ideal solutions for the protection of TK seems to be designing a *sui generis* law. However, the provision in TRIPS Agreement regarding this aspect is vague and thus, makes it difficult for the countries to design such a regime. It has not defined in the TRIPS Agreement a clear criterion when designing a *sui generis* scheme.

The Position in Sri Lanka

Although Sri Lanka has a rich source of traditional knowledge most of it is in the danger of disappearing (Wickramanayake, 2012) Many forms of traditional knowledge involve *inter alia* indigenous medicine which is a mixture of formalized systems of Ayurveda, Sidhha, Unani and the non-formalized system of Deshiya Chikitsa used for bone mending, snakebite, eye disease treatment and etc., architecture (Buddhist architecture of cave temples, stupas, meditation houses, vaulted roof shrines, places with ponds ad storied buildings) agriculture, water supply systems which are sustainable, environmental management, food preparation and preservation habits and martial arts (*angampora*), traditional local performances such as *tovil*, drumming, low-country dance, Kandyan dance and etc.

Sri Lanka is subject to a 'serious threat of bio piracy' says Marsoof (2010). Bengwayan mentions that global drug firms seek to exploit ancient Lankan wisdom, extracting chemicals from local plants and patenting them abroad. For instance, it is found that nineteen different drugs have been made using substances found in the *Keena* tree of Sri Lanka (Gracia,2007).Further, locally grown *Kothalahimbutu*plant (*Salacil reticulate*) helps control diabetes when one drinks water left overnight in mugs or jugs carved out of *Kothalahimbutu*. A Japanese drug company has patented a product based on this plant through the American Chemical Society in 1997. The plant *Weniwelgata* has also been registered by Japanese, European and American manufacturers which is used by Sri Lankan to remedy fever, coughs and colds. However, unfortunately the current legal framework is greatly inadequate in addressing this issue of bio piracy. Intellectual Property Act No. 36 of 2003 and the Fauna and Flora Ordinance amendment Act No. 22 of 2009 play a supportive role in this aspect but with serious deficiencies. For instance, under the Sri Lanka IP Act protection is granted under Section 5 copyright protection only to oral traditional cultural expressions such as Kandyan dance, folk poetry and traditional craftsmanship. Traditional knowledge in Sri Lanka is not limited to expressions of folklore and seeking protection only to expressions of folklore is only a partial solution. According to Dutfield (2003) "protection of traditional knowledge must be broad enough to embrace traditional knowledge of plants and animals in medical treatment etc."

Moreover, Section 6 limits folklore to performance related to stage performances. Economic rights guaranteed to the owner under Section 9 shall concern the works protected under Section 6 of the Act. Therefore, the limitation of protected expressions of folklore which are "apt for stage production" seriously narrows the scope of protection. Hence, traditional crafts objects due to the inability to perform on stage will not be able to be protected under Section 6. Another issue is the inability of incorporating copyright

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protection with traditional expressions. Traditional which implied ancient existence may be traced back to centuries ago. Therefore, protection under copyrights will be futile since the duration of copyright protection in only for lifetime of the author and 70 years after death.(Section 13) Another problem arises here is the identity of ownership of indigenous knowledge since such knowledge is held by the community and they refuse to recognize individual ownership. A further issue arises as to the 'originality.' According to WIPO "Many traditional literary and artistic productions are not original." But for copyright protection to be granted the work must be original. It is now desirable to examine several cases in this aspect. Although in ***BulunBulun v. R &T Textiles (Pty) Ltd*** (1998 41 IPR 513) ,***BulunBulun v Nejlam Investments*** (11 10 EIPR 346) the court protected aboriginal artwork by enforcing copyright inadequacy of protecting the rights of holders of traditional expressions by copyrights was stressed in ***Yumbulul v. Reserve Bank of Australia*** (1991 21 IPR 482). In the latter case French J. noted that copyrights are insufficient to deal with such claims and emphasized on relying on customary laws in this regard.

Section 24 of the Act makes specific provisions relating to reproduction, communication to the public, adaptations, translations and other transformations of expressions of folklore. This gives rise to many issues for instance empowering a competent authority to authorize third parties to make use of folklore may not be in the best interest of local communities. Further, even though a fee paid by third parties will be collected in fund to be utilized for cultural development it does not specifically address the need for benefit sharing with indigenous communities. Moreover, although Section 24 (6) states that those who deal with folklore without the requisite authorization will be liable for damages it is unclear as to whom the damages will be paid.

India

India is home to over 700 indigenous groups. They have taken many steps forward in protecting their indigenous knowledge in their country. For instance, the Biodiversity Act of 2002 in India which recognizes that India is rich in traditional knowledge and is responsible for regulating access to TK. It also provides for the establishment of the National Biodiversity Authority (NBA) (Section 8.1)which is required to *inter alia* ensure that foreigners, Indian non-residents, corporations, associations, organizations not registered in India or registered in India, but having shares held by or managed by foreigners do not have authorized access to biological resources occurring in India (Section 3.1) or knowledge associated thereto, for purposes of research, commerce, or biodiversity and bio-utilization.(Section 3.2)NBA together with State Biodiversity Board must consult local Biodiversity Management Committees before access is granted to anyone, even though there is no obligation to follow the latter's recommendations. Further, it provides that no one shall without the approval of the NBA transfer results of any research to any biological resources occurring in or obtained in India for monetary compensation to a foreigner, an organization of a body corporate managed by foreigners, or having shares held by foreigners. It is stated in Chapter X that

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every local authority shall constitute a biodiversity management committee within its area, the purpose of which shall be promote the conservation, sustainable use and documentation of biodiversity (Section 4.1)

Subsequent to fighting several high profile legal battles such as the Turmeric case (India forced USPTO to revoke patent granted to researchers in US for the use of turmeric powder (curcuma longa) for wound healing. India won the battle in 1997) where they argued that since Indian have for centuries used turmeric powder for wound healing thus, it lacked the 'novelty' criterion for granting patents. India recognized the need for safeguarding their TK through establishing a Digital Library. This is a thirty million page searchable database translated from Hindi, Sanskrit, Arabic, Persian, Urdu, and Tamil into English, German, French, Spanish and Japanese.

Conclusion and Recommendations

The most visible action a government can take is to create, modify and implement national laws on traditional knowledge in order to protect it. Usually, this law making is stimulated by pressure to meet international agreements. In Sri Lanka, the proposed legal framework of 2009 is important in this regard. This working piece of legislation has identified two categories of TK viz. public domain TK and non-public domain TK. The draft legislation not only provides for registration of TK which is not in the public domain but also it provides for creation of a database for public domain TK. Nevertheless, some issues pertaining to the draft legal document is ascertaining how to demarcate public domain TK from non-public domain TK and unavailability of a mechanism how to penalize those who abuse public domain TK in an unauthorized manner.

Designing national laws also solve the issues of high cost involved in protecting TK and availability of patent protection only for inventions which are novel, innovative and useful since these requirements make it difficult to seek protection of TK based biological resources which have been transmitted orally from time immemorial rendering not novel and which are collectively held and not individually owned. However, designing a *sui generis* law for countries is also not an easy task because there is no guideline as to the criteria to be considered when designing such a law. It can be therefore, recommended to provide a series of guidelines for states when designing a *sui generis* model for protection of TK. This could lead to countries having a more uniform set of laws relating to protecting TK.

Next, creating a database and digital libraries can also be recommended with much legal protection because TK is in danger of being eroded and therefore, preventing from getting disappear is much more important than fear of misappropriation. In order to remedy misappropriating such knowledge stringent laws can be implemented. Rules and regulations must be provided for other practical issues like basis for users fees, valuation of the information collected, possible claims of intellectual property over the databases themselves and the recovery of operational costs of these database.

Moreover, active participation of indigenous people in protecting TK must be encouraged. It is much important that

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indigenous people's organizations be informed of developments in the international arena and at the same time relating these developments to what is happening around. A more coherent approach can be designed through support given by the civil society involving churches, temples and other mechanisms.

Establishing an IPR Ombudsman attached to the national patent office will help investigating complaints of indigenous communities. This post should be filled in consultation with indigenous communities and organizations and he should provide an annual report on his activities. He also should possess the authority to delay patent approvals and to require the review of specific patents or patent applications. When indigenous community challenge the patent claim through the ombudsman a Tribunal should be established in order to solve the dispute.

One of the main difficulties that arise when seeking to protect TK is that certain developed countries are unwilling to participate in finding a solution to this issue. It can be recommended that TRIPS Agreement include in its requirements for grant of patent that application of patents shall not be granted where the invention is known or the applicants can be required to disclose the source of origin for patent applications based on biological resources. At this point, the challenge of TK falls within the sphere of prior art arises and it can solved by requiring in TRIPS Agreement disclosing the source of origin and proof of consent of TK holders as conditions for patent applications.

It is of utmost importance that Sri Lankan IP Act be amended to include specific concerns relating to TK. Guidance may be sought from Indian Patent Amendment Act of 2005. Section 3 of the Act excludes a mere discovery of a known substance from patentability with an aim of protecting TK and biodiversity. Further, grounds of opposing patent applications include 'non-disclosure or wrongful disclosure mentioning incomplete specification, source and geographic origin of biological material used in the invention and anticipation of invention by the knowledge, oral or otherwise available within any local or indigenous community in India or elsewhere.' Moreover, Sri Lanka should refer instruments like United Nations Declaration on Rights of Indigenous People when drafting national legislations.

Scholars also point out that the 'Trust concept' can be of much use in protecting TK. Therefore, attention should be drawn to involve trust concept in this regard. TK in the public domain can be protected under public trust doctrine and TK privately owned can be protected under private trusts. For instance, San Hoodia Benefit Sharing Trust was created for the San Tribes and this can be done in Sri Lanka through benefit sharing as required in Chapter II of Trust Ordinance No. 9 of 1917.

Finally, it is of utmost importance to establish an international TK regulation regime in this aspect. Drahos (2004) has suggested "A framework treaty is the first critical step in this process because it creates the contracting space for the evolution of more specific and enforceable obligations." The need for such an international protection arises because national and regional laws only have a limited impact since they affect only in the countries in which they have been enacted.

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Although this can be remedied by bilateral and plulateral agreements between countries the issue is only a few countries actually have these laws in place. Therefore, it is crucial to have an effective international TK regulation. An international regime needs to carefully define international policy objectives, particularly in terms of what and who needs to be protected. One major advantage of such a regime is that it provides for minimum acceptable standards for protection and thereby creates a greater legal certainty by harmonizing of national laws to a certain extent. Thus, it will ease the holders of TK to manage and trade their IP assets. However, international regime should not be too prescriptive in terms of how it will be implemented and thereby allowing each country to determine own provisions. The overall objective should be ensuring the stated objectives are achieved.

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