



TRADITIONAL KNOWLEDGE PROTECTION AND DOCUMENTING: AN OVERVIEW ON TRADITIONAL KNOWLEDGE DATABASE AND REGISTRY

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ABSTRACT

Traditional knowledge is widely recognized as role in economic, social and cultural life and development, not only in traditional societies but also in modern societies. The recognition has heightened in recent years as a result of the increased awareness of the environmental crisis and growing appreciation of local communities. The awareness of the value of biodiversity has highlighted the role of critical importance of traditional knowledge and indigenous people's knowledge. The misappropriation of their resources, their knowledge or the products of their knowledge would not only violate their rights, but also adversely affect the conservation and use of the knowledge and biodiversity. The article explores the issues and challenges of the method used to protect traditional knowledge such as database and registry.

INTRODUCTION

Traditional and indigenous knowledge has been used for centuries by indigenous peoples and local communities under their local laws, customs and traditions. It has been transmitted and evolved from generation to generation. However, many of the countries have not recognized any significant value in traditional knowledge nor any obligations associated to its use and have passively consented to or accelerated its loss through the destruction of the community's living environment and cultural values. International recognition and protection of traditional cultures and the rights of indigenous peoples are gradually becoming apparent. Despite this, international law has not yet been able to finalize a regime protecting the rights of indigenous peoples.

Importance of Traditional Knowledge Protection

Traditional knowledge is widely recognized as role in economic, social and cultural life and development, not only in traditional societies but also in modern societies. The recognition has heightened in recent years as a result of the increased awareness of the environmental crisis; the role of some modern technologies, production methods and products in contributing to this crisis; and a growing appreciation that local communities have a wide range of traditional knowledge, practices and technologies that are environmentally sound or friendly that have been making use of the manifold and diverse biological and genetic resources for food, medicines and other uses. In particular, the recent increased awareness of the value of biodiversity has highlighted the role and critical importance of traditional knowledge (Correa 2001).

The knowledge of local communities, farmers and indigenous peoples on how to use the many forms and types of biological resources and for many functions, as well as on how to conserve these resources, is now recognized as being a precious resource that is critical to the future development or even survival of the humankind (Gupta 2003). At the same time, this precious knowledge is maintained and thrives in the context of the traditional ways of social

and economic life and customary practices of the traditional communities. The viability and sustainable development of these communities also requires their rights and access to natural resources such as land, forest, water and the preservation of the environment within which they live and work. Moreover, their rights to their knowledge, to the use of their knowledge and to the products arising from such use must also be recognized (Correa 2001). The misappropriation of their resources, their knowledge or the products of their knowledge would not only violate their rights, but also adversely affect the conservation and use of the knowledge and biodiversity.

Traditional knowledge refers to the knowledge, possessed by indigenous people, in one or more societies and in one or more forms, including but not limited to art, dance and music, medicines and folk remedies, folk culture, biodiversity, knowledge and protection of plant varieties, handicrafts, designees, literature. The position of traditional knowledge and the rights of local communities is now widely accepted and acknowledged: (i) of role and importance of traditional knowledge; (ii) that for traditional knowledge to be maintained, the social and economic context in which it developed and is applied has to be maintained; (iii) that for this context to be maintained, the rights of local communities to their resources and knowledge have to be recognized and respected; and (iv) that misappropriation of these rights can erode the basis of traditional knowledge and thus adversely affect the prospects of sustainable development (Correa 2001).

Whilst these principles may be widely acknowledged, there are debates and disagreements on many issues, such as the interpretation of the rights of local communities and what constitutes 'misappropriation'. Moreover, discussions are proceeding on what measures can or should be taken, at multilateral, national or community levels, to protect and promote traditional knowledge and community rights.

The growing demand for the bioproducts, commercialization of the traditional knowledge associated with the bioresources has been on pace all over the world. This has adversely affected the livelihoods of TK holding societies and also caused serious threat to the biodiversity. The need for the protection of TK and bio-resource has been raised and has become a topic of international debate. Biodiversity represents the very foundation of human existence. Biodiversity is the most significant of the resource available to man. It has limitless potential for application for human welfare. Biodiversity rich nations are also the storehouse of information and knowledge on various unique application of Biodiversity. For the protection of traditional knowledge there are number of Agreements, Declarations, number of methods by individual countries and groups of countries, but still there is not any universally accepted model or method.

Traditional Knowledge Registries and Databases

TK registries are official collections of documentation that describe indigenous knowledge. Registries can be established and maintained either locally or outside the community itself. The community may collectively decide what is to be included in the registry and what is to be shared or disclosed to people outside the country.

External registries are maintained outside the community, often on the national international level, by governments, non-governmental organizations, museums, or libraries. These registries can be collections of TK specific to one particular community or to several communities. Local communities may have control over what is entered into registry, but may not be responsible for the registry's maintenance (Downer and Laird 1999).

Registries can also be public or private. Public registries place information in the public domain and serve as a form of prior art or defensive disclosure. A defensive disclosure, by describing information in a printed publication or other publicly accessible medium, helps to establish prior art capable of preventing patents based on that information.

Indigenous peoples and local communities have maintained virtual databases or registers of traditional knowledge for centuries and most frequently storing and passing it on through oral traditions.

Traditional Knowledge Digital Library (TKDL)

The Indian government set up the Traditional Knowledge Digital Library an electronic database, to document public-domain information about medicinal plants including traditional systems such as Ayurveda, Unani, Sidha, Naturopathy and Folklore. The information is then classified under Traditional Knowledge Resources Classification (TKRC), an information retrieval system linked to International Patent Classification (IPC). This is to make the information available worldwide to national patent office's through the IPC system to establish Indian rights to that knowledge so that they are not awarded patents since a claim could be laid then that the knowledge is already in the public domain.

The genesis of TKDL dates back to the Indian effort on revocation of patent on wound healing properties of Turmeric at the United States Patent Office (USPTO) and anti-fungal properties of Neem at European Union Patent Office (EPO). In 2000, the TKDL expert group estimated that about 2000 wrong patents concerning Indian systems of medicine were being granted every year at international level, mainly due to the fact that India's traditional medical knowledge existing in languages, such as Sanskrit, Hindi, Arabic, Urdu, Tamil etc. was neither accessible nor comprehensible for the patent examiners at the international patent offices.

After the creation of TKDL, India signed TKDL Access Agreement with (i) European Patent Office (Feb 2009), (ii) United State Patent & Trademark Office (Nov 2009), (iii) Canadian Intellectual Property Office (Sep 2010), (iv) German Patent Office (Oct 2009), (v) United Kingdom Patent & Trademark Office (Feb 2010) and (vi) Intellectual Property, Australia (Jan 2011). In-principle Agreement has been reached with the Japan Patent Office while negotiations are under way to conclude the Access agreement with the Intellectual Property Office of New Zealand (www.tkd.lan.govt.nz/default/common.asp).

These unique International Access Agreements are expected to have long-term implications on the protection of both traditional knowledge and global intellectual property systems in view of the fact that in the past, patents have been granted at various patent offices on the use of over 200 medicinal plants due to the lack of access to the documented knowledge in public domain. Also, 40-50 patent applications based on Indian traditional knowledge are awaiting grant of patent at any point of time.

The National Innovation Foundation (NIF)

The National Innovation Foundation established in 2000 by the Department of Science and Technology, Government of India, provides institutional support in scouting, spawning, sustaining and scaling up grassroots innovations and helping their transition to self-supporting activities. NIF established the National Register of Innovations and Unique Traditional Knowledge (NRITUK). These innovations are to be supported for incubation and conversion into viable business opportunities.

Society for Research and Initiatives for Sustainable Technologies (SRISTI), a nongovernmental initiative based in Ahmedabad in Gujarat established in 1993, promoted the 'Honey Bee Network' to document and promote innovations through entrepreneurship. The Honey Bee database of 12,000 innovations collected and documented by SRISTI would be part of the National Register of Innovations to be managed and supported by NIF. Grassroots Innovations Augmentation Networks (GIANs) in various geographic regions have been established to link up innovations, investments and enterprises. Input of formal science and technology, design, handholding support for project planning and management, finance and marketing intelligence to enable transition of an innovation into product and then into enterprise. The National Biodiversity Act also indicates village or community biodiversity chronicles/ registers to be carried out at a national level.

Farmers Rights Information System (FRIS)

The Farmers Rights Information System database is part of the collection of the Genetic Resources Centre of the MS. Swaminathan Research Foundation (MSSRF), an NGO in Chennai. FRIS is essentially a holistic database linked to the Community Gene Bank (CGB) which holds seed samples of farmers' varieties of different crops from Tamil Nadu, Kerala and Odisha, where the Foundation is involved in livelihood-linked conservation.

The objective of the gene bank to collect and document biological materials, predominantly seed varieties of the regions mentioned above as well as fruit, inflorescence, roots, tubers, rhizomes, sucker, live plants and dried plants, and to regenerate these plants using genetic techniques in the case of extinction, alarmingly low count of the species, or for propagating and sustaining agro- biodiversity.

The Convention on Biological Diversity (CBD) and FRIS are parts of a larger comprehensive system for the conservation of agro-biodiversity as an aid to local development, coordinated by the Foundation. The underlying impetus behind the establishment of FRIS is that local communities who play a big role in conservation should derive economic benefit from it. The objectives of this project include the documentation and promotion of agricultural and farm conservation practices in Tamil Nadu, Kerala, Andhra Pradesh and Odisha.

In these regions, the Foundation undertakes conservation-based project activities involving collection and depositing of traditional varieties, conducting farmers' forums at villages, establishing farmer participatory village seed banks, educating farmers on seed selection, variety purification, plant breeding, and new techniques developed through research, as well as linking farmers to traders by excluding intermediaries. FRIS seeks to promote the traditional role of farmers in the conservation and enhancement of genetic resources and to establish legal entitlement for tribal and rural farming communities. Through this system, FRIS aims to get recognition and reward for tribal and rural families for their contribution to genetic resources conservation and enhancement.

Concerns and Opportunities

Traditional knowledge registry or database promotes the documentation, maintenance, and preservation as well as communication of its value for the use and education of present and future generations of those in the community, neighbouring communities, the scientific community and to the world generally.

Under existing law, registries will generally not be able to perform the classic function of a registry, which is to put on record and give notice of a claim of legal right by a community or individual over an item or body of knowledge. Under the current system found in most jurisdictions, a registry will not establish a legal claim for much indigenous and local knowledge. This is because Intellectual Property Rights do not generally extend to traditional knowledge which is not novel, does not have a distinct individual inventor, and is often already in the public domain (UNU IAS Report 2003).

The inclusion and publication in a registry will not typically confer positive legal rights, nevertheless it could make it more difficult for others to claim intellectual property rights over the knowledge by establishing a record that it is prior art that is, information that was already part of the public domain and therefore not patentable.

In some jurisdictions, publication in the registry would have a practical impact if not a legal one. In Europe, Article 54 of the European Patent Convention (EPC) provides that a patent cannot be obtained for something that is part of the state of the art, which is defined as everything made available to the public by means of a written or oral description, by use, or in any other way. Knowledge held in an oral tradition anywhere in the world could in principle be prior art. Yet including it in a registry makes it more likely that patent examiners in Europe will become aware of the existence of the knowledge and thus refuse a patent. In the United States, in contrast, prior art, includes oral traditional knowledge held in the United States but does not include such knowledge held outside the country.

Inclusion of knowledge in a publicly accessible database would have the legal result in the United States of ensuring that its status as prior art was on the record and it could not be patented by another. Under either rule, as a practical matter, patent offices are more likely to check for prior art in the form of traditional knowledge if they have easy access to registries of traditional knowledge.

Another argument is that the open databases make knowledge available to outsiders who might seek to exploit the information without acknowledging or compensating those who provided it. Because of the limited legal protection in most jurisdictions for much of the traditional knowledge likely to be included in a database, this is a significant drawback

The more public the registry, the more effectively it will advance the goals of enhancing recognition of the value of traditional knowledge, supporting its preservation, encouraging exchange and cross-fertilization among different communities, encouraging the dissemination of knowledge about sustainable uses, establishing that traditional knowledge is prior art and not patentable by others, and encouraging the sharing of benefits by users willing to abide by contractual requirements for access.

However, the more public the database the more likely those users unwilling to comply with benefit sharing requirements can gain access to and use the information. If the registry is confidential, however, interested members of the public, such as scholars, scientists, and potentially even the members of the indigenous and local community themselves, will not benefit from learning about, sharing, and republishing indigenous or traditional knowledge and public authorities will be reluctant to participate in supporting or sharing information with the database.

Conclusion

Databases or registries can play an important role in defensive protection of traditional knowledge and indigenous knowledge. The Databases and registers are not an end in themselves but it's a tool or mechanism through which economic, scientific, social, cultural, and environmental goals can be met. Depending on the specific objective of any regime to protect traditional and indigenous knowledge, registers and databases may play a substantial role.

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