

THE IMPORTANCE OF TRADITIONAL KNOWLEDGE AND ITS INFORMATION-SYSTEM FOR PAKISTAN

Tariq Mahmood* and
Sobia Sarwar*

ABSTRACT

Traditional knowledge (TK) refers to the knowledge, innovations and practices of indigenous and local communities around the world. Traditional knowledge is mainly of a practical nature, particularly in fields such as agriculture, fisheries, health, horticulture and forestry. With the coming into force of the Convention on Biological Diversity (CBD), the need for the protection of traditional knowledge has received increased attention. One mechanism with much potential to protect traditional knowledge is its documentation in databases and registers. The rights of TK holding communities are also of considerable importance and are well-protected in some countries like India and China. Pakistan has a rich cultural and traditional background. There must be a database in the form of a Digital Library and legislation for proper preservation and protection of TK to use it as a developmental tool for sustainable socio-economic progress.

This paper highlights the importance of TK for Pakistan, as well as policy issues to document and protect the rights of TK-holding communities.

1. INTRODUCTION

The study of human knowledge is as old as history of human beings itself. It has been central to the subject matter of philosophy and epistemology since the Greek period. Knowledge has also begun to gain a new wave of attention in recent years. Human- knowledge systems are classified into two kinds: formal scientific knowledge (SK) system and traditional knowledge (TK) system. The main difference between these two kinds of knowledge-systems is their format. The SK system is essentially in explicit format that can be articulated in formal language including grammatical statements, mathematical expressions, specifications, manuals, and so forth. This kind of knowledge, thus, can be transmitted across individuals formally and easily. This has been the dominant mode of knowledge according to the (western) scientific philosophy. However, the format of TK system is mostly tacit that is hard to articulate with formal language. This knowledge is embedded in the experiences of indigenous or local people and involves intangible factors, including their beliefs, perspectives, and value-systems⁸.

Traditional knowledge may be denoted mainly as a tacit type of knowledge that has evolved within the local (grass root) community and has been passed on from one generation to another; it encompasses not only local or indigenous knowledge, but also scientific and other knowledge gained from outsiders.

For countries that are rich in traditional knowledge like Pakistan, the protection, promotion, and development of such knowledge can add to their competitive advantage. The long-term sustainable development of indigenous and local communities depends, at least to some degree, on the communities' abilities to harness their traditional and local technologies⁴.

1.1 Background: A number of cases relating to traditional knowledge have attracted international attention. As a result, the issue of traditional knowledge has been brought to the fore of the general debate surrounding intellectual property. These cases involve what is often referred to as "biopiracy". The examples of turmeric, neem and ayahuasca illustrate the issues that can arise when patent protection is granted to inventions relating to traditional knowledge that is already in the public domain. In these cases, invalid patents were issued because the patent examiners were not aware of the relevant traditional knowledge. In another example, a patent was granted on a plant specie called Hoodia. Here, the issue was not whether the patent should or should not have been granted, but rather on whether the local people known as San, who had nurtured the traditional knowledge underpinning the 'Invention' were entitled to receive a fair share of any benefit arising from commercialization.

Partly as a result of these well-known cases, many developing countries, holders of traditional knowledge, and campaigning organizations are pressing in a multitude to protect traditional knowledge in a better way. Such pressure has led, for example, to the creation of an inter-governmental committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore in World Intellectual Property Organization (WIPO). The protection of traditional knowledge and folklore is also being discussed within the framework of the Convention on Biological Diversity (CBD) and in other international organizations such

* Pakistan Council for Science & Technology (PCST), G-5/2, Islamabad.

as United Nations Conference on Trade and Development (UNCTAD); World Health Organization (WHO); Food and Agriculture Organization (FAO), and United Nations Educational, Scientific and Cultural Organization (UNESCO)¹¹. In addition, the Doha WTO Ministerial Declaration highlighted the need for further work in the TRIPS Council on protecting traditional knowledge⁶.

2. THE IMPORTANCE OF TRADITIONAL KNOWLEDGE

Traditional knowledge as national asset is an important source of income, food, and healthcare for large parts of populations, particularly in developing countries⁴.

Traditional Medicine (TM) serves the health needs of a vast majority of people in the world. According to the World Health Organization (WHO), up to 80 percent of the world's population depends upon traditional medicine for its primary health-needs⁴. For instance, the per-capita consumption of TM-products is, in Malaysia, more than double as compared to modern pharmaceuticals. TM is also significant in more advanced developing countries, such as South Korea, where the per-capita consumption of TM-products is about 36% more than modern drugs. It is often the only affordable treatment available to poor people and to people in remote communities¹. In India, for example, there are 600,000 licensed medical practitioners of classical traditional health systems and over one million community-based traditional health-workers⁴.

TM also plays a significant role in developed countries, where the demand for herbal medicines has grown in recent years. The world market for herbal medicines has reached, according to one estimate, US\$43 billion, with annual growth rates of between 5 and 15%. For China, the leading country in this field, WHO estimates TM-generated income of about \$5 billion in 1999 from the international and \$ 1 billion from the domestic market. The European market in 1999 was calculated to be \$ 11.9 billion (where Germany had 38%, France 21% and United Kingdom 12%). Moreover, many pharmaceutical products are based on, or consist of, biological materials¹⁰.

Studies of local communities also provide evidence that the conservation and the use of traditional

knowledge can provide significant environmental benefits⁴. The use and continuous improvement of farmers' varieties (landraces) is essential in many agricultural systems. In many countries, seed supply fundamentally relies on the "informal" system of seed-production, which operates on the basis of the diffusion of the best seed available within a community¹⁰.

Furthermore, TK is the origin of a great variety of artistic expressions, including musical works and handicrafts which are important parts of a community's heritage, and cultural patrimony can act as a source input into other markets, such as entertainment, art, tourism, architecture, and fashion⁴.

The importance of TK for its creators and for the world community at large, and the need to foster, preserve and protect such knowledge, has gained growing recognition in the international fora. Thus, in 1981 a WIPO-UNESCO Model Law on Folklore was adopted; in 1989 the concept of "Farmers Rights" was introduced in the FAO International Undertaking on Plant Genetic Resources; in 1992 the Convention on Biological Diversity (CBD) specifically addressed the issue [(article 8(j)]. In 2000, an Inter-governmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore was established by the World Intellectual Property Organization (WIPO) and it first met in April 2001¹.

For Pakistan where 66.5% of the population lives in rural areas and 38.5% of population lives below poverty line the importance of TK greatly increased for sustainable development¹⁰.

3. PROTECTING TRADITIONAL KNOWLEDGE

In Article 8(j), the CBD requires Parties to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity" and promotes the "wider application" of traditional knowledge with the approval and involvement of the holders of traditional knowledge. Article 10(c) similarly provides that CBD Parties "shall...protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements." The TRIPS Agreement and other international

agreements on intellectual property rights, by contrast, fail to recognize the value of traditional knowledge as a source of innovation. These instruments were designed mostly to protect "western" forms of innovation and do not provide adequate mechanisms that address the special nature of traditional knowledge.

Current trends show an increasing number of national laws providing direct or indirect protection for traditional knowledge. Establishing mechanisms exclusively designed for protecting traditional knowledge, including sui generis systems, provides direct protection. Indirect protection occurs as a consequence of more general laws oriented towards the protection of indigenous rights or laws regulating access to genetic resources. These particular trends should be supported by the international community because they favor a bottom-up approach when providing protection and permit more direct participation of indigenous and local communities in their national context¹².

3.1 Pakistan's Status: Pakistan is a signatory of many international agreements like Paris Convention (2004), Berne Convention (1948) and TRIPS Agreement (1995). It was after GIs came under WTO agreement on TRIPS that Pakistan started its efforts to develop a legislative framework for the registration and protection of products and traditional skills originated within Pakistan.

At present Pakistan Trade Mark Ordinance 2001 (promulgated but has not come into force yet) is the sole document for the protection of geographical indicators and other indigenous products. To improve its Intellectual Property Rights Regime, Geographical Indications of Goods (Registration and Protection) Ordinance, was drafted in 2001. In

July 2006, a two day national workshop on GIs was organized by EU, IPO and WIPO to propose amendments to upgrade it as per the international requirement⁹.

Apart from treaties and emerging international norms, which imply both legal and moral imperatives for protecting traditional knowledge, there are a number of reasons why developing countries like Pakistan may feel motivated to protect TK. These are set out below:

- To improve the livelihoods of TK-holders and communities
- To benefit national economies
- To conserve the environment
- To prevent biopiracy

There are ample reasons for the government to take steps to legally protect traditional knowledge (Table 1). However, it cannot be emphasized enough that protection of TK cannot satisfactorily be dealt with in isolation from the more fundamental needs, interests and rights of the holders of traditional knowledge, innovations, practices and technologies and their communities².

4. THE INFORMATION SYSTEM

The nature of traditional knowledge is such that more of it is transmitted orally rather than in written form. This poses particular problems when parties not authorized by the holder of that knowledge seek to obtain IPRs over it. In the absence of any accessible written record, a patent examiner in another country is unable to access documentation that would challenge the novelty or inventiveness of an application based on traditional knowledge.

Table - 1: Reasons to protect TK

REASONS		
Moral	Legal	Utilitarian
To fulfill moral obligations towards indigenous/local Communities	To comply with international treaties and emerging norms e.g. CBD, Universal Declaration of Human Rights(UDHR), International Undertaking on Plant Genetic Resources(IUPGR)	For local economic, welfare (health and food security) and subsistence benefits
To prevent biopiracy		For national economic and welfare benefits
		For global economic and welfare benefits
		For improved sustainable management of biodiversity and conservation

The use of Information System as an instrument can provide a solution. There is a need for developing digital databases of prior art related to herbs, which is already under public domain. It is assumed that if the materials / knowledge is documented; it can be made available to patent examiners the world over. It is also hoped that such documentation would facilitate tracing of indigenous communities with whom benefits of commercialization of such materials/knowledge has to be shared. A good example of the use of information system is The Museum of the Word and Image described by Santiago, the founder, as "a museum without walls". The museum is actually a mobile exhibition and website (www.museo.com.sv) aimed at Salvadorians abroad, documenting the history and culture of people of El Salvador. The first exhibition was set up in an international consumer fair organized by the American Embassy in San Salvador, and showed traditional dances and rituals, arts and crafts and oral histories next to stalls with the latest technology and consumer goods. Santiago comments: "By being a mobile museum we can go to places where no cultural activities normally take place. We also encourage people to document their own local histories, to construct a real, rather than distorted memory, and a sense of identity and belonging – a sense of self and of society, which is not blinded by attempts to ape the US... It is based on a firm belief that if you lose your memory you lose your social vision"³.

Pakistan is endowed with immense traditional knowledge, which is either undocumented or available in ancient classical and other literature, often inaccessible to the Information Managers and Patent Examiners. Documentation of this existing knowledge, available in the public domain, on various traditional systems of medicine has become imperative to safeguard its sovereignty and protect it from being misused in patenting of non-original inventions.

5. TRADITIONAL KNOWLEDGE DIGITAL LIBRARY

Recent efforts have been made to develop a TK classification and to create a Traditional Knowledge Digital Library (TKDL) with the goal of enhancing the quality of patent examination and allowing patent examiners access to pertinent information concerning prior art in the form of TK in an appropriately classified form. These issues were taken up at WIPO during 1998 and 1999⁴.

An initiative was spearheaded by the Department of Indian Systems of Medicine & Homeopathy (ISMH). It set up an inter-disciplinary task force, known as the TKDL Task Force, drawing on experts from the Central Council of Research of Ayurveda and Siddha, Benares Hindu University, the National Informatics Center, the Council of Scientific & Industrial Research and the Controller General of Patents and Trade Marks. The Task Force evolved a Traditional Resource Classification (TKRC), which would enable retrieval of certain information on traditional knowledge in a systematic manner⁴.

The WIPO Member States have set up a Traditional Knowledge Task Force consisting of China, the European Union, Japan, India and the United States of America. The Indian proposal on creating a TKRC was presented to it⁴.

Documentation, however, will not ensure benefit sharing with the holders of such knowledge. It may even foreclose that possibility, to the extent that the documented knowledge is deemed part of the prior art⁴.

In case of Pakistan there is no such digital database or library. There is a need of TK documenting surveys and databases. One step in this direction is the creation of TKDL for SAARC countries.

5.1 Creation of TKDL for SAARC Countries: Keeping in view the importance of documentation of TK in the region SAARC Documentation Center arranged a two-day workshop on 'creation of TKDL for SAARC countries' in December 2004 in New Delhi. The workshop was attended by delegates from all member countries except Pakistan. The key issues that were discussed include creation of draft Legal and Policy Frameworks for TK protection in SAARC Countries and developing a Technical Framework for Creation of TKDL for SAARC Countries that have emerged as the major recommendations of the workshop⁷.

6. POLICY RECOMMENDATIONS

Future action in this field may thus include:

- To protect TK, national legislation is needed. This should be followed by negotiations at the international level for an international agreement to protect TK and the rights of local communities.
- Disclosure, informed consent and equitable

benefit sharing in accordance with CBD, should be mandatory for any commercial use of TK and genetic resources. Concrete and specific methods of sharing benefits should be worked out in the event of commercialization.

- Develop an interface between community, industry and national authority to work out these modalities.
- There is need for a greater investment in research in TK by both the government and the private sector.
- To create awareness in society about the value of TK, a system of rewards and recognition for creators and holders of TK should be developed.
- We can promote intellectual and cultural exchange, community development and legitimate trade, by safeguarding our traditional cultures and cultural diversity.

7. SUMMARY & CONCLUSION

Traditional Knowledge (TK) is a valuable and sophisticated knowledge-system developed over generations by local communities in various parts of the world. TK has been developed in many fields and is still evolving. It is a technology or know-how capable of providing sustainable solutions to many present-day problems. This fact should be acknowledged and the commercial use of TK should be handled in the same way as the other technologies.

The importance and protection of Traditional Knowledge for a developing country like Pakistan raises a number of policy issues. Such issues are extremely complex, since there are broad differences about the definition of the subject-matter, the rationale for protection, and the means for achieving its purposes. The issues relating to TK should be addressed in a holistic manner, including ethical, environmental and socio-economic concerns of the use of such knowledge⁵.

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