

## Traditional Knowledge, Intellectual Property Rights and Biodiversity Conservation: Critical Issues and Key Challenges

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Based on a survey of the major national and international initiatives undertaken to protect Traditional Knowledge (TK) since 1990s, the paper states that the task of reconciling TRIPS with CBD and other related TK laws is fraught with difficulties. After examining various IPRs in relation to TK, the paper argues that there are clear limits to which former can accommodate the latter especially when it comes to positive protection of TK and related cultural expressions. The main argument in this paper is that *sui generis* legislations are more effective for the protection of TK and related cultural expressions. A *sui generis* legislation that views TK as a composite resource, having both economic and cultural features has a better prospect of ensuring protection of TK, besides enabling benefit sharing. By having international regulations that harmonize protection measures, it is guaranteed that national efforts at protection are not wasted due to absence of reciprocity.

**Keywords:** *Sui generis*, bioprospecting, valuation

The birth of the Convention on Biological Diversity (CBD) in 1992 and inception of TRIPS in 1995 marked the advent of a fierce debate on the place to be accorded to traditional knowledge in the scheme of intellectual property protection. There were three strands of thinking that came out in the debate. The first strand emphasised on protection of TK within the framework of IP laws covered by the TRIPS. The second strand laid stress on adjustments in non-IP laws including biodiversity conservation to secure TK protection. The third perspective argued for setting up a *sui generis* system of TK protection that was based on an amalgam of modern IP and non-IP laws and regulations, including customary laws. In the first seven years of the existence of the TRIPS, no solution emerged. Despite the Doha Declaration of 2001 paying attention to the issue, we are yet to witness a conclusive end to the debate.<sup>1</sup> Meanwhile the Intergovernmental Committee on Intellectual

Property and Genetic Resources of the WIPO has developed an overview of policy objectives and core principles for the protection of TK at the global level. At the national levels too, there have been initiatives to protect TK. Countries like India have tried to address the matter of TK protection, through facilitating changes in their patent and biodiversity laws, besides attempting to put in place *sui generis* systems for protecting traditional knowledge. Against the backdrop of current international developments, the paper attempts to assess the complexity of the concept of traditional knowledge in relation to intellectual property and biodiversity conservation with special reference to India.

### **Rationale and modes of Protecting Traditional Knowledge**

Unlike modern products and processes that qualify for IP protection, largely due to their tangible character, TK cannot be reduced to tangible products or processes. Article 3 of the WIPO's Revised Draft Provisions for the Protection of Traditional Knowledge: Policy Objectives and Core Principles, defines traditional knowledge as the 'content or substance of knowledge resulting from intellectual activity in a traditional context, and includes know-how, skills, innovations, practices and learning

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that form part of traditional knowledge systems, and knowledge embodying traditional lifestyles of indigenous and local communities, or contained in codified knowledge systems passed between generations'.<sup>2</sup> The definition conveys the composite nature of TK in terms of its technology, knowledge base and cultural contents. It is this aspect of TK that distinguishes it from modern IP systems that focus narrowly on novel or new innovative products and processes. In terms of the composite perspective, misappropriation of traditional knowledge does not just involve loss of rights over one's innovative skills or know how rather it leads to loss of community identity.

Unauthorized use, misappropriation or misleading use of community totems or logos by trade and industry are cited as reasons for global and national efforts for protecting TK. The fact that such improper use of TK deny potential flow of benefits, add to the sense of deprivation for the TK holder. This renders the quest for defensive protection of an absolute necessity. Measures to prevent grant of IP rights to non customary holders include developing TK databases. While these systems act as excellent defensive measures, they do not confer positive benefits to the community concerned.<sup>3</sup> On the other hand, a proactive policy of protecting TK can ensure accrual of benefits to the local communities. Consequently certain national regulations for protecting TK also stress on benefit sharing as an essential precept.

In the WTO forum on TRIPS, five modes of TK protection have been advocated. The first mode involves use of existing IPR laws to protect TK through facilitating changes in the former. The second one involves disclosure requirements which require an innovator to disclose utilization of traditional knowledge in a patent application, besides producing evidence of having obtained prior informed consent from the competent authority in the country of origin of TK and entered into appropriate benefit-sharing arrangements with the community or entity concerned.<sup>4</sup> The third mode involves institution of a stand alone *sui generis* system for the protection of TK. The fourth mode involves use of contract laws based on bilateral agreements on a case by case method for protecting TK. The fifth mode involves use of environmental legislations such as biodiversity legislations for building provisions for TK protection. While the first mode clearly involves a defensive

approach to TK protection, the remaining four tracks carry elements of proactive protection that entail benefit sharing.

Since TK is also about cultural identities, it is obvious that apart from the five tracks mentioned, a variety of adventitious laws are considered to be important for TK protection. This includes trade practices and marketing laws, laws of privacy and rights of publicity, law of defamation, cultural heritage registers, inventories and databases; customary and indigenous laws and protocols; cultural heritage preservation and promotion laws and programmes and handicrafts promotion and development programs.<sup>5</sup> This repertoire largely enables defensive approaches. Their role in facilitating positive benefits to the holders is limited.

### Limitations of IP based Protection

There are many philosophical reasons for TK not fitting into the framework of modern IP laws. These are:

- IPRs protect individual property rights whereas traditional knowledge are collective or community resources
- Traditional knowledge evolves over a long period of time stretching over generations and may not meet the criteria of novelty or inventive step required for IPRs like patents
- For the reason mentioned above, products based on TK cannot be reduced to a limited duration of protection as is provided for patentable products
- TK may be held by multiple communities and it becomes difficult to determine title holders
- Traditional knowledge is not based on scientific methods or assessments

Apart from these broad reasons, TK protection through existing IP laws suffers from certain specific limitations. Disclosure of TK in patent filings is not mandated by IP laws in developed countries, though the same has been incorporated in India's Patent Act 1970 following recent amendments.<sup>6</sup>

Coming to copyrights, the hoary nature of TK precludes protection though in recent years legal rights over copyright to traditional knowledge have been introduced in recent years to prevent 'unauthorized use of photographs of indigenous dance group', or unauthorized reproduction of art images.<sup>7</sup> Distortion of artistic works containing pre-existing

cultural clan images are also viewed as violations. It is often held that trade secret law can be employed to help indigenous and local communities restrict circulation of their knowledge, innovations and practices. However given the customary connotations associated with community knowledge it is doubtful whether trade secrets legislations, with its emphasis on employer-employee relationship in corporate settings, will hold for a community *vis-à-vis* its members. Design protection on TK based cultural expressions is not feasible given the emphasis of design IP laws on 'new' and 'non disclosed' creations.

TK craft products and associated logos and symbols that fulfill the requirement of 'distinctiveness', are ideally suitable for protection as a collective or certified trademark. The advantage of geographical indications laws is that they permit registration of a reputed traditional product from an identified area to be registered and protected as a Geographical Indication (GI). Aranmula mirror, Aligarh locks and other products with a huge reputation for craftsmanship have been registered in India as GIs. In some cases as in the case of certain textile products there have been efforts to protect age old designs as GIs.<sup>8</sup>

Plant Variety Protection legislations that are based on the 1991 UPOV Agreement do not favour protection of traditional varieties of plants such as landraces nurtured by farmers. This is due to the insistence of UPOV based legislations on registering 'new' varieties that are distinct, uniform and stable. However, the OAU Model Law and India's Protection of Plant Varieties and Farmers' Rights Act 2001 (PPVFR) are different from the plant breeder regimes based on the UPOV, since they have active provisions for protection of TK. India's PPVFR is consistent with the notion of a *sui generis* legislation as stated by Article 27 (3) of WTO-TRIPS. It provides for registration of extant varieties and landraces, thus affording protection for traditional plant products of different farmers/farming communities. Similarly, compensation and benefit sharing clauses of the PPVFR provide ample protection to traditional plant materials and their associated knowledge. This has been made possible by the unique nature of India's PPVFR being a delicate amalgam of CBD, the FAO International Undertaking on Plant Genetic Resources and the UPOV.<sup>9</sup>

#### Non-IP Laws

Contracts have the advantage of securing protection for TK in situations where formal laws do

not provide for their protection. However, this advantage can be realized only when communities which are holders of TK are in a position to negotiate contracts with their customers in an informed manner and have the ability to negotiate effectively for realization of benefits from fair use of their products. Nevertheless where facilitating national level institutions and laws exist (that brings about informed three party contracts negotiations) the possibility of contracts leading to fruitful results for TK protection, cannot be ruled out. Alternatively contract laws, if complemented by civil and/or criminal remedies available under general trade practices could prove to be equally effective in a national context.<sup>10</sup>

#### Biodiversity Laws and TK

Article 15 (5) of the CBD states that 'Access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party'. Article 15(7) of the Convention requires parties to take legislative and administrative policy measures with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources, with the contracting party providing such resources. Such sharing is envisaged to be on mutually agreed terms.

As has been mentioned earlier, five modes of protection have been advocated for protecting TK in the WTO forum. It is in the spirit of the stated CBD provisions that India and Brazil have, in the TRIPS Council deliberations argued for TRIPS to be amended so that Members shall require patent applicants to disclose:

- the source and country of origin of any biological resources or traditional knowledge used in inventions
- Evidence of prior informed consent from the competent authority in the country of origin
- Evidence of fair and equitable appropriate benefit-sharing arrangements to have followed national law.<sup>11</sup>

Switzerland too came up with the idea of a disclosure requirement. However the focus of the Swiss proposal is on amendment of the Patent Cooperation Treaty of WIPO (PCT) which would enable countries to insist upon patent applicants to disclose the source of genetic resources or traditional knowledge used in inventions.<sup>12</sup>

The European Community, on the other hand, has proposed mandatory requirement on the part of national, regional and international patent applicants to disclose information on the country of origin or the source of genetic resources or traditional knowledge made use of by an innovator. At the national level, India has attempted a similar move by amending its Patents Act 1970 to provide for disclosures of sources of TK in patent applications. Clauses 19(2) and 19 (3) of India's National Biodiversity Act of 2002 provide for previous approval for access to traditional knowledge. The Act also provides for equitable sharing of benefits arising from use of biological resources and associated TK.

In case the issue of TK protection needs to be resolved within the framework of WTO, it is important to reconcile the provisos of Articles 15(5) and 15(7) of the CBD with review of Article 27.3(b) of the TRIPS.<sup>13</sup>

However the cardinal problem is that an amendment to the TRIPS on the lines desired by India and Brazil seems to be a distant reality. The fate of the Swiss and the EU proposals are not different. This necessitates looking at options for formulating a *sui generis* legislation or guidelines for protection of TK at the national and global levels.

#### Why a *Sui Generis* TK Protection System?

One of the greatest problems facing bioprospecting contracts has been valuation of the resources covered by the contract. Genetic resources being public goods exist outside the pale of markets. They are not amenable to pricing. Where both genetic resources and associated TK are sought to be accessed through bioprospecting activities matters get complicated. One of the most ticklish issues is to segregate value of genetic resources from its associated TK. Since biodiversity legislations largely view TK as an associated feature of genetic resources, the former is likely to be devalued in comparison to the latter. A *sui generis* legislation on TK that recognizes its autonomous economic, cultural and 'development' character (independent of its association with other resources) is able to ensure a more objective valuation of TK from a benefit sharing perspective.

A *sui generis* law for protecting TK is also necessitated by the fact that discussions that narrowly focus on traditional knowledge related to biological and non biological resources do not cover the knowledge that is non- functional. A case in point is a TK perspective on climate , seasons and related facets

of nature.<sup>14</sup> A *sui generis* regulation that covers all facets of TK will be wider in scope and comprehensive in approaching TK in its totality. To this extent it will encourage a more objective system of valuation of TK that respects its aggregate value, than the value of a small component.

While national *sui generis* legislations would facilitate a robust system of TK protection, international action to frame guidelines and compacts is desirable, given the global character of knowledge and resource flows. International guidelines and compacts not only guarantee reciprocity but also ensure that norms of TK protection and benefit sharing are harmonized within the framework of a multilateral regime.<sup>15</sup>

#### Conclusion

The main argument in this paper is that *sui generis* legislations are more effective for the protection of TK and related cultural expressions. Though the process of employing TK in the prior art examination process has gained currency in the world, the larger task of protecting TK in an affirmative sense is yet to be accomplished. This is partly due to the fact that the process of integrating TK concerns within existing laws have not succeeded in many countries due to the inability of many countries to recognize TK as falling within the meaning of 'novel' innovations. While geographical indications and biodiversity legislations offer scope for TK protection, they are restricted in scope. While GIs are primarily concerned with resources that enter the realm of trade, biodiversity legislations deal with TK that is tied to biological or genetic resources. A *sui generis* legislation that views TK as a composite resource, having both economic and cultural features has a better prospect of ensuring protection of TK, through improved valuation and benefit sharing. If national measures for *sui generis* protection are backed by international regulations that harmonize protection measures, TK protection within national boundaries would be fortified by 'reciprocity' guaranteed by international compacts.

#### References

- 1 Para 19 of the Doha Ministerial Declaration of 2001 called upon the TRIPS Council, to examine, *inter alia*, the relationship between the TRIPS Agreement and the Convention on Biological Diversity.) The Ministerial Declaration also requested the TRIPS Council to consider protection of traditional knowledge and folklore as part of its review of the implementation of the TRIPS under Article 71.1. WTO (2001) *Ministerial Declaration*,

- Doha WTO Ministerial 2001WT/MIN(01)/DEC/1, 20 November 2001, [http://www.wto.org/English/thewto\\_e/minist\\_e/min01\\_e/mindecl\\_e.htm](http://www.wto.org/English/thewto_e/minist_e/min01_e/mindecl_e.htm).
- 2 WIPO (2006): Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Ninth Session, Geneva, 24-26 April 2006, [wipo/grtkf/ic/9/5](http://wipo.grtkf/ic/9/5), 9 January 2006.
  - 3 This is not to state that defensive measures do not entail payments to the TK holders. However payments that flow out of successful defensive measures have the character of 'compensation' than 'benefit'.
  - 4 This proposal was mooted by India and Brazil in the TRIPS Council deliberations; Meier Ewert Wolf, The relationship between TRIPS and the Convention on Biological Diversity (CBD) - State of play in the TRIPS Council, Presentation at *WTO Symposium on Trade and Sustainable Development*, Geneva, 11 October 2005.
  - 5 Wendland Wend B, for a detailed exposition of the aspect of cultural expression, 2006. Admittedly there is no effort made in this paper to touch upon the initiatives of WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (the Committee) to review legal and policy options for the protection of traditional cultural expressions (TCEs)/expressions of folklore as spelt out in WIPO (2005) and (2006).
  - 6 Those who oppose amendment of patents laws to provide for protection of TK, argue that such an amendment is redundant if TK enters pre-grant system as prior art in the form of digital database or is presented in post-grant opposition proceedings. The revocation of neem and turmeric patents is cited as an instance of the success of the patents system in eliminating spurious innovations that are based on mis- appropriation of TK. What this argument overlooks is that a large segment of TK which is based on tacit knowledge and oral traditions of dissemination do not enter the realm of patent processes to position themselves as prior art .
  - 7 WTO (2006, b), The Protection of Traditional Knowledge and Folklore: Summary of Issues Raised and Points Made, *Note by the Secretariat*, Revision, IP/C/W/370/Rev.1, Council for Trade-Related Aspects of Intellectual Property Rights, 9 March 2006.
  - 8 Damodaran A, Coupling creative designs and innovative technology to build sustainable market share, paper presented at *WIPO-National Institute of Design Seminar on Industrial Design and Intellectual Property Rights*, Ahmedabad, 25-26 April 2006.
  - 9 A detailed analysis of the economic implications of India's PPVFR 2001 is attempted in Damodaran A, Economic Implications of Global Conventions and India's Regulatory Environment on Plant Biotechnology Industry, 2004, Research Monograph No. 393, *Institute of Developing Economies*, Japan.
  - 10 This argument is closer to the US position in the Council for Trade-Related Intellectual Property Rights of the WTO as well, WTO (2004) *Article 27.3(B) Relationship Between the TRIPS Agreement and the CBD and the Protection of Traditional Knowledge and Folklore*, Communication from the United States IP/C/W/434, 26 November 2006.  
For a detailed discussion on the analytics of the benefit sharing regimes for genetic resources and associated TK, see Damodaran A, Economics and Policy Implications of India's National Biodiversity Legislation, *Economic and Political Weekly*, December 2003.
  - 11 Ewert Wolf Meier, The relationship between TRIPS and the Convention on Biological Diversity (CBD) - State of play in the TRIPS Council, presentation at *WTO Symposium on Trade and Sustainable Development*, Geneva, 11 October 2005, [www.wto.org/english/tratop\\_e/envir\\_e/sym\\_oct05\\_e/meier%20ewert\\_e.ppt](http://www.wto.org/english/tratop_e/envir_e/sym_oct05_e/meier%20ewert_e.ppt).
  - 12 This would have been in the spirit of the suggestions advanced by India and Brazil, Ewert Wolf Meier ,The relationship between TRIPS and the Convention on Biological Diversity (CBD) - State of play in the TRIPS Council' , Presentation at *WTO Symposium on Trade and Sustainable Development*, Geneva, 11 October 2005, [www.wto.org/english/ratop\\_e/envir\\_e/sym\\_oct05\\_e/meier%20ewert\\_e.ppt](http://www.wto.org/english/ratop_e/envir_e/sym_oct05_e/meier%20ewert_e.ppt).
  - 13 WTO (2006, a) , Review of the provisions of Article 27.3(b), Summary of issues raised and points made, *Note by the Secretariat*, Revision, 9 March 2006, IP/C/W/369/Rev.1, WTO , Council for TRIPS, Geneva.
  - 14 On the significance and distinctiveness of traditional cosmology, Berkes Fikret, Traditional ecological knowledge, p1-10 in *Perspective In Traditional Ecological Knowledg : Concepts and Cases*, edited by Julian T Inglis, International Programme on Traditional Ecological Knowledge and IDRC, 1993, Ottawa.
  - 15 There is also the 'national treatment' rationale for international regimes for *sui generis* TK protection based on multilateral approaches. This is brought in WTO (2006), The protection of traditional knowledge and folklore: Summary of issues raised and points made', *Note by the Secretariat*, Revision, IP/C/W/370/Rev.1, Council for Trade-Related Aspects of Intellectual Property Rights, 9 March 2006.