# Protecting Traditional Knowledge under Trips: Prayer of the developing world By

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## Abstract

This paper tries to show if there is any way of protecting traditional knowledge in the current modern system of intellectual property protection. Protection of works of the mind is currently being rendered in national and international legal regimes. Among the international organizations with primary responsibility of protecting intellectual property, we found WIPO and WTO as major structures. Most of the world trade which flows through WTO channel is found to be protected in the trade related intellectual property agreement (TRIPs). Communities in developing countries and some developed world have been living for centuries depending on their tradition and customs. These traditions are ways of their day- to-day activity and have reached their current generation through a prolonged transfer from their fore-fathers. They are endowed with traditional knowledge with potential of solving various problems, but the problem is their knowledge has been easily taken away by the free trade spirit and they are not benefiting from their property.

#### Introduction

The place of Intellectual Property (IP) in the world is growing. The international community has been rendering the appropriate attention in recognizing works of the mind thereby protecting the creator/inventor from any third party interference. The World Trade Organization (WTO) is the entity primarily concerned about international trade. But the strong link that exists between trade at the international level and issues relating to intellectual property has resulted in TRADE RELATED ASPECT OF

INTELLECTUAL PROPERTY (TRIPs). Adebe, on his short article dealing with the origin and history of the TRIPs negotiation, has stated that the incorporation of Intellectual Property (IP) in the multilateral trade negotiation, launched at Punta del Este, Uruguay was primarily initiated in the interest of the developed nations.

The United States of America came at the cutting edge with the claim of failure of rules under World Intellectual Property Organization (WIPO) in protecting the heavy losses sustained in relation to the IP. This reason which sounds in the best interest of the developed world only was felt by most developing nations at the time that they have resisted the idea of making IP a matter of international trade. Yet, TRIPs was made part and parcel of the WTO. The whole of the TRIPs agreement has implication for sustainable development, as stated in the preamble and article 7 of the agreement. The part dealing with 'patent' has been one usually raised in relation to such an objective by most developing countries. In fact, the writer has gone through available literature and documents at the international and national levels which reveal that certain areas are spots of both academic and practical discussions. These areas include: TRIPs and public health, TRIPs and biodiversity, TRIPs and genetic resources, TRIPs and issues of patenting life, plant varieties and also the issue of "TRADITIONAL KNOWLEDGE & FOLKLORE".

The focus of this study is then to assess TRIPs focusing on the point of traditional knowledge from the perspective of developing countries. Though traditional knowledge and folklore are mentioned almost in all circumstances, as the later falls in the realm of copyright and this article is being limited to 'patent' issues, the researcher purposefully neglected the discussion on folklore.

The author organizes and presents the research report in the following format. First, traditional knowledge and related issues will be examined as to their meaning. Next, this will be followed by explanation of position of TRIPs regarding traditional knowledge and its protection. Finally, a recommendation is suggested on how we could make TRIPs help to protect traditional knowledge from perspective of developing world.

## **Definition of Traditional Knowledge**

All those who dwell on the Traditional knowledge (TK) prefer to address directly to point rather than worry on the meaning of traditional knowledge. Available literature tells the fact that preference is accorded to distinguish, probably, among the various terminologies which have connotation with TK as that of Indigenous knowledge (IK), community knowledge, group knowledge and local knowledge. Of course, it is only a matter of comfort to use one of such terms, albeit TK and IK are predominantly and interchangeable used. For the purpose of this paper, TK is employed. Question may arise as to for what reason could one cites; why scholars tend to skip defining TK. The author would only argue that the existence of complex and divergent views of society which vary that from place to place may account for non-existent of universally applicable definition of TK. This would not mean that efforts had not been made to define the term. The well known and, for that matter, the first document which explicitly recognizes 'TK' internationally is the Convention on Biological Diversity (CBD). Article 8 (i) of the Convention reads that:

'Each contracting party shall, as far as possible and as appropriate subject to its national legislation, respect, preserve & maintain knowledge, innovation and practices of indigenous and local communities embodying traditional life style and the equitable

sharing of the benefits arising from the utilization of such knowledge, innovation and practice." <sup>135</sup>

Here one can easily spot that IK is accorded of protection. The definition can be inferred further from a connected reading of the provision, especially the part that reads 'embodying traditional life style.' That is, if the knowledge, practice or invention is one forming part of the tradition or culture/living style of a certain community, it is to be treated as TK. Bearing this in mind, we still fail to find an explicit meaning of traditional knowledge, but if we were forced to come up with a definition such a reading seems essential. One problem which is still visible is that what is deemed as a practice of traditional nature as a reason of varying cultures from place to place. In our attempt to give positive meaning to the term, the definition of TK can be seen in relation to the specific local community/indigenous group under consideration.

A tag on the web dictionary of Wikipedia has generally explained TK as "the matured long-standing tradition and practice of certain regional, indigenous or local communities". It further elaborates the fact that TK also encompasses "the wisdom, knowledge and Teachings of the communities which are expressed through stories, legends, folklore, and ritual song and pass from generation to generation."

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<sup>&</sup>lt;sup>135</sup>UN, 1993, Convention on Biological Diversity, Article 8(5), pp. 6-7.

<sup>&</sup>lt;sup>136</sup> Wikipedia, the free encyclopedia

It will be mandatory to state the problem faced by WIPO in defining TK. 137 but as definition was found to be a 'pressing need', a working definition was formulated which resulted in:

TK refers to tradition-based literary, artistic, or scientific works; performances; inventions; scientific discoveries; designs, marks, name and symbols, undisclosed information; and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields. 138

Moreover, the word tradition-based which is further elaborated as referring to

Knowledge systems, creations, innovations and cultural expressions which have generally been transmitted from generation to generation and which pertain to a certain people and territory developing through a non-systematic way which evolved as to change in environment. 139

## Position of Trips on Traditional Knowledge

'Understanding the position of TRIPs needs an analysis of position of parties at the negotiation table,' states the author of TRIPs & TK, local communities, local knowledge, & global Intellectual property framework. 140 We tried little to touch upon this point in the introductory sector. In the aforementioned article, Arewa states that the global move of IP system in the 19<sup>th</sup> century has based itself on national legislations and bilateral arrangements which primarily accord protection to knowledge in the civilized countries. An exception for such an analysis is geographical indication, due to the fact that

Intellectual property law & policy, p. 1396.

<sup>&</sup>lt;sup>137</sup> Daniel Gervias, 2002, TRIPs, DORIA & Traditional knowledge, Draft version . P 6. <sup>138</sup> Graeme B. Dinwoodie, William D.Hennessey & Shira Perlmutter, 2001, *International* 

<sup>&</sup>lt;sup>139</sup> ibid.

<sup>&</sup>lt;sup>140</sup> Olufunmilayo B. Arewa, 2006, TRIPs and Traditional knowledge: local communities, local knowledge, and global intellectual property frameworks, as it appears in Marquette Intellectual Property Law Review, 10(2), 153-180.

European national legislations also protect them. This led to TK's as essentially being public domain, i.e. resources freely appropriable, TRIPs echoing same. To put TK under TRIPs is a negative move for the developed world as to a great extent they are found in the third world and among indigenous people.141

To put it in TRIPs terminology, many forms of TK do not qualify for protection under TRIPs for various reasons. Such as 142

- A) They are too old and in public domain (Art 27(1) of TRIP'S);
- B) If protected, it follows that the right given for the holders is an exclusive rights for unlimited period which would contravene the general rule in IP, i.e. limited protection so that the property return to the mass (Art 33 of TRIP'S);
- C) The difficulty in identifying the 'TK' right holder, and thus the chance to conclude there is no right holder (Art 28 of TRIPs);
- D) Problems faced when the right holder is identified with groups or communities;
- E) The fact that same creation/inventions might express themselves in several versions and incarnation; and
- F) Applying for a patent requires full disclosure of the invention, shortly after the patent is approved which will make the knowledge visible to public exploitation.

This reason in one or other way contravenes principles enshrined under TRIPs, but the paradox is the fact that creations (inventions) which base themselves on TK are protected. Though the fate of the patent is later dealt

<sup>&</sup>lt;sup>141</sup> ibid, pp 161-164. <sup>142</sup> Supra note 3, pp. 7-8.

in different mechanisms, it would be exemplary to state some of these inventions.

Let us start discussing about the case of ETHIOPIA'S '*Endod' Berry*, a base for a patent granted to the University of Toledo, as 'crustacean killing properties' 143. The author of the article who cited this and like instance has even gone to the extent of deeming the act 'Bio piracy' signifying the concept of 'Theft of TK.' 144 It is then safe to conclude that granting a patent under TRIPs or any national legislation after denying the protection of the original knowledge is being blind to the existent truth. Of course, as stated by many developing countries, it tantamount to be making TRIPs for the developed, by the developed, to the developed nations.

If such is the stand of TRIPs, then the next question will properly be "Is there no ground under TRIPs whereby the issue of TK protection can be raised? Recognizing the silence of TRIPs on TK, Weeraworawit tends to answer the question positively. As to him, in fact, there are certain provisions which could be interpreted in favour of the concept of access and technology transfer. 145 as Art. 7 of the TRIPs which deals with technology transfer is stipulated in broad terms which make it a subject of interpretation by WTO members as even a provision providing the safeguard of TK. A similar position can be spoken for Article 67 of the TRIPs, as it talks of cooperation

<sup>143</sup> Naomi Roht- Arriata, of seeds and shamans; The appropriation of the scientific and technical knowledge of indigenous & local communities, 17 WCH.J.INT'I.L 919,961(1996), p. 923. 144 ibid; see the title of the article.

<sup>&</sup>lt;sup>145</sup> Weerawit Weeraworawit, International Legal protection for Genetic Resources, Traditional knowledge and folklore; Challenges for the intellectual property system, (2003), pp. 161, as it appear in Trading in knowledge, Development perspective on TRIPs, Trade and sustainability.

between the developed and other nations (assistance including prevention of abuse).

Another important article with this aspect is the provision of Article 27(3.b). The provision sets out conditions for which certain biological materials or intellectual innovations are excluded from patenting. The last paragraph of the above-sated article ignites the discussion on TK by stating that: "The provisions of this subparagraph shall be reviewed..." under the realm of such point many developing nations who strongly insist in the incorporation of TK in one or another way are forwarding their ways which they deem possible. Thus, to deepen the issue, readers are advised to look into the following documents which are all available in the WTO web site: 147

- a) Review of provision of Art. 27(3) B of TRIPs;
- b) The relationship between TRIPs and the convention of biological diversity (Here we should take a note that the establishment of this relation to that of high value as the later recognizes in black and white TK in relation to biological diversity); and
- c) The protection of TK and folklore.

Here one can understand this is through the instrumental of this article, countries have a chance to speak of their stand.

<sup>&</sup>lt;sup>146</sup> Boniface G. Chidyausiku, Art 27(3)b of the TRIPs agreement; the review process and developments at national & regional levels, 2003, pp.109 pp, as it appear in Trading in knowledge, Development perspective on TRIPs, Trade and sustainability

<sup>&</sup>lt;sup>147</sup> Documents of the council for TRIPs with respect to the review of the provisions of Art. 27(3)(B), The relationship between TRIPs and the CBD and the protection of TK and folklore

## Need of According International Protection for Traditional Knowledge

Though available literature the author has consulted pinpoint a number of reasons for protecting TK in the global level, it is advisable to prefer to cite the basic reasons why countries themselves provide in the debate of the topic to the TRIPS council. The author's tendency is based on two reasons. First, as most request to the Council were presented in joint capacity, it better addresses commonalities than a scholar's view on the issue (we can cite the 'African Group' in this aspect.) The second reason is the fact that the demands were addressed to the Council of TRIPs which was established to see if there is a room in TRIPs for protecting TK. This means that the reasons embodied in the documents directly relate with considering TRIPs as the best place of according international attention. <sup>148</sup>

The concern by the proponents of international action is motivated by the two following reasons:<sup>149</sup>

a. Fact of patent granting to TK for persons other than the indigenous people/communities who originated and control the knowledge; and

b. The use of TK without authorization and proper benefit to the indigenous people.

There are some paradigms. The paradigms behind these two reasons are stipulated further as follows:

<sup>&</sup>lt;sup>148</sup> WTO, Council for TRIPs, The Protection of Traditional knowledge and folklore summary of issues raised & points made, IP/C/W/370 Rev. 1, 9 March 2006. <sup>149</sup> ibid, p3.

#### 1. Common Economic Interest

There is a contention that TK as a global resource with a potential of being translated to commercial benefits leads for the development of useful products and processes, in particular in the fields of medicine and agriculture saving lots for the bio-tech sector. This reason makes the protection of TK a common-man kind interest so as to assure the continuing vitality of the communities who preserve and develop the knowledge. <sup>150</sup>

## 2. Equity

It refers to the benefit that should accrue to the holders of the TK. In a term which I believe echoes the tit for tat mentality, developing countries argue, if TRIPs require us to protect a wide range of IPs, it is only equitable TK is also protected. In their terms, as they said: "Indeed, it is the responsibility of the international community to create an equalitarian system for the availability, acquisition, maintenance, and enforcement of IP rights, which does not a priori exclude any section of the society." <sup>151</sup>

## 3. Food Security

Most developing countries have agricultural or agricultural led economic system. The existence of these communities depend on the availability of rain plus the methods the communities have preserved in the selection and breeding of plant and animal varieties. The well-established practices of saving, sharing and replanting seeds ensure food security. <sup>152</sup> Going far will not be a necessity to prove this fact. In more than 85% of rural community of our country, this technique of production is commonly known, and what

<sup>&</sup>lt;sup>150</sup> Reports submitted to the council by Bolivia, Indonesia, Kenya, Switzerland, Peru, Venezuela, Brazil, India and Ecuador, id.

<sup>&</sup>lt;sup>151</sup> Reports submitted to the council of TRIPs by Bolivia, Colombia, Ecuador, Nicaragua,, Peru, Cuba, Honduras, Paraguay and Venezuela, id.

<sup>152</sup> Supra note 19, Kenya, Peru and the African Group Ip/CM 28; Ip/c/w 206.

the agriculture experts refer as 'mirtezer' is a result of such a traditional process. As to the stand of the African Group, global recognition and protection of TK will help keep such system intact, providing secured production of food and preventing future chaos.

#### 4. Culture Preservation

TK is strongly linked with the day to day cultural life of a community.

#### 5. Environment

Most TK are results of sacred beliefs related to the environment. The protection of TK, in these regard, is a means to protect the environment (e.g. the protection of Genetic and Natural resources).<sup>153</sup>

### 5. Development

From TRIPs's stand point, the attitude of linking TK protection with development is seen in doubt, as argues by Frederik Abbott. The argument of this author can never be given meaning of what it seems; rather it is safe to conclude other factors as protection reasons than 'development' per se. This can be inferred from the same article: "The protection of such expression is important on cultural grounds... ... [W]ill have an impact in certain micro-economic setting." 155

For the author, it seems a back-firing claim as all the aforementioned facts, especially reasons 1 and 3 are clear economic and developmental reasons. Development is a clearly expressed motive of most international instruments under the GATT, TRIPs inclusive. On a report presented for TRIPs, Council representatives of Venezuela has expressed their view on the point

155 id

<sup>&</sup>lt;sup>153</sup> Supra note 20, A point raised by Ecuador.

<sup>154</sup> Frederik Abbott, The Future of IPRs in the Multilateral Trading system 2003,pp 36.

'protection of TK could contribute significantly to the fulfillment of developmental objectives' 156

## 7. Communal Right

So far the existing IP system has been an individual focused, both in the National and International Instruments. Protecting the rights of indigenous community is a new jurisprudence, and TK and IP shall then also be blessed with this conception of recognizing communal rights. 157

## 8. Legal Force

We have witnessed instruments protecting TK at both the national and the regional level. In certain instances, it is even at the international forum. It can also be said that the legal force states will accord to such scattered treaties will not be effective unless a well-established international law is applied. Brazil and India add to this point to glorify the weakness of national legislation protecting TK, dealing with the 'Trans-boundary use of TK' they cite the case of acquiring the knowledge in a country and applying patent in another, wherein there is no national law prohibiting the act. Such situations can be curbed by the usage of an international IP instrument. 158 In short, these are the major reasons which justify the existence of an international legal instrument for protecting TK. Now, let us proceed to examine the best available instrument of protection.

Venezuela, Ip/C/M 29, pora. 201, Supra note 20.
 Supra note 13, pp.159.

## **Appropriate International Forum of Protection**

Since the beginning of the debate, the developed nation has tirelessly insisted on the mandate of the World Intellectual Property Organization (WIPO) to work on Traditional Knowledge and the involvement of TRIPs on the issue was treated as duplication of effort. 159When the realm of GATT/WTO expands to the IPs, many have argued for the logic behind making IP a matter of international trade. U.S.A insisting for a full-fledged protection employed the term trade for IP and in the benefit and interest of many of its multi million companies 'Trade related' IP rights form part and parcel of one of the strong international instruments in the Globe. <sup>160</sup> Many who primarily benefit from such a protection side the view of USA and so lobby developing nations. Action by a country which is a member to such a multilateral arrangement shall be reasonable that it shall not only see its needs, rather try to incorporate the need and interest of other members, on the base of WTO system. We can say that what happens in the case of 'TK' is exactly the contrary. Developing nations are looking for the best forum in the context of IP to protect their right and I firmly believe it's the task of WIPO to dwell on IP issues and immediate attention shall be rendered to the 'Bio-piracy' of various forms of TKs. It is the commercial interest and share of benefit that concerns TK, without forgetting the long sighted sustainable protection mechanisms. In this case, an international instrument is of need which combines both the issue of 'Trade' and 'IP'. This is what led the argument to rest on TRIPs. This formulation is backed up by various types of literature and submissions of the WTO members made over the period of

<sup>&</sup>lt;sup>159</sup> Documentation for council of TRIPs by Australia, Canada, European community, Japan, Korea, New Zealand, Switzerland & USA.

<sup>&</sup>lt;sup>160</sup> Adronico O Adebe, Origins and History of the TRIPs Negotiations, 2003, pp. 23-30.

1998 till now. Reasons spelt in those periods range varyingly culminating in the conception of TRIPs as the best instrument of according TK protection internationally. Some of the justifications are:<sup>161</sup>

- a. It would be inappropriate to have issues and problems arising out of TRIPs to be dealt by WIPO;
- b. The WTO has the necessary expertise to deal with the matter;
- A solution to the concerns relating to patenting that constitutes a
  misappropriation of TK should similarly take the form of
  obligations that need to be enforceable within the WTO
  framework;
- d. Works in TK are being carried by another wing of the WTO, the Trade & Environment Sect, making the work manageable and cooperative;
- e. WIPO by itself has allowed the treatment of the subject by other forums; and
- f. The already existing laws have failed to protect TK. As such an amendment in providing protection of 'TK' will be visible in improving the already strong systems.

The motto of this part is to show the best forum for protecting TK. Yet, the author argues that it is essential to state what most claims as an alternative to considering TRIPs, a dream instrument. The concept emanates from no new place but TRIPs itself. Art 27(3) mentions of a 'sui generis system'. This is a distinct body of law which will be devoted for securing a certain wanted behaviors. Though locating a country which has developed this system is a hard task, scholars had done their part as to what could be incorporated in the future law. Let's

<sup>163</sup> Supra note 17, pp 16.

<sup>&</sup>lt;sup>161</sup> Supra note 19, 20.

<sup>&</sup>lt;sup>162</sup> Suman Sahai, Indigenous knowledge and it's protection in Indian (2003),pp. 173.

support the author's stand by bringing the experience of Australia as to the Aborigines<sup>164</sup>, about them WIPO presented proposal, including rights to<sup>165</sup>:

- 1. Prevent unauthorized use (making, using, offering for sale, selling or importing) of TK;
- 2. Prevent any reproduction of a fixation of traditional knowledge that is unauthorized (distorting);
- 3. Respect of database (Refer Art. 39(3) of TRIPs); and
- 4. Assign/Transfer in respect of benefit-sharing.

All this purposes can still be the theme of TRIPs but the reason WTO was chosen as a forum of TRIPs was the fact that having greater enforcement power through international trade mechanisms than WIPO or a to be established unique system of national/international legislation. <sup>166</sup>

## Framing TRIPs to Traditional Knowledge

To make TRIPs favourable instruments for the protection of TK, certain major amendments of the provision is an action which should be taken. The amendment shall incorporate this important point, as stated:

a. The definition of Intellectual Property Rights shall be amended as to give recognition to communal rights in form of TK. It is not a necessity to qualify all kinds of TK with IP realm. Lessons can be grasped from existing laws which have given recognition to TK as to what sort of knowledge can be eligible of IP definition.

<sup>166</sup> Supra note 7, p. 165.

<sup>&</sup>lt;sup>164</sup> Department of Home Affairs & Environment, Report of the working party on the protection of Aboriginal folklore, 73-75 (1981)

<sup>&</sup>lt;sup>165</sup> Elements of a Sui Generis system for the protection of Traditional knowledge, WIPO document, WIPO/GR TKF/IC/418 of September 30, 2002.

- Once, TK is recognized as IP under TRIPs, the application of laws to protect IP will be possible. In our case, we are talking about 'patents'. The existing patent system will fail short of protecting TK. The general wording of Art 27(1), 'New', is not explanatory. Members as such define novelty in a manner including one that gives no recognition of any sort of information (prior art) available to the public through any means outside their jurisdiction. Such can easily be avoided the protection as TK exist openly in developing countries in the local communities. A company from a developed world can bio pirates the knowledge and patent it in its respective country as the possibility of this far world knowledge to make part of the patent applied nation is one in a million. Such acts can only be avoided if the wording 'NEW' under Art 27 is given meaning to include one which has not been priory publicized or used any where in the world. The fear of this requirement backfiring on TK holders when they require for patent will be avoided by making an exception provision which recognizes group or local knowledge, though it has been used by a certain specified society, as long as the community can prove it exists/it came from nowhere but themselves. The burden of proof may rest on the party who alleges the novelty of their TK.
- c. To make the 'prior art' search easy and to dispense claims timely, member states shall be obliged to keep account of their TKs. A wide movement has already started with the move of 'documenting of data base on TK'
- d. As an exception to Art 39, a party seeking patent on account of a result which bases itself on TK will be required to disclose such information. The disclosure can be limited to the IP office to assure the fear of losing confidential information.

- e. The rights that are protected shall be spelt in clear terms. Taking the experience of South Africa <sup>167</sup> on the point, inclusive of
  - 1. Right of ownership and control of TK;
  - 2. The right to benefit commercially from the authorized exploitation of TK (This imagines informed-consent, followed by benefit sharing);
  - 3. The preservation of the right to cultural autonomy in any system for protecting TK. I envisage the term of protection under Article 33 will not work for a patent required directly on TK. There will be no term specified rather mechanisms will be stipulated so as to see the public domain will be beneficial of the knowledge, for instance, contractual agreements and the such, keep in mind that by doing this we are reconciling with the limited monopoly though not as strong as the other cases;
  - 4. The right to approve/reject commercial use of TK;
  - 5. The right to maintain the secrecy and sacredness of TK. Secrecy does not go against the documenting in mention earlier, as the documentation need not to go to the every nuts and balls of the knowledge, rather an overview of it which doesn't require the disclosure of secretes or spiritual or other beliefs related to the knowledge;
  - 6. The right to prevent distortion or mutilation of TK; and
  - 7. The right to legal assistance for negotiating and enforcing TK contracts.

<sup>&</sup>lt;sup>167</sup> Resources current policy and legislative Development in South Africa, 2003, P. 274.

Although many can be said, these are the pillars in establishing TRIPs as a favourable place of claiming TK rights. The prayers of developing nations (i.e. owners and pioneer beneficiaries of the right) can be at least partially answered by implementing these remedies.

#### Conclusion

TRIPs have entertained 'winners' and 'losers' in its life span among the members of WTO, and the effect is even far reaching to non-members. The question that has benefited from TRIPs can be answered without haste, the developed industrialized world that has its creations and inventions protected from any sort of infringement. In the developing world, even to benefit of the WTO dispute settlement economic requirements are barriers. Now, it seems these developing nations, even the undeveloped natives of the developed countries, have an opportunity to see many has benefited through the commercialization of what they create, preserve and keep. Traditional knowledge and creations based on them promise economic development for many. To achieve this, well organized system of protection becomes a need. As many claim 'TRIPs can't be a place for TK', this paper was an effort to underline 'Reasons as to how TRIPs can entertain TK.'

#### REFERENCES

Adronico O Adebe, Origins and History of the Trips Negotiations, (2003).

Boniface G. Chidyausiku, Art 27(3b of the TRIPs agreement; the review process and developments at national & regional levels (2003).

Daniel Gervias, TRIPs, DOHA & Traditional Knowledge & Policy (2001).

Elements of a Sui Generis system for the protection of Traditional knowledge, WIPO document, WIPO/GR TKF/IC/418 of (September 30, 2002).

Frederik Abbott, The Future of IPRs in the Multilateral Trading system (2003).

Graeme B. Dinwoodie, William D.Hennessey & Shira Perlmutter, *International Intellectual Property Law & Policy* (2001).

International Labor Organization's revised Convention of 1989, Art 7(1), *The United Nations Draft Declaration on the Right of Indigenous people Art* 29 (2007).

Johnson A. Ekpere, *The AU Model Law for the Protection of the Rights of Local Communities, Farmers and Breeders and the Regulation of Access to Biological Resources* (2003).

Marcih E. De Geer, *Biopiracy: The Appropriation of Indigenous Peoples cultural knowledge* (2003).

Naomi Roht-Arriata, Of seeds and Shamans: The Appropriation of the Scientific and Technical Knowledge of Indigenous & Local Communities (1996).

Olufunmilayo, Arewa, TRIPs & Traditional Knowledge, Local Communities, Local Knowledge & Global Intellectual Property Frameworks (2006).

Resources Current Policy and Legislative Development in South Africa (2003).

United Nations, Convention on Biological Diversity (1993).

Weerawit Weeraworawit, International Legal Protection for Genetic Resources, Traditional knowledge and folklore: Challenges for the Intellectual Property System (2003). World Trade Organization (WTO), Council for TRIPs, The Protection of Traditional Knowledge and Folklore: Summary of Issues raised & Points made, IP/C/W/370 Rev. 1 (March 9, 2006).