



Indigenous Knowledge and Intellectual Property Rights

International trade in genetic resources, often referred to as biotrade involves high economic stakes today. The sale of drugs based on traditional medicines alone amounts to over US\$ 32 billion (1 billion equals 1,000 million) a year. It has been estimated that by consulting indigenous peoples, bio-prospectors can increase the success ratio in trials from one in 10,000 samples to one in two. In the experience of another expert, traditional knowledge increases the efficiency of screening plants for medicinal properties by more than 400 percent. Without the input of indigenous knowledge, many valuable medical products used extensively today, would not exist.

Prior to 1992, traditional knowledge and resources were seen as the common heritage of mankind. There were no international (and in most countries national) laws regulating access to genetic resources. As a result, there was an increase in the commercial use of the knowledge and biological resources of indigenous peoples. The rapid depletion of environmental resources and the need to reward both users and providers, gave rise to the Convention on Biological Diversity (CBD), which for the first time acknowledged the value of indigenous knowledge and resources. It established a framework for providing access to genetic resources and a means for fair and equitable benefit sharing.

Intellectual property is a means of acquiring ownership over a particular

resource that is intangible in nature. It usually involves the protection of some form of invention created by the human mind. This includes a wide variety of creations, ranging from new music, novels, drugs, to computer software and products obtained from the use of indigenous knowledge.

The CBD introduced the notion of intellectual property rights as a strategy for conserving biodiversity by granting countries sovereign rights over their resources. This was complemented by the Agreement on Trade-Related Intellectual Property Rights (TRIPS). The inclusion of TRIPS into the mainstream of the WTO system established new disciplines for many countries in patents, copyrights, geographical indications, trademarks and industrial designs. The main objective of the agreement is to create an international standard for minimum intellectual property rights (IPR) protection.

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Intellectual property rights: conflict or synergy?

Does the protection of indigenous knowledge and resources through the establishment of IPRs promote or hinder the channeling of equitable economic benefits to the custodians? Critics argue that IPRs are a threat to biodiversity by limiting access to resources and the products derived from them. They encourage companies to patent inventions derived from indigenous knowledge and resources, without equitably sharing the commercial rewards with these communities. The advocates of TRIPS claim that it encourages technology transfer, which could be one strategy for equitable benefit sharing. There are several other issues that arise in this debate which will be dealt with and reconciled by examining strategies for working within existing IPR regimes and widening their scope where necessary, to conserve indigenous knowledge and biodiversity.

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Problems of applicability

The individualistic nature of IPRs creates several complications, when applied to local communities. They fail to take into account the fact that these communities have a holistic approach to their environment. Such communities find it difficult to separate the resources from which their livelihood stems into distinct economic and social assets.

As far as IPR is concerned, this leads to another critical problem. How does one define an innovation and a beneficiary in local communities, given the need to prove novelty and non-obviousness. In most traditional communities, knowledge is acquired over time and passed on from one generation to the next. Through this process it keeps evolving and changing in character. Therefore, it is difficult to establish when such knowledge was actually discovered and when it entered the public domain.

The second aspect of the dilemma involves the community aspect of indigenous knowledge. It is developed by being shared amongst the members of the community such as the elders who have the wisdom of years of experience which adds further value to knowledge. In this sense it has always been in the public domain of the community and therefore fails to meet the non-obviousness criteria of a patent. And when an entire community is involved in the evolution of traditional knowledge, how does one identify the inventor? The problem is further complicated in cases where the same indigenous knowledge is used by different communities across the world. For instance, if a particular herb is used by the Maasai in Kenya, as well as by the Amazonian Indians, how does one identify the rightful inventor?

Towards a synergy

These issues may be reconciled by working within the framework of TRIPS through the use of different forms of intellectual property rights. These include geographical indications which are more applicable to community based inventions. Another possibility is to widen the scope of IPRs to include the notion of community based rights. This may include *sui generis* (of its own kind; constituting a class alone) forms of protection which are more innovative than the use of patents.

Some suggest that patent laws be modified to ensure that all patent applications disclose the country of origin of biological materials and traditional knowledge used to develop the invention. A related issue involving the patenting of indigenous practices is the need to document them. The problem with most indigenous practices is that they are passed on from one generation to the next through oral traditions and not written records. In order to prevent traditional knowledge that is already in the public domain from being patented as a new invention in another country, it is vital to provide written documentation of such practices. This way, indigenous communities can challenge patents being granted to others for practices that are traditionally their own. The World Bank's Indigenous Knowledge database and a similar initiative by WIPO to register traditional practices are initiatives in this direction.

In addition, the creation of national, regional and international registries of traditional knowledge could support benefit sharing among industry and local communities. They could support IPR-related measures such as strengthening traditional knowledge's status as prior art, enabling 'defensive publications'.

Aside from patents, there are other possible mechanisms for establishing intellectual property rights over indigenous knowledge and resources. These include the use of geographical indications (place names or words associated with a place to identify the origin, type and quality of a product — for example "Darjeeling tea"). These are unique in their ability to reward collective traditions while allowing for evolution. They emphasize the relationships between human cultures and their local environment and can be maintained as long as the collective tradition survives. It is immaterial whether the inventor is an individual, family or large corporation. Indigenous communities claim their knowledge is not to be freely bought or sold. Similarly, a geographical indication lacks the typical private property characteristic of being freely transferable.

Other forms of protection include copyrights and trade secrets. Copyrights are often used to protect traditional folklore from unauthorized duplication. WIPO has protected folklore from different parts of the world as copyrights. Trade secrets are a means to protect confidential information that

can give others such as a business firm a competitive advantage. They could be an effective way of protecting indigenous knowledge. Local communities could restrict access to their territories and information to outsiders through agreements that secure confidentiality and economic benefits. Such practices have been initiated in countries such as Ecuador with the support of the Inter-American Development Bank.

***Sui generis*: access and equitable benefit sharing**

Some of the biggest controversies surrounding IPRs concern the protection of local plant species. The TRIPS agreement states that members may exclude from patentability...

"Plants and animals other than micro-organisms and essentially biological processes for the production of plants and animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof." – (Article 27.3b)

Sui generis refers to methods of protection other than the use of a patent. The most common form of *sui generis* protection for new varieties of plants involves some kind of "plant breeders rights". At the international level, a number of countries have joined together in the International Union for the Protection of New Varieties of Plants (UPOV), and negotiated an International Convention for the Protection of New Varieties of Plants. The Convention lays down minimum standards of protection that national systems should accord. It enables breeders to enjoy the so-called "breeder's privilege" which gives them the freedom to use protected plant varieties in their breeding programs to generate other (derived) varieties.

Such forms of protection have generated some concerns amongst developing countries, most of which seem to be unfounded. The fear, for example, that farmers will no longer be allowed to carry on with their traditional farming practices as a result of a patent or *sui generis* form of protection being issued for a product that has been used by them over a long period of time, is misplaced. A product or process that has been used publicly is not new and therefore cannot be pat-

ented. Only new plant varieties will be eligible for protection and even then, the onus is on the breeder to seek protection. It is not compulsory. Thus, farmers will be able to retain seed from their harvest for sowing on their land (this has come to be known as the “farmers’ privilege”).

Sui generis offers the possibility to move beyond traditional forms of IPR and examine other mechanisms for regulating access to resources and equitable benefit sharing. These could include contracts between the users and custodians of these resources, such as Material Transfer Agreements. In Cameroon, for instance, the US National Cancer Institute signed a contract with the government following the discovery of a forest plant species with a potential anti-AIDS chemical. Cameroon provides plant samples in return for payments which are used for indigenous community development projects to conserve the forests.

Others argue that *sui generis* systems that allow for considerable innovation in the form of protection offered need to be expanded even further to include community-based rights and traditional resources rights. NGOs such as the Third World Network advocate an alternative rights regime that reflects the culture and value system of local communities. They argue that, to take into account the dynamic nature of traditional knowledge, the concept of ‘innovation’ needs to be redefined beyond what typifies industrial innovations. This could be embodied in community-based rights.

Academics have advanced a more holistic approach that integrates property rights with everyday customary laws and practices. They claim that indigenous knowledge cannot be separated from other indigenous rights such as human rights, rights to land and self government. One possible solution could be an integrated rights approach through the establishment of traditional resource rights which could provide a framework of principles upholding the rights of traditional communities. These can serve as guidelines to establish other rights such as *sui generis* property rights.

Conclusion

Intellectual property rights can provide an effective means of protecting indigenous knowledge systems and plant varieties. This note emphasizes the critical importance of documenting indigenous knowledge in writing, which can then be used to challenge a patent claim on knowledge that is already in the public domain. Second, it highlights the usefulness of other forms of intellectual property rights than patents such as geographical indications. These may be of more use to indigenous communities seeking to regulate access over their resources, as they can be applied to knowledge that evolves over time and with the input of the local community at large. This leads us to the possibility of widening the TRIPS agreement to ensure that patents disclose the origin of genetic resources and use of indigenous knowledge and consider *sui generis* forms of intellectual property such as community based rights to secure equitable benefit sharing.

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