

Conclusion

Obligations on technology transfer in MEAs have little practical effect where the bulk of the technology lies in the private sector. The private sector is not directly bound by the provisions of the CBD or other MEAs and has no obligation to transfer technology other than in accordance with relevant national law. Technology transfer is, in the absence of national law and policy to promote transfer, reliant on the good will of the private sector, and securing this good will is largely dependent upon ensuring that market conditions are favourable so that the private sector stands to benefit economically or otherwise by supporting an MEA's implementation.

At the end of the day, it appears that including provisions on technology transfer in MEAs will have little practical impact unless supported by adequate funding and mechanisms to secure protection of intellectual property rights. Unfortunately, while much has been done to secure the latter, funding has not been so readily forthcoming.

If it cannot be shown that there has been a significant increase in the transfer of technologies as a direct or indirect result of the entry into force of MEAs, developing country negotiators may well wish to reconsider the weight to be given to technology transfer provisions in the negotiation of future MEAs. UNU-IAS is conducting ongoing research that is intended to help inform this analysis while also providing a review of options and best practices for defining the nature, scope, and mechanisms for funding of technology transfer in MEAs in order to secure their more effective implementation in the future.

1 Advocates of the "Green Agenda" and the "Brown Agenda" often disagree over which environmental problems should be tackled first. The Green Agenda concentrates on reducing human impacts on the world's natural resources and ecosystems, whereas the Brown Agenda focuses on the environmental threats to health in poor areas. See *Sustainable Development Update*, Issue 6, Volume 3, 2003.

Protecting and Strengthening Traditional Knowledge Innovation Systems

By Nicolas Brahy and Brendan Tobin

Traditional knowledge was long considered little more than unscientific and irrelevant hocus pocus of witchdoctors or slavish repetition of outdated farming methods by unsophisticated peasants. It is now, however, increasingly being recognized as a complex and dynamic system of knowledge developed over centuries through research, investigation, application, modification, and innovation by indigenous and local communities – and deserving of protection.

Far from being an outdated form of science, traditional knowledge remains the primary means for securing and sustaining the livelihoods of a majority of the global population, and for responding to their health, food, clothing, and housing requirements. In terms of public health alone, over 80 per cent of the population in developing countries is estimated to depend upon traditional medicine for their daily needs. Traditional knowledge, far from being expendable, is a crucial part of our present and future scientific knowledge base, and requires both conservation and nurturing.

Despite its importance, traditional knowledge is under threat from a number of internal and external pressures. These include not only unapproved commercial and scientific exploitation (commonly referred to as "biopiracy") but national health, education, agricultural, and fisheries extension programmes that downplay the importance of traditional knowledge in favour of external or imported knowledge. Likewise, the influx of foreign religions has frequently led to displacement of traditional rites and festivities that are important tools for the transfer of knowledge. Loss of indigenous language, culture pride, and identity are other key factors in this lamentable trend.

Ironically, increased interest during recent years by the scientific and commercial sectors in the potential of traditional knowledge to assist in the identification of valuable biological and genetic resources has served as a catalyst for the revaluation of traditional knowledge, and has inspired a global movement dedicated to the protection of indigenous peoples' rights over their knowledge. Emblematic cases of biopiracy involving turmeric from India, ayahuasca from the Amazon, beans from Mexico, and maca from the Andes have served to create an environment of distrust and confrontation that has placed the issue of protection of traditional knowledge high on the international agenda.

The Convention on Biological Diversity (CBD) has established a Working Group dedicated to investigating the means to protect and strengthen traditional knowledge systems, including development of *sui generis* systems¹ of property rights over knowledge. At the same time, the World Intellectual Property Organization's InterGovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (WIPO-IGC) is researching potential options for the protection of traditional knowledge, and promoting research into a number of potential mechanisms for protection of rights (such as contracts, registers, and databases). Meanwhile, the 2001 Doha Declaration stipulates that in its review of Article 27.3(b) of the World Trade Organization's (WTO) Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement "which deals with patentability or non-patentability of plant and animal inventions, and the protection of plant varieties", the TRIPS council "should also look at: the relationship between the TRIPS Agreement and the UN Convention on Biological Diversity; [and] the protection of traditional knowledge and folklore".²

The UNU-IAS Biodiplomacy Initiative has developed a wide-ranging research programme on a number of key issues related to the protection and strengthening of traditional knowledge systems. These include:

- intellectual property and *sui generis* protection of traditional knowledge;
- the role of databases and registers in the protection of traditional knowledge; and
- the interface between customary decision-making processes of local and indigenous communities, and national law and policy on access and benefit-sharing (ABS) and traditional knowledge.

Intellectual property and *sui generis* protection

Underlying traditional knowledge holders' claims for protection of their rights over their knowledge, three broad objectives can be identified. First, there is a need to support and strengthen the continuing use of traditional knowledge as the best way to conserve and develop it. (This includes use by its custodians, by other traditional knowledge holders, as well as by Western scientists and companies, provided proper conditions are ensured.) Second, there is a need to prevent traditional knowledge from being appropriated by third parties. Third, there should be equitable sharing of benefits derived through the use of traditional knowledge. (This benefit-sharing can be justified by reasons of equity, but above all as an incentive for maintaining traditional knowledge and for continuing innovation).

While seeking recognition of their rights, indigenous peoples have expressed concerns that framing those rights in the context of intellectual property rights (IPR) could lead to significant changes to the nature of the knowledge systems and to the exhaustion of their traditional rights to the knowledge generated. They have, therefore, proposed that protection be framed through appropriate *sui generis* regimes. The World Intellectual Property Organization has responded with the development of draft principles for the protection of traditional knowledge. To stimulate open dialogue on the nature of these principles and the theoretical bases underlying them, UNU-IAS organized a side event during the 7th meeting of the WIPO-IGC in Geneva in November 2004, with a keynote address by Professor Jerome Reichman of Duke University on the potential role of a compensatory liability regime in protecting traditional knowledge.

The UNU-IAS Biodiplomacy Initiative will continue to hold informative workshops during WIPO-IGC sessions. These events will have the aim of enabling leading academic commentators on IPR and traditional knowledge issues to discuss their proposals with government negotiators, custodians of traditional knowledge, non-governmental organizations, and relevant international organizations. A workshop was held at the 8th meeting of the WIPO-IGC in Geneva in June 2005 which discussed the notion of

misappropriation and the role of databases in protecting traditional knowledge.

Role of databases and registers

The recent proliferation of IPR in several economic sectors creates a risk of reducing access to knowledge and raises concerns that it may hinder innovation. This has led to an intense debate in the IPR and scientific communities regarding the need to find the right balance between the granting of IPR to reward innovation and the need to maintain the vibrant, free, and open access to information through the public domain. At the same time, there are concerns that an ever-increasing body of traditional knowledge is being documented by academic researchers and published in databases or academic journals. As a result, this traditional knowledge is being placed in the "public domain" in the sense that it becomes available for use without permission of the traditional knowledge holders, and any rights that traditional knowledge holders may have been entitled to seek based upon legal notions of novelty and trade secret are effectively lost.

Over the centuries, an extensive body of traditional knowledge has fallen into the "public domain" and brought little benefit to traditional knowledge holders. There is, therefore, a need to protect traditional knowledge holders' intellectual rights; the challenge that faces regulators is how to achieve this end without unnecessarily restricting use and access, or negatively affecting the nature and underlying bases of traditional knowledge systems. In the long run, although they may approach the issue from different perspectives, the IPR community and traditional knowledge holders both face the same challenge: the need to balance the mechanism for protection of rights over the product of intellectual effort (mechanisms predominantly based upon the notion of IPR at the present, but increasingly involving the development of *sui generis* regimes) and access to knowledge.

The UNU-IAS Biodiplomacy Initiative has begun a multi-year research programme that seeks to address the relationship between information exchange, intellectual property rights, and the public domain. This research commenced with the preparation of a UNU-IAS policy report "The Role of Registers and Databases in the Protection of Traditional Knowledge" (see at left), based upon a comparative study of experiences in the development of traditional knowledge databases and community registers. Further research examined knowledge-sharing from an indigenous standpoint, drawing upon research of aboriginal concepts of knowledge-sharing in Australia. Work is continuing with the preparation of a policy report on the potential role of databases to support an international regime on protection of traditional knowledge.

This research addresses the issue with attention to a recent proposal by the WIPO secretariat in a negotiation document distributed at the 7th IGC in Geneva in November 2004,³ in which the concept of "misappropriation" is used



This report is available for download from http://www.ias.unu.edu/binaries/UNUIAS_TKRegistersReport.pdf

as an organizing principle to explain the objectives of traditional knowledge protection and the justification for protection, and to describe its content. In addition, the negotiation document includes a list of issues to be met by a legal regime protecting traditional knowledge. UNU-IAS research seeks to clarify the principle of misappropriation, a concept drawn from competition law, and to further examine the potential objectives and justification for a regime to protect traditional knowledge. It also will examine how existing laws on database protection can help to answer some of the questions identified by WIPO in its paper. Consideration is being given to how a combination of databases, IPR, contracts, and licenses may be utilized to strengthen the enforcement of and respect for traditional knowledge holders' customary laws and community protocols.

Customary law/practice, ABS, and traditional knowledge

Traditional knowledge is a complex holistic system that permeates every area of indigenous people's lives; it includes not only information but also a comprehensive system of laws and practices that regulate both the manner and the right of use of knowledge. The UNU-IAS Biodiplomacy Initiative is working together with a range of partners in the Pacific region to develop a research programme to examine the existing status of customary law and practice relating to traditional management of natural resources. The region has been identified as one of the most propitious for such research as over 80 per cent of land and a significant portion of coastal marine areas are subject to customary rights.

UNU-IAS has been actively involved in organizing a number of workshops in the Pacific region. The first of these, for Melanesian countries, was held in Townsville, Australia, in November 2003 and coordinated by the International Marine Project Activities Centre (IMPAC) with the sponsorship of the Christiansen Fund. The second, for Micronesian countries, held in Palau in May 2004, was organized by UNU-IAS in coordination with the Office of Environmental Response and Coordination (OERC), and supported by United Nations Environment Programme and the South Pacific Regional Environment Programme.

A regional Pacific Workshop is planned for the latter half of 2005. As part of this, UNU-IAS is coordinating the preparation of a number of national case studies to identify best practices in the development of effective interfaces between national legal regimes and community decision-making processes.

These workshops are part of the Biodiplomacy Initiative's capacity development programme, which is designed to provide greater opportunity for indigenous and local communities to influence the development of law and policy on protection of traditional knowledge with reference to their own realities, customary law, and practices. Work has also included a series of workshops on ABS and traditional knowledge in Central Asia and Mongolia and a workshop for Amazonian, Andean, and Afro-Peruvian indigenous organizations in Peru to develop a proposal for a national consultation process on traditional knowledge.

Working together with the Uzbek patent office and WIPO, UNU-IAS is organizing a regional workshop for Central Asia and Mongolia on IPR and traditional knowledge, to be held in Tashkent in

September 2005. This workshop is intended to bring together representatives of local and indigenous communities, experts in protection of traditional knowledge, and representatives of patent offices to discuss the opportunities and challenges faced by countries of the region in establishing effective mechanisms to protect traditional knowledge.

Conclusion

UNU-IAS believes that protection of traditional knowledge cannot be addressed from a purely defensive standpoint that seeks to prevent or control commercial and scientific use. Nor can it be achieved by relying solely on government regulation and international aid. Protecting traditional knowledge requires an understanding of the nature of indigenous and local community knowledge systems, respect for their knowledge-sharing practices, and support for their customary laws and practices. It requires a proactive policy of nurturing traditional knowledge systems, identifying the threats they face, and creating incentives and opportunities for increased use of traditional knowledge and respect for the innovative capacity and guardianship role of its custodians.

UNU-IAS seeks to support and facilitate the debates surrounding protection of traditional knowledge through its research, outreach, and capacity development activities, thereby engendering increased opportunities for indigenous peoples and local populations to participate in an informed and effective manner in decision-making processes.

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- 1 "Sui generis system" literally means "a system of its own kind". Developing a *sui generis* system for protection of rights over traditional knowledge implies a new and specific system of property rights rather than adoption of a system based upon existing intellectual property rights.
 - 2 See the WTO website at http://www.wto.org/english/tratop_e/trips_e/art27_3b_background_e.htm.
 - 3 WIPO, "Protection of Traditional Knowledge: Overview of Policy Objectives and Core Principles", WIPO/GTRKF/IC/7/5, 2004.