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Traditional Knowledge, Genetic Resources and Intellectual Property Protection: Towards a New International Regime

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I. Introduction

This paper is a contribution to background material for Africa's participation in the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. The Committee is expected to address three interrelated issues. The first cluster is those intellectual property issues that arise in the context of access to genetic resources and the sharing of benefits arising from the utilization of those resources. Emphasis may be on whether intellectual property protection, as currently constructed and practised, offers the best way of regulating access to genetic resources and promoting benefit-sharing to promote the goals of the Convention on Biological Diversity.

The second set of issues pertains to the protection of traditional knowledge and associated innovations. The Committee is likely to focus on the extent to which existing forms of intellectual property rights adequately cover traditional knowledge, and what specific reforms should be instituted to enlarge protection of this knowledge. The third set of issues are those on the protection of expressions of folklore.

This paper highlights gaps in the current regimes of intellectual property protection. It points to alternative forms, such as *sui generis* systems, that would provide a certain measure of protection of traditional knowledge and expressions of folklore, as well as to promote fair and equitable sharing of benefits arising from the utilization of genetic resources. There is however need to provide an international definition and standards for *sui generis* systems for the protection of traditional knowledge and genetic resources.

The first section of the paper provides an overview of the issues. It introduces the concepts of intellectual property protection, traditional knowledge, folklore, access to genetic resources, and fair and equitable sharing of benefits. The paper argues that current forms of intellectual property protection were established to cover industrial innovations. Their structures and requirements are inimical to the protection of traditional knowledge and expressions of folklore. They are also not suitable for the regulation of access to genetic resources, and the promotion of benefit-sharing as envisaged by the Convention on Biological Diversity. There are however a number of initiatives at regional and national levels to provide legal protection to traditional knowledge and associated innovations.

The second discusses the extent to which traditional knowledge and expressions of folklore, including access to genetic resources and the sharing of benefits from the resources, are treated or recognized by international conventions (those pertaining to intellectual property protection) and related regional as well as national regimes. It also reviews the growing demand for reform of the intellectual property protection system.

The last section is about policy and process options that African countries may wish to articulate at sessions of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. Emphasis is placed on the need to ensure that an authoritative and inclusive international process is established to negotiate and reach agreement on a comprehensive legal instrument for the protection of traditional knowledge and folklore. Some of the policy issues that such a process would address include agreement on what would constitute an effective *sui generis* regime, and coherence with the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement of the WTO and the Convention on Biological Diversity's provisions on access to genetic resources (Article 15) and promotion and protection of traditional knowledge (Article 8j).

II. Conceptual and Overview Issues

Intellectual property protection carves out exclusive rights to an individual (either a natural person or a legal one) to exploit particular creations of human ingenuity. The rights deal with informational services “which are intangible. . . not readily susceptible to either possession or delineation”.¹ For example, a patent vests exclusive right in an inventor to develop, control, use and market an innovative industrial process or product for a specified period of time. Trademarks extend protection to brand names that have a particular identity in the marketplace while trade secrets protect confidential information often of commercial value to an industrial firm or person. Copyright (perhaps the most common and established form of intellectual protection) covers literal and artistic works such as computer software, writings and drawings.

IPRs have recently received attention as incentives for technological innovation, promoting the conservation of biological diversity and sustainable use of its components, and for ensuring that benefits arising from the utilization of genetic resources are shared in a fair and equitable manner among the relevant stakeholders.² However, critics argue that these rights and their protection increase the costs of accessing technologies, and that they promote genetic monoculture by concentrating industrial and agricultural activities on a few cultivated varieties or species.

Despite the existence of various international agreements aimed at harmonizing intellectual property protection, there are still differences among national laws, especially those regarding patenting. For example, while the U.S. has extended patent protection to genetically engineered organisms, many other countries are opposed to extending patents to such subject matter. In addition, different countries have different conditions for disclosure of information on the invention. While some (for example the U.S. and the European Union countries) have tight conditions and mechanisms for enforcing them, others (particularly those of the developing world) have weak disclosure requirements. These differences in national application of intellectual property law are at the centre of much of the debate on intellectual property protection, and more specifically the extent to which TRIPS broadens and harmonises the law.

TRIPS establishes minimum standards on patents, industrial designs, trade secrets, copyright, trademarks and geographical indications. It is the most comprehensive body of international law on intellectual property covering all types of IPRs, with the exception of breeders’ rights and utility models. TRIPS also embodies enforcement measures. It has detailed provisions on enforcement.

The broadening of intellectual property protection—through the recognition and inclusion of new rights and subjects of protection—has taken place mainly through the Uruguay Round of multilateral trade negotiations. This process has been informed by modern economic and technological development interests. It has been promoted by needs and interests of firms and economies of the industrialized world. The results, largely in the form of TRIPS, ignore a large measure of human creativity. They ignore traditional knowledge and innovations generated by local and indigenous peoples around the world.

1. Traditional Knowledge and Genetic Resources

The concepts of indigenous knowledge and traditional knowledge are widely used yet their meanings rarely provided. Their usage is often subject to confusion. There have been various efforts to define these concepts, but there are so far no universally adopted definitions. Different persons define them differently depending on their intellectual persuasion. And many often use the concept of traditional knowledge interchangeably with that of indigenous knowledge.

Indigenous knowledge, as far as we are concerned, is that knowledge that is held and used by a people who identify themselves as indigenous of a place based on a “combination of cultural distinctiveness and *prior territorial occupancy* relative to a more recently-arrived population with its own distinct and subsequently dominant culture”.³ Traditional knowledge is, on the other hand, that which is held by members of a distinct culture and/or sometimes acquired “by means of inquiry peculiar to that culture, and concerning the culture itself or the local environment in which it exists.”⁴ Indigenous knowledge fits neatly in the traditional knowledge category

but not traditional knowledge is not necessarily indigenous. That is to say, indigenous knowledge is traditional knowledge but traditional knowledge is not necessarily indigenous.

Traditional knowledge is thus the totality of all knowledge and practices, whether explicit or implicit, used in the management of socio-economic and ecological facets of life. This knowledge is established on past experiences and observation. It is usually a collective property of a society. Many members of the particular society contribute to it over time, and it is modified and enlarged as it is used over time. This knowledge is transmitted from generation to generation. According to UNEP, this knowledge “can be contrasted with cosmopolitan knowledge, which is drawn from global experience and combines ‘western’ scientific discoveries, economic preferences and philosophies with those of other widespread cultures.”⁵ It is generally an attribute of a particular people, who are intimately linked to a particular socio-ecological context through various economic, cultural and religious activities. In addition, traditional knowledge is dynamic in nature and changes its character as the needs of local people change. Examples of traditional knowledge include knowledge about the use of specific plants and/or parts thereof, identification of medicinal properties in plants, and harvesting practices.

Recent years have witnessed a paradigm shift in the recognition of and appreciation for the role of traditional knowledge. There is new awareness among (‘conventional’, ‘laboratory’, ‘Western’ or ‘institutional’) scientists that farmers and indigenous peoples not only have knowledge but also often actively engage in research. Rather like the rediscovery of Mendel’s Laws at the beginning of the 20th century, the end of the century saw a rediscovery of the creativity and innovation of rural societies. For some time, conventional science believed that traditional knowledge was a hit or miss affair through which communities built up a storehouse of useful experiences passed from generation to generation.

Over the past decade or so, biotechnology, pharmaceutical and human health care industries have increased their interest in natural products as sources of new biochemical compounds for drug, chemical and agro-products development.⁶ The decade has also witnessed a resurgence of interest in traditional knowledge and medicine. This interest has been stimulated by the importance of traditional knowledge as a lead in new product development. Of the 119 drugs developed from higher plants and on the world market today, it is estimated that 74% were discovered from a pool of traditional herbal medicine.⁷ In 1990 Posey estimated that the annual world market for medicines derived from medicinal plants discovered from indigenous peoples amounted to US\$ 43 billion. A report prepared by the Rural Advancement Fund International (RAFI) estimated that at the beginning of the 1990s, worldwide sales of pharmaceuticals amounted to more than US\$130,000 million annually.⁸

African countries and their traditional peoples have contributed considerably to the global drugs industry. 20 plant species from the tropics generate about US\$4 billion for the US economy.⁹ The search for these plants has been accompanied by appropriation of traditional knowledge. For example in the 1970s the US National Cancer Institute (NCI) invested in extensive collection of *Maytenus buchananii* from Simba Hills of Kenya. NCI was generally led by the knowledge of the Digo communities—indigenous of the Simba Hills area—who have used the plant to treat cancerous conditions for many years. More than 27.2 tonnes of the shrub were collected by the US NCI from a game reserve in the Shimba Hills for testing under a major screening programme.¹⁰ The plant yields maytansine which was considered a potential treatment for pancreatic cancer. All the material collected was traded without the consent of the Digo, neither was there any recognition of their knowledge of the plant and its medicinal properties.

The NCI has also collected *Homalanthus nutans* from the Samoa rainforests. The plant contains anti-HIV compound prostratin. The collection was undertaken on the basis of traditional knowledge.¹¹ NCI has also benefited from traditional knowledge of local communities living around Korup Forest Reserve in Cameroon. The Institute has collected *Ancistrocladus korrupensis* from the reserve to screen for an anti-HIV principle, Michellamine B.

Contributions of traditional peoples to the global crop production system have well been documented.¹² It is estimated, for example, that the United States of America economy alone has annual sales at least US\$50 million from genes of 15 major crops that were first cultivated and enhanced by traditional peoples.¹³ However, intellectual rights of these peoples are not recognized and protected. In addition, indigenous and local peoples do not share, at least in a fair and equitable manner, benefits arising from the appropriation of their knowledge and its subsequent use in drug development.

2. Intellectual Property Protection Regimes

2.1 International Conventions

The Paris Convention for the Protection of Industrial Property

The Paris Convention for the Protection of Industrial Property covers property rights for patents, utility models, industrial designs, service marks, indications of source or appellations of origin and trademarks. The Convention, which has 101 members, was adopted in 1883. Article 1 of the Convention defines scope of industrial property. It states in para 3 that “[i]ndustrial property shall be understood in the broadest sense and shall apply not only to industry and commerce proper, but likewise to agricultural and extractive industries and to all manufactured or natural products, for example, wines, grain, tobacco leaf, fruit, cattle, minerals, ... beef, flowers, and flour.”¹⁴

Article 2 sets conditions for national treatment—each Contracting Party to the Convention must grant the same intellectual property protection to nationals of other Parties that it gives to its own nationals. Article 5(a) of the Convention allows Parties to pass legislation that would grant compulsory licenses in order to prevent abuses resulting from the exercise of exclusive rights.

It is possible for innovations of indigenous and local peoples to be protected under the trademark, utility models, industrial designs, service marks, and indications of source or appellations of origin provisions of the Paris Convention. In this respect, Article 7 of the Convention is worthy noting. It allows member countries to “accept for filing and to protect collective marks belonging to associations the existence of which is not contrary to the law of the country of origin, even if such associations do not possess an industrial or commercial establishment.”¹⁵ If indigenous and local peoples form associations that are legally legitimate in their countries, it is possible for them as a collectivity to acquire service marks.

The Convention on Biological Diversity

The Convention on Biological Diversity (CBD) explicitly recognizes the importance of traditional knowledge, and the rights of indigenous and local peoples in that knowledge. It creates a framework for ensuring that local people share benefits arising from appropriation and use of their knowledge and preamble. In its preamble the CBD recognizes: “the close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components.”¹⁶

Article 8(j), 10(c) and 18(4) make reference to the rights of indigenous and local people. Article 10(c), for example, provides that each Contracting Party “shall [p]rotect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.” Article 18(4) defines technologies broadly to include “indigenous and traditional technologies”.

Article 8(j) is perhaps the most authoritative provision dealing with traditional knowledge. It provides that each Contracting Party shall, as far as possible and as appropriate, “subject to its national legislation, respect, preserve, and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.”¹⁷

There are a number of limitations with Article 8(j) in so far as the question of intellectual property rights in traditional knowledge is concerned. First, the Convention leaves the protection of the knowledge, innovations and practices of indigenous and local communities to the discretion of parties. Some parties to the CBD may in fact invoke language of Article 8(j) not to undertake any measures that protect indigenous and local peoples' knowledge, innovations and other rights. Language such as "subject to national legislation" was and "as far as possible and as appropriate" was promoted during the negotiations for the CBD by governments that did not want to be committal about protection of indigenous peoples and their rights.

Second, Article 8(j) does not talk of protection of the knowledge but merely calls on parties to "respect, preserve and maintain" it. It does not guarantee indigenous and local people any rights in traditional knowledge.

Limitations of Article 8(j) have been recognized by parties to the Convention. This is implicit in a number of the decisions that the Conference of Parties (COP) to the Convention has so far made. For example, the third COP held in Argentina in November 1996 agreed (in Decision III/14) on the need to "develop national legislation and corresponding strategies for the implementation of Article 8 (j) in consultation with representatives of their indigenous and local communities". The Parties also agreed to establish an intersessional process to advance further the work on the implementation of Article 8 (j) and related provisions.

The CBD has established an open-ended inter-sessional working group composed of Parties including indigenous and local communities be established to, *inter alia*, "provide advice as a priority on the application and development of legal and other appropriate forms of protection for the knowledge, innovations and practices of indigenous and local communities ..."¹⁸

Trade-Related Aspects of Intellectual Property Rights (TRIPS)

The TRIPS Agreement aims at "to reducing distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade."¹⁹ Countries that ratify the Agreement are expected to establish comprehensive intellectual property protection systems covering patents, copyrights, geographical indications, industrial designs, trademarks, and trade secrets.

However, Article 1 of TRIPS (on nature and scope of obligations) provides some flexibility in the implementation of the provisions of the Agreement. Article 1(1) states that "[m]embers may, but shall not be obliged to, implement in their domestic law more extensive protection than is required by [the] Agreement, provided that such protection does not contravene the provisions of [the] Agreement."²⁰ According to Graham Dutfield, parties to TRIPS can invoke this provision to enact legislation for protecting traditional knowledge. He asserts "[T]he absence of any mention of traditional ... knowledge in the Agreement, does not prevent any Member from enacting legislation to protect such a category of knowledge."²¹ It is not possible to use TRIPS to extend patent protection to traditional knowledge.²²

The TRIPS Agreement requires member states to provide patent protection for "any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application."²³ The "inventive step" and "capable of industrial application" requirements are deemed "to be synonymous with the terms 'non-obvious' and 'useful' respectively."²⁴ Traditional knowledge fails the test for patenting on one, or all, of the "new", "inventive step" and "industrial application" standards. On the "new" standard it will probably fail because by its very nature traditional knowledge has been known for some length of time. One could try and argue that it is new to the world outside of the community from which it came but this is unlikely to succeed.

Article 29(1) of the Agreement requires that a patent applicant discloses sufficient and clear information regarding the invention to the extent that another person "skilled in the art" would be able to reproduce the product or complete the process. This is a standard patent law condition. Opponents of patenting have been quick to point out that this condition of information disclosure could erode the rights of indigenous and local people because it would make traditional knowledge easily available to commercial entities. Given the absence

of financial and organizational competencies of indigenous and local peoples to monitor and enforce patents in modern economic space, their knowledge would easily be used with due compensation.

Article 27(3b) of TRIPS provides that “[m]embers may also exclude from patentability... plants and animals other than microorganisms, and essentially biological processes for the production of plants or 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 a combination of thereof. The provisions of this sub-paragraph shall be reviewed four years after the entry into force of the Agreement Establishing the WTO.”²⁵

First, there is controversy as to what “an effective *sui generis*” regime is. “Effectiveness” of the *sui generis* system is not defined. The nature of a *sui generis* system is also left to individual members to determine. According to the Crucible Group report of 1994, [t]he term *sui generis*, ..., may offer a wider range of policy choices because it could presumably, include any arrangement for plant varieties that offers recognition to innovators—with or without monetary benefit or monopoly control.”²⁶ If there is any dispute on the nature and minimum standards of “an effective *sui generis*” system, the WTO is itself the mechanism for adjudication.

Second, it has also been noted that multinational companies and developed countries are likely to promote plant breeders’ rights as the effective *sui generis* system. “[Plant breeders’ rights] may be used as a measure of effectiveness under TRIPS thereby limiting the ability of developing countries to develop a system to properly reflect their own social and economic needs”²⁷ They may encourage African countries to establish the UPOV arrangement. This could significantly erode rights of local farmers, particularly their rights to share benefits from the use of plant genetic resources.²⁸

Convention for the Protection of New Varieties of Plants

The International Convention for the Protection of New Varieties of Plants is the only international treaty focusing on plant variety protection. It was adopted with specific aim of introducing private property rights on plant varieties. It was however felt that introduction of patents in agriculture would be inappropriate due to the prevalent practices of free exchange of seeds and knowledge among farmers. The 1978 version of the Convention allows farmers to re-use propagating material from the previous seasons’ harvest and to freely exchange seeds of protected varieties with farmers. Membership of UPOV is currently made up mainly of developed countries. Only a few developing countries mainly from Latin America have joined the UPOV. In Africa only Kenya and South Africa are members.

Over the past few years, there has been significant pressure on developing countries to adopt UPOV as a *sui generis* plant variety protection system. New members can only accede to the 1991 version of the Convention, which is more stringent and has strengthened much the rights of commercial breeders. The new version undermines privileges that farmers enjoy in the 1978 version. Under the 1991 UPOV Convention a farmer who produces a protected variety from the farm-seed seeds is guilty of infringement unless the national law provides otherwise. Plant breeder’s rights embodied in the 1991 Act of the UPOV Convention are inadequate in protecting traditional knowledge of indigenous and local people’s. The convention does not contain any provisions for recognizing the knowledge and other contributions that indigenous and local peoples make to plant breeding programmes.

International Undertaking on Plant Genetic Resources

The international undertaking was adopted by the FAO Conference as a non-binding instrument.²⁹ It covers both traditional cultivars and world species, but also varieties developed by scientists in laboratories. The instrument gives countries sovereign rights over their plant genetic resources. Plant breeder’s rights and farmer’s rights are also recognized. The draft article on farmers’ rights focuses on the protection of traditional knowledge, the equitable sharing of benefits arising from the exploitation of biological resources and the right to participate in decision-making. African countries should support the undertaking and ensure that the categories of plant genetic resources covered by it include those that are important for African farmers.

2.2 Regional Instruments

African countries have under the auspices of Organisation of African Union (OAU) prepared a model law on community rights and access to biological resources. The African Model Legislation for the Protection of Rights of Local Communities, Farmers, Breeders and for the Regulation of Access to Biological Resources (annex) aims at establishing a framework for national laws to regulate access to genetic resources. It is premised on the rejection of patenting of life or the exclusive appropriation of any life form, including derivatives. Its provisions on access to biological resources make it clear that the recipients of biological resources or related knowledge cannot apply for any intellectual property right of exclusionary nature. Community rights recognised include rights over their biological resources and the right to collectively benefit from their use, rights to their innovations, practices, knowledge and technology and the right to collectively benefit from their utilisation. In practice, these rights allow communities the right to prohibit access to their resources and knowledge but only in cases where access would be detrimental to the integrity of their natural or cultural heritage. Further, the state is to ensure that at least fifty per cent of the benefits derived from the utilisation of their resources or knowledge is channelled back to the communities. The rights of farmers are slightly more precisely defined.

There are two regional intellectual property systems in Africa. One is the African Regional Industrial Property Organization (ARIPO) for the Anglophone countries and the Organisation Africaine de la Propriete Intellectuelle (OAPI) for the Francophone countries. OAPI countries have a uniform patent law. ARIPO is made up of a Treaty and a Protocol to the Treaty. The treaty basically sets up the administrative organs and financial obligations of its member states. It is constitutional in nature. The protocol regulates industrial property rights and each ARIPO member state is implicitly allowed to operate distinct national patent regimes. At present, there are three categories of patent regimes operating in the ARIPO member states. The first category includes those countries such as Botswana, Lesotho and Swaziland that confer automatic protection to patents registered in South Africa. The second category includes countries that require the patents be granted in the United Kingdom prior to their re-registration in these countries. The third category of states is those that operate independent patent regimes. These are Kenya, Malawi, Sudan, Zambia and Zimbabwe.

The ARIPO regime has three distinct features on patentable subject matter. First, the regime has no concept of non-patentability. Second, it adopts the absolute novelty criteria for patentability. Third, both the concept and criteria for patentability are conditional upon national patent laws. The system that ARIPO adopts is that everything is patentable unless the designated state legislation stipulates otherwise. The regime confers on its member states the power to refuse to acknowledge an ARIPO patent on the grounds that the invention is not patentable in accordance with the Protocol and that patent cannot be granted under the national law of that state because of the nature of the invention.

Consequently, in the ARIPO system, the national patent law is the final determinant of the patentable subject matter, the duration of the patent, the enforceability of patent rights and the effectiveness of the grant of an ARIPO patent. If conflicts arise between ARIPO patent regime and national patent laws, the national patent regime prevails. Thus the ARIPO patent system loosely regulates the national interests of its member states.

Under section 3 (9) of the protocol, ARIPO patents are granted for inventions upon fulfilment of three criteria of novelty, inventive step and industrial applicability. With respect to the novelty criteria, absolute novelty is adopted. The ARIPO protocol provides that 'an invention is new if it is not anticipated by art.' Further, "everything made available to the public anywhere in the world by means of written disclosure shall be considered prior art." The adoption of the absolute novelty concept is incompatible with the economic needs and development goals of the ARIPO states. The fact that the ARIPO regime applies absolute novelty criteria makes it inappropriate for protecting traditional knowledge and folklore.

2.3 National Measures

A number of African countries use copyright legislation to protect their folklore. In Kenya³⁰ the copyright Act covers traditional works made before and after the Act came into force. In Ghana³¹ folklore rights are vested in the republic. Where a person intends to use any such folklore other than for a use permitted under the law, he has to apply to the secretary to do so and shall pay a prescribed amount of money. Money generated from using folklore is paid into a fund established by the secretary and shall be used for the promotion of institutions for the benefit of authors, performers and translators.

In Nigeria³², the copyright council has been established to oversee protection of folklore. Use of folklore in a manner not permitted by the section 28 of the copyright Act is seen as a breach of statutory duty and makes one liable to the council in damages, injunctions and any other remedies as the government may deem fit to award in circumstances.

III. Towards Protection of Traditional Knowledge and Folklore

The issue of protection of traditional knowledge is debated in a wide range of international forums including WTO, WIPO, the Convention on Biological Diversity (FAO) and the Food and Agriculture Organization (FAO) and the International Labour Organisation (ILO).³³ Probably the most critical areas of conflict arise from developing countries' interests in implementing the relevant provisions of the CBD and their obligations under WTO. The main concern expressed by these countries is that the traditional knowledge held by local and indigenous communities now forms part of the product discovery process of the industrialized countries. This knowledge is however not recognized and provided adequate protection my conventional intellectual property protection systems.

African countries are seeking to remedy this problem by instituting laws that are based on a regional model for the protection of community rights (see section 2.2). They are seeking intellectual property registration systems that would name the sources of genetic material and traditional knowledge used in product discovery. Such a system would allow for the sharing of benefits arising from the use of such genetic material and knowledge in accordance with the requirements of the CBD.³⁴ African countries have carried these proposals to the FAO Commission on Plant Genetic Resources for Food and Agriculture. The work of the Commission focuses on revising the International Undertaking on Plant Genetic Resources to bring it in line with the Convention on Biological Diversity.

The African effort (model legislation on access to genetic resources and protection of community rights) is one of the emerging processes to develop *sui generis* legislation. This alternative should be further explored and tested. What is crucial for the countries is to ensure that review and revision of Article 27(3b) of the TRIPS do not in any way undermine or extinguish the flexibility to create and use *sui generis* law. The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore offers the countries an opportunity to search for and give *sui generis* options more political authority.

In addition to the *sui generis* option, African countries should continue to press for the enlargement of the scope of protection through geographical indications and copyright. The African Group, for example, has argued that "the negotiations envisaged under Article 23.4 of TRIPS should be extended to other categories, and requests, in this regard, that the scope of the system of notification and registration be expanded to other products recognizable by their geographical origins (handicrafts, agro-food products)."³⁵ It has been noted that restricting protection of geographical indications to wines and spirits would "not constitute a fair and equitable treatment of the rights and the interests" of WTO members.³⁶ Those supporting the extension believe that this would promote the development of local products and would be consistent with the overall goals of the agreement.

Another issue that the African Group should argue for is to have intellectual property rights application procedures to require that the applicants submit evidence of prior informed consent, where the invention and/or innovation are based genetic material. This would enlarge prospects of implementing Article 15 of the Protocol and be a good basis for seeking recognition and protection of traditional knowledge. On the whole, the WIPO Committee should address the need to expand requirements for obtaining IPR.

The CBD Experts' Panel recommended that a study be conducted to establish the relationship between between customary laws governing custodianship, use and transmission of traditional knowledge, on the one hand, and the formal intellectual property system. WIPO should work with the CBD to implement this recommendation. Such a study would form the basis for ensuring that intellectual property rights does not preclude continued customary use of genetic resources and related knowledge.

One of the issues that arises is the extent to which WIPO and the Committee are the right forum to address these concerns since these questions are being considered in different institutional contexts. The challenge is really about achieving a certain of coherence and consolidation. African countries may wish to propose the establishment of a Standing Committee on Traditional Knowledge, Genetic Resources and Folklore to define minimum standards for the protection of traditional knowledge and expressions of folklore. Such a committee should have authority to consolidate efforts being made under the CBD by its working groups on indigenous knowledge and access to genetic resources.

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(Footnotes)

- ¹ See, Timothy Swanson, *The Appropriation of Evolution's Values: An Institutional Analysis of Intellectual Property Regimes and Biodiversity Conservation*, in IPRs AND BIODIVERSITY CONSERVATION - AN INTERDISCIPLINARY ANALYSIS OF THE VALUES OF MEDICINAL PLANTS 141 (Timothy Swanson ed., 1995) at 163.
- ² Gollin, M. 1993, p. 159-197 in Reid, W. et. al. eds., 1993.
- ³ UNEP/CBD/COP/3/Inf. 33, Annex 2.
- ⁴ UNEP/CBD/COP/3/Inf. 33, Annex 2.
- ⁵ UNEP/CBD/COP/3/Inf. 33., p. 9.
- ⁶ Reid, W. et. al. 1993.
- ⁷ Laird, S. 1994.
- ⁸ RAFI, 1994.
- ⁹ Okoth-Owiro, A. with Juma, C. 1996.
- ¹⁰ Juma, C. 1989.
- ¹¹ Posey, D. and Dutfield, G. 1996, op. cit.
- ¹² See for example Kloppenburg, J.; and Roht-Arriaza N. 1996.
- ¹³ Roht-Arriaza, N. 1996.
- ¹⁴ Goldstein, P. et. al. 1997, p. 420.

15. Goldstein, P. et. al. 1997, p. 431.
16. UNEP, 1992.
17. UNEP. 1992.
18. UNEP 1998. Decisions Adopted by the Conference of Parties to the Convention on Biological Diversity at its 4th Meeting. Advanced, unedited version.
19. Goldstein, P. et. al. 1997, p. 435.
20. Goldstein, P. et. al. 1997, p. 436.
21. Dutfield, G. 1997, p. 16.
22. Some limited protection of traditional knowledge would be possible using regimes of copyright, trade secrets and geographical indications. These measures do, however, have their own limitations in protecting traditional knowledge as intellectual property of traditional and local peoples. The problem as we shall show is because of the rigidities built in these measures and the very nature of traditional knowledge.
23. Goldstein, P. et. al. 1997, p. 448. Article 27(1) of the TRIPS Agreement.
24. Dutfield, G. 1997, p. 24.
25. Goldstein, P. et. al. 1997, p. 448. Article 27(3) of the TRIPS Agreement.
26. The Crucible Group, 1994, p. 53.
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