Traditional knowledge protection and recognition of customary law: Policy issues and challenges

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This paper explores the policy issues and challenges surrounding the protection of traditional knowledge (TK) relating to biological resources and the recognition of customary law systems. It reviews the commercial use of TK, international and national policy processes, human rights fora and indigenous peoples'/NGO proposals. It is intended to provide background information for project partners.

Contents:

1. Introducing key concepts, issues and approaches for TK protection

1.1 The nature and importance of traditional knowledge systems

Although handed down from one generation to another, traditional knowledge is neither 'old' nor static, it develops incrementally with each generation adding to the stock of knowledge. As noted by the Canadian indigenous peoples organisation, the Four Directions Council: "What is 'traditional' about traditional knowledge is not its antiquity, but the way it is acquired and used. In other words, the social process of learning and sharing knowledge, which is unique to each indigenous culture, lies at the very heart of its 'traditionality'. Much of this knowledge is actually quite new, but it has a social meaning, and legal character, entirely unlike the knowledge indigenous people acquire from settlers and industrialised societies."[1]

Traditional environmental or ecological knowledge (TEK) has been defined as: "A body of knowledge and beliefs transmitted through oral tradition and first-hand observation. It includes a system of classification, a set of empirical observations about the local environment, and a system of self-management that governs resource use"[2]. TEK is generally associated with an understanding that all parts of the natural world are infused with spirit, and is often underpinned by a conservation ethic. In the context of the Convention on Biological Diversity, traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities deriving from customary uses of biological resources and associated cultural practices and traditions.

The term Indigenous Knowledge (IK) is sometimes used to describe knowledge that belongs specifically to indigenous peoples, while traditional knowledge encompasses knowledge held by both indigenous and non-indigenous local communities.

Traditional knowledge plays a fundamental role in meeting the food, agriculture and health needs of millions of people, as well as being central to indigenous peoples' cultural identify and spiritual belief systems. It also provides a vast store of information about the natural environment, the conservation and sustainable use of diverse ecosystems and the uses of biological resources, which supports the development needs of mankind as a whole and our ability to adapt to changing environmental conditions.

Posey and Dutfield have summarised different types of TEK, including knowledge of[3]:

- uses, preparation, processing and formulations of useful species/varieties;
- planting methods, care, selection criteria, or storage of species;
- ecosystem conservation and cultural landscapes (eg. sacred sites);
- biological resources that originate in indigenous lands and territories; and
- systems of knowledge classification such as traditional plant taxonomies.

[1] Dutfield, G. "The Public and Private Domains: Intellectual Property Rights in Traditional Ecological Knowledge, WP 03/99. OIPRC Electronic Journal on Intellectual Property Rights.
[2] Johnson, M. (1992), 'Research on traditional environmental knowledge: its development and its role' in M. Johnson (ed), 'Lore: Capturing Traditional Environmental Knowledge', Ottawa: IDRC, at 3-4
[3] Posey, D.A, and G. Dutfield (1996). 'Beyond Intellectual Property Rights: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities', IDRC, Ottawa.

Successive generations of indigenous peoples and farmers have also invested in the improvement, development and conservation of a vast array of traditional crop varieties (or 'landraces'), which are themselves the product or embodiment of traditional knowledge.

Yet this accumulated knowledge is disappearing rapidly as the world becomes increasingly culturally and biologically uniform. It has been estimated that 80% of all cultural diversity will have disappeared in 100 years time[4]. According to the IUCN Task Force on Indigenous Peoples, the main threats to cultural diversity include extension of government control, unjust land policies, cultural modification policies and inappropriate conservation management[5]. For indigenous and tribal groups facing cultural extinction, preserving their knowledge may take special importance (even if respect for their land rights could be more crucial still)[6].

1.2 Biopiracy and the need to protect traditional knowledge

'Biopiracy' refers to the unauthorised and uncompensated commercial use of biological resources and/or associated TK from developing countries and traditional communities, or to the patenting of spurious 'inventions' based on such knowledge or resources. For many people biopiracy is a serious problem and is becoming increasingly common.

Biological and genetic resources and related traditional knowledge are used by scientists and companies for producing a number of different products, including new pharmaceutical drugs, herbal medicines, new crop varieties, pesticides, food products, cosmetics and personal care products. For example, knowledge about medicinal plant uses can greatly increase the chances of finding medically active compounds needed to develop new drugs. In the 1980s, improved screening techniques led to renewed interest in medicinal plants to identify active compounds which can then be extracted or chemically reproduced. In some cases, this has led to the discovery of multi-million dollar drugs, although such cases are not that common.

Markets for herbal remedies are growing in the US and Europe, while aromatic plants are increasingly sought by the personal care and cosmetics industries. Traditional crop varieties are used in crop development and genetic engineering programmes to develop new 'improved' varieties. Micro-organisms that survive extreme conditions are also used to develop new industrial manufacturing processes. The development of these new products often involves highly sophisticated scientific techniques and biotechnologies, which are rapidly evolving.

In many cases, intellectual property rights such as patents and plant breeder's rights, are obtained on resulting products, thereby conferring exclusive monopoly rights, without the consent, recognition or compensation of the indigenous and local communities whose traditional knowledge and/or resources were used to develop the product. Increasingly, patents are obtained on processes or 'products' which occur in

[4] Representative of UN Permanent Forum on Indigenous Peoples, WIPO/IGC March 2004

[5] Inter-Commission Task Force on Indigenous Peoples (1997). 'Indigenous Peoples and Sustainability: Cases and Actions', Utrecht: IUCN and International Books.

[6] Dutfield G., 'Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation' (2003). UNCTAD-ICTSD. IPRs and Sustainable Development. Issue Paper No. 1.

nature that are barely modified, or not modified at all, simply on the basis that they have been described in chemical terms.

The concern for indigenous and local communities is not only that their traditional resources and knowledge are unfairly exploited. The commercial use of these resources can also be culturally offensive, particularly if they are considered sacred, and preventing such inappropriate use may be as or more important than gaining fair compensation. In many traditional societies, TK holders or tribal leaders, have permanent custodianship responsibilities with respect to the use of knowledge, and ensuring it is used in a culturally appropriate manner, irrespective of whether the knowledge is secret, known to just a few people, or known to thousands across the world[7].

Another important concern is the loss of control over essential resources through the granting of monopoly rights to powerful corporations. For example, seed and agro-chemical companies are increasingly obtaining IPRs on 'improved' crop varieties, including Genetically Modified Organisms (GMOs), and aggressively promoting these patented varieties, often with support from their governments, and linked to agricultural modernisation programmes. Yet, IPRs and genetic modification itself, impose restrictions on the rights of farmers to produce, exchange and sell seeds. They create dependency amongst farmers on external seed supplies and expensive agricultural inputs, and undermine their self-sufficiency and control over food production and markets. Perhaps the most extreme example is the use of Genetic Use Restriction Technologies (GURTS) such as the Terminator Gene, which produces sterile seeds that cannot be saved from one season to the next.

The diversity of the world's food crops was developed principally by small holder farmers through the free exchange of seeds between farmers, hence this free exchange is essential for the conservation and development of agricultural biodiversity. Furthermore, the introduction of modern varieties has often had devastating impacts on traditional crop varieties and biodiversity in general as a result of conversion to intensive monoculture farming. At the same time, it has eroded traditional farming and associated knowledge systems, whilst undermining local food security. In some cases, modernisation programmes entail forced displacement of communities from their land.

Faced with these concerns, representatives of indigenous and farming communities around the world have for some time called for the legal recognition and protection of their rights to decide over the end-use of their traditional knowledge and biological resources. Many groups have also called for a moratorium on 'bio-prospecting' (the commercial use of biodiversity) until such time as effective TK protection systems are in place, and for the banning of all patents on life forms. Farmers and NGOs have also called for farmer participation in crop research and breeding programmes, and promotion of 'participatory plant breeding', and, more recently for policies to strengthen their 'food sovereignty'.

[7] Dutfield G., 'Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation' (2003)

1.3 The Convention on Biological Diversity

The need to protect traditional knowledge has received increasing global attention since the Convention of Biological Diversity (CBD) entered into force in 1993. The CBD has three objectives: "the conservation of biodiversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising from the utilization of genetic resources". Article 8(j) requires parties to: "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for 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 benefits arising from the utilisation of such knowledge, innovations and practices*" [emphasis added]. Article 10(c) requires countries to "protect and encourage the customary use of biological resources in accordance with traditional cultural practices".

Article 15 states that access to genetic resources and benefit-sharing (ABS) should based on the Prior Informed Consent of the country providing the genetic resources and on Mutually Agreed Terms. It requires countries to take 'legislative, administrative or policy measures' for access and benefit-sharing. A number of developing countries have introduced national legislation on access and benefit-sharing, sometimes as of broader biodiversity laws, and have designated a national competent authority to administer ABS agreements.

In some cases, ABS or biodiversity laws also cover access to associated TK or 'intangible components'. However, many countries have also recognised the need for more comprehensive sui generis laws for TK protection[8], which are specifically aimed at regulating the use of traditional knowledge, and are tailored to the nature of traditional knowledge and the needs of TK holders.

The CBD does not explicitly state that PIC of indigenous and local communities is required for the use of genetic resources and associated TK. Nevertheless, its provisions are generally interpreted to imply that PIC should also be obtained from local or indigenous communities from whose territories genetic resources are taken. In some countries, such as those of the Andean Pact and the Philippines, this is legally required.

The CBD's recognition of national sovereignty over genetic resources, which many countries have reaffirmed in national laws on ABS or biodiversity, has raised concern amongst representatives of indigenous and local communities. The notion of sovereignty is often being used to assert national ownership over biological resources, thereby threatening to undermine community resource rights. Thus, addressing TK protection in the context of centralised ABS frameworks may be problematic. Although in international fora countries recognise communities as custodians of biological resources and related TK, they are often far less supportive of the role and rights of local communities when it comes to policy and practice in their own countries.

[8] 'Sui generis' means 'of its own kind'

It should also be noted that some countries feel quite nationalistic about TK and consider biopiracy to be an extension of neo-colonialism. In countries like India, the predominant view is that the nation itself is the 'victim' of biopiracy, while in Africa, the perception seems to be that the continent as a whole is prey to biopirates. However, in the American New World countries established by European settlers, there seems to be more recognition that TK belongs to indigenous peoples who are the victims of biopiracy. For them, dealing with this issue in forums like WIPO may be more about acting on behalf of the interests of indigenous peoples, who they admit have been subjected to oppression in the past and continue to be marginalized.[9]

1.4 Customary laws and practices and TK protection

Article 8(j), taken together with Article 10 (c), which calls on the state to "protect and encourage the customary use of biological resources in accordance with traditional cultural practices", implies that access to genetic resources and associated knowledge owned by local or indigenous communities, or located on their customary territories, is subject to customary law, ie. the laws of traditional communities, where such law is established.

Indigenous peoples' representatives have repeatedly stressed that TK protection must be in accordance with customary laws and practices. In other words that they should decide about the use of their knowledge in accordance with their own customary rules, principles, decision making practices and resource management practices – which are in tune with their worldview, values, livelihood needs and systems for maintaining TK and related biological resources. As Ekpere notes: "this system of [community] rights [over biodiversity and TK], which enhances the conservation and sustainable use of biodiversity and promotes the use and further development of knowledge and technologies, is absolutely essential for the identity of local communities and for the continuation of their irreplaceable role in the conservation and sustainable use of biodiversity"[10].

Essentially, customary laws are set of unwritten rules which evolve over time, become universally accepted through continuous practice and are applied by traditional authorities. They govern all aspects of life, including social relationships, exchange of biological resources; land and other common property; political responsibilities and rights.

Customary law is defined in the Collins Dictionary as law which is "founded upon long-continued practices and usage". Customary laws can also be defined as culturally distinct: "enforceable rules and norms of conduct existing within and applying to a tribal group or other community living within a socio-cultural system distinct from the dominant system of the state within whose territory the community resides"[11]. Or as "customs that are accepted as legal requirements or obligatory rules of conduct,

[9] Dutfield G. (2003) 'Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation'

[10] Ekpere J.A. (2000) The OAU's Model Law, Organisation of African Unity; Scientific, Technical & Research Commission, Lagos.

[11] Laird S. Ed. (2002). 'Biodiversity and Traditional Knowledge: Equitable partnerships in practice'. WWF, People and Plants Conservation Series.

practices and beliefs that are so vital and intrinsic a part of a social and economic system that they are treated as if they are laws"[12].

1.5 Different approaches to TK protection

Initiatives and proposals for TK protection from governments, NGOs and indigenous groups, reflect a diversity of approaches and perspectives. They range from a narrow interpretation focused on compensation through voluntary contracts (as advocated by some northern countries), to legal requirements for the fair and equitable sharing of benefits (as advocated by many southern countries), to a more comprehensive approach based on recognition of land/human rights, indigenous decision-making and the in-situ maintenance of knowledge systems (as advocated by many indigenous groups).

To date, formal efforts to protect TK at national and international level have been led largely by governments and IPR experts, with limited participation of TK holders themselves (eg. indigenous peoples, farmers and local communities). National initiatives (eg. to develop sui generis laws) have tended to focus on the benefit-sharing approach, with the state largely retaining the role of decision-maker and mediator on behalf of TK holders. At international level, this approach is reflected in the official CBD process, particularly in the context of discussions on ABS, while the work in relation to Article 8(j) tends to take a more holistic and community-focused approach. The WIPO forum has tended to emphasise the role of contracts and existing IPRs, as well as government decision-making, and has been polarised along North-South lines, thus preventing meaningful progress beyond the lowest common denominator (ie. voluntary guidance).

Given the often limited participation of indigenous peoples in national and international fora for developing mechanisms for TK protection, discussions on the objectives, principles, tools, modalities and procedures, have tended to draw on existing precedents, concepts and models of western IPR laws, rather than being shaped by the concerns, beliefs, worldviews and customary laws and practices of indigenous peoples.

1.6 Developing appropriate mechanisms for TK protection

A number of issues need to be considered in the development of mechanisms for TK protection which fully and effectively protect the rights of indigenous and local communities over their TK. Some of the most critical are the following:

i) The need to vest decision making fully with TK holders: Traditional knowledge owes its existence solely to indigenous and local communities and not to any act of government. There is a tendency however, for many governments to seek to be the decision-makers on behalf of TK holders, and some have openly stated that they aim to balance the interests of TK holders with those of commercial users, in order to support national economic objectives. While indigenous peoples themselves may be willing to engage with commercial interests, they should be the ones who make the decisions on their own terms if their rights are to be fully respected, with the state acting as a facilitator. Where decision-making rests with national authorities, there is

[12] Black's Law Dictionary, 7th Edition, 1999.

no guarantee that the rights of TK holders will be fully respected, particularly when economic interests are at stake.

ii) *The need to recognise existing customary laws for sharing, acquiring and using TK*. As the late Darrell Posey explained: "indigenous peoples have always had their own laws and procedures for protecting their heritage and for determining when and with whom their heritage can be shared". Many traditional societies have their own custom-based 'intellectual property' systems which can be very complex, vary greatly among different indigenous peoples, and often differ considerably from western concepts of intellectual property. These locally-specific systems include the classification of different types of knowledge, proper procedures for acquiring and sharing knowledge, and the rights and responsibilities which attach to possessing knowledge, all of which are embedded uniquely in each culture and its language[13].

Rather than developing a uniform system for protection of TK, which imposes uniformity on diverse customary law systems and does not fit the values or laws of any one indigenous society, countries should recognise that TK should be acquired and used in conformity with the customary laws of the people concerned. Hence TK protection mechanisms need to be flexible enough to accommodate the diversity of traditional knowledge and customary law systems. Furthermore, formal law needs to recognise the supremacy of customary law in matters relating to TK, not only within ancestral territories, but at country-wide and international levels.

iii) *The need to strengthen TK systems and address a broader set of rights*. Given the rapid loss of traditional knowledge and cultural diversity, it is important to ensure that TK protection mechanisms do not undermine traditional knowledge systems, but actually help to maintain and strengthen them. This means understanding community concepts and patterns of knowledge ownership, transmission and production, so that TK systems can be reinforced by TK protection mechanisms. It also means safeguarding community rights to biological and natural resources, ancestral lands, cultural practices and belief systems, traditional farming and resource management practices, and traditional governance and customary law systems. This is because TK and innovation systems do not exist in isolation, but depend on the continuous interaction of people, natural resources, landscapes and cultural practices and beliefs.

Furthermore, because land and resource rights are the most fundamental concern for indigenous peoples' livelihoods and survival, any system for TK protection developed from their perspectives needs to also consider these rights. Indeed traditional societies tend to view knowledge, biological resources, landscapes and culture as being inextricably linked, thus separation of these rights goes against cultural beliefs and worldviews, as well as livelihood needs.

iv) *Understanding systems of knowledge ownership and transmission*: The collective nature of traditional knowledge has often been emphasised, given its inter-generational and often communal character and the difficulty of attributing it to a single 'inventor'. While many traditional societies have a strong sharing ethos, concepts of 'ownership' and 'property' or their close equivalents also exist in most, if not all, traditional societies. Some resources such as seeds and related knowledge, are

[13] Four Directions Council (1996).

shared and transmitted through continual informal exchange as part of daily livelihoods. Other resources and knowledge (eg. medicinal knowledge) may be individually held and transmitted along family lineages or between particular role-players in the community. However, individual property rights over knowledge are often accompanied by certain collective responsibilities or duties[14]. Indeed many indigenous groups have called for their collective knowledge rights to be recognised and for Prior Informed Consent to be exercised collectively by them.

The challenge for TK protection mechanisms is to recognise and reflect existing patterns and concepts of knowledge ownership and transmission within and among communities. If knowledge is perceived as the collective heritage of a number of communities or an indigenous group as a whole, then Prior Informed Consent and benefit-sharing processes will need to reflect this. Otherwise they risk imposing notions of individual property and undermining the systems and cultural values that underpin the maintenance of traditional knowledge.

v) *Recognising Rights over TK in the public domain.* Existing IPRs that accrue to new 'inventions' are negated by the prior existence of knowledge (or 'prior art'). It has therefore been argued that once traditional knowledge has been documented or disclosed to third parties, rights over such knowledge should no longer be recognised. However, custodianship responsibilities do not necessarily cease to exist just because knowledge has been placed in the so-called public domain. An enormous amount of knowledge has been disclosed and disseminated without the authorisation of TK holders, consent for publication or consent for commercial uses to which it has later been put. This does not mean that the community has abandoned its property rights or its responsibilities to ensure the knowledge is used in a culturally appropriate manner.

Nevertheless, governments sometimes view already documented knowledge as being in the public domain and therefore not qualifying for protection, or being 'national property' under their custodianship. Peru's sui generis regime only recognises indigenous rights over knowledge which has been disclosed in the last 15 years, which excludes the majority of their TK.

2. The commercial use of TK and IPRs

2.1 Sourcing practices and partnerships

Vast collections of plants and seeds are held in herbaria, museums, botanical gardens, and agricultural research institutes of the CGIAR around the world. Similarly, an enormous amount of traditional knowledge has already been published in ethnobotanical literature and databases. Companies and scientists often use these *ex-situ* sources in the first instance, before turning to *in-situ* sources.

Some botanical gardens have adopted voluntary codes of conduct or guidelines to address the CBD's objectives on access and benefit-sharing in the collection and transfer of genetic resources. Similarly, the CGIAR institutes have adopted ABS objectives in their guidelines and conditions for Material Transfer Agreements (in line with the FAO International Undertaking on Plant Genetic Resources for Food and

[14] Dutfield G., 'Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation' (2003). UNCTAD-ICTSD. IPRs and Sustainable Development. Issue Paper No. 1.

Agriculture), which also prohibit recipients from obtaining IPRs on materials in the form received. However, as with the CBD's provisions, the guidelines of ex-situ institutions usually only cover resources collected after the CBD's entry into force, and, although they may recognise community or farmers' rights, they tend not to be very rigorous with respect to these rights, in their content and application. Furthermore, it is still normal practice for ethnobiologists to publish information collected from TK holders without asking permission.

In-situ collections of biological resources and TK are often carried out by researchers for academic or scientific purposes, but this can lead to commercial discoveries, or the resources collected can later be used commercially by third parties. The line between scientific and commercial research is becoming increasingly blurd as scientific and commercial interests forge ever closer links in a complex web of partnerships, and funding for scientific research is increasingly provided by private companies (whether directly through government grants), linked to commercial objectives.

Commercial collections usually involve a complex chain of actors – for example, a Northern corporation might contract a university in the north, which then contracts a university in a biodiversity-rich country to undertake the collection. Often there are even more actors and intermediaries involved. This makes it difficult to monitor resource collection, transaction and use. Furthermore, the responsibility and burden of implementing access and benefit-sharing and TK protection requirements (eg. PIC) falls on the research partners in the South, often without the necessary allowances of additional time and funding included in the contract.

There is therefore a need for 'user' countries to introduce legal measures and undertake sensitisation work to ensure researchers and companies in the north take the necessary steps to facilitate and encourage their southern partners to acquire resources through proper procedures and consent with source communities. To date, the burden of action to implement access and benefit-sharing objectives has been shouldered by developing countries, many of which have developed national ABS laws, rather than by user countries. The last few years has seen increasing calls for 'user measures' to ensure compliance with provider country legislation.

2.2 Patents, monopoly rights and corporate power

The number of patent applications on natural compounds and genes is increasing. A study in March 2003 found that 49% of US patent claims were based on traditional knowledge from India, representing a 3 fold increase from 2000. It also estimated that there were around 7000 'mis-patents' in 3 patent offices alone[15]. Another study by the Third World Network, found that, as of November 2000, patents were pending or had been granted on over 500,000 genes and partial gene sequences in living organisms, of which 9000 involved human genes[16].

The patent system has undergone a process of regulatory globalisation and harmonisation and scope of what is regarded as patentable has gradually expanded. Furthermore, patent examinations are not very thorough in many countries, mainly because there are too few patent examiners handling too many applications, hence

[15] Statement of the India delegation at the WIPO/IGC/GRTKF meeting in Geneva, March 2004

[16] Khor M. (2002). Intellectual Property, Biodiversity and Sustainable Development: Resolving the difficult issues. Zed Books.

patents are granted too easily.[17]

Several patents have been granted on plants used in traditional medicine or drugs developed using traditional medicinal knowledge. For example, in 1991 a US patent was obtained on a fungicide derived from the seeds of the Neem tree, which has been used in India for 2000 years as an insecticide, fungicide and traditional medicine. The patent was granted for an extraction process that produces a stable form of the pesticide that could be stored and marketed globally. However it was later revoked on the grounds that it lacked novelty. In 1995, two expatriate Indians at the University of Mississippi Medical Centre were granted a US patent for turmeric to be used to heal wounds. The Indian Council for Scientific and Industrial Research challenged the patent and the patent was cancelled by the US Patent Office because the CSIR was able to present published documentation to show such use of turmeric was common knowledge and not a new 'invention'.

Other examples include a patent obtained by the French cosmetic company l'Oreal on 'Kava' – which is used as a ceremonial drink in the Pacific – for its hair growth stimulation properties; a US patent on Ayahuasco, used in traditional Amazonian medicine (revoked after proof of prior publications describing its use); and a patent obtained on hoodia, a traditional plant used by the Xhomani San people to stave off hunger, by South Africa's Council for Scientific and Industrial Research (which has now agreed to share some future profits with the Xhomani). A number of South-East Asia traditional medicines (eg. from the Philippines, Thailand and Indonesia) have also been patented by Japanese companies, while several patents have been granted in China on Chinese traditional medicines.

Several patents have been granted on agricultural crops, including basmati rice, which originates from India by Ricetec Inc., and jasmine rice from Thailand. A GRAIN study found 160 biotechnology patents on rice granted from 1982-1997, mainly to US and Japanese companies. Over two thousands patents have been filed for maize gene sequences, over 1000 for potato genes and nearly 300 for wheat gene sequences. Another example is Quinoa, a traditional Andean crop, where an attempt was made to obtain a patent granting exclusive rights over 36 traditional varieties. This would have had serious implications for Bolivian farmers' exports as a result of cultivation in North America[18].

In some cases, very broad patents are granted which cover all transgenic varieties of a crop, thus creating huge market monopolies. For example, Monsanto's patent on transgenic soybeans, and Aventis now holds a US patent covering all transgenic plants containing the Bt gene. Bt is a naturally occurring bacterium which produces a protein fatal to many insects, and the gene for this protein has been introduced into several crops, including maize, soybean, cotton, potato and rice[19].

[17] Dutfield G., 'Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation' (2003). UNCTAD-ICTSD. IPRs and Sustainable Development. Issue Paper No. 1.

[18] Ibid.

[19] Khor M. (2002). Intellectual Property, Biodiversity and Sustainable Development: Resolving the difficult issues. Zed Books.

The large-scale granting of patents for genes and biological materials is leading to an even greater concentration of control over the world's food crops, such as maize, potato, soybean and wheat, in a few global corporations. The TWN study (Khor 2002) notes that the top five companies involved in agricultural biotechnology (AstraZeneca, DuPont, Monsanto, Novartis and Aventis) account for 60% of the global pesticide market, 23% of commercial seed market, and virtually 100% of the transgenic seed market (Monsanto controls over 90% of the total world area sown in transgenic seeds). Companies are also increasingly consolidating through mergers and acquisitions, with some global life-science companies now combining pharmaceuticals, food, seed and chemical divisions; and are increasingly operating through strategic research and technology partnerships to facilitate access to rapidly evolving technologies. As a result, already large companies have become even larger, and corporate revenues dwarf the gross domestic product of biodiversity-rich countries[20]. This concentration of power has created public suspicion of life-science corporations and the willingness and ability of governments to regulate them.

Global life-science companies have argued that new biotechnologies will enable the development of cures for a wide range of diseases and solutions to world hunger. There may well be biotechnology applications which could improve health and food security for poor farmers, for example through improved drought resistance or nutritional content. However, very little of the current Research and Development effort, whether for crops or pharmaceuticals, is actually focusing on the needs of poor farmers and communities. This, together with the insufficient evidence about environmental and social impacts of new biotechnologies, notably GMOs, does little to support such arguments.

Industry also argues that IPRs are needed to recover the costs of investment in new technologies that will help to fight world hunger. Farmers groups and NGOs however emphasise that reducing hunger and poverty requires not biotechnology, but changes in access to land, food and political power, together with farmer-led research.

2.3 The WTO/TRIPs Agreement

The Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPs) was one of a package of agreements that led to the establishment of the World Trade Organisation in 1994, as a result of the Uruguay Round of trade negotiations of the General Agreement on Tariffs and Trade (GATT). It could only be accepted or rejected in its entirety. Prior to TRIPs, an international framework for intellectual property standards was in operation in the form of various treaties administered by the World Intellectual Property Organisation (WIPO). However, the US argued for international protection of IPRs at the Uruguay Round, claiming that it was loosing billions of dollars through infringement of its intellectual property throughout the world, because WIPO had no means by which to enforce its decisions. The result was TRIPs which became effective in January 1995.

TRIPs requires patents to "be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve and inventive step and are capable of industrial application…". Article 27.3(b) requires

[20] Laird. S. ed. (2002). 'Biodiversity and Traditional Knowledge: Equitable partnerships in practice'. WWF, People and Plants Conservation Series.

micro-organisms, microbiological and non-biological processes to be patentable. Plants, animals and 'essential biological processes' for their production may be excluded from patentability. Plant variety rights must also come under some form of protection, either an IPR system which may be patents, a sui generis alternative, or a combination of the two. Genetic and biochemical resources are not specifically excluded, which means that patents must in principle be made available for them, provided they are new, involve an inventive step and are capable of industrial application[21].

Thus, countries which become signatories to the WTO to access the trade advantages must also implement TRIPs, by raising national standards for protection of intellectual property to a uniform minimum level, and introducing protection for subject matter not previously covered in most developing countries. While many of the provisions of TRIPs reflect requirements of earlier IPR agreements, such as the Paris and Berne Conventions, it imposes additional requirements particularly with respect to new technologies. Given their 'informal' nature, traditional knowledge and innovations of farmers and local communities are not covered by the property rights of the TRIPs agreement, particularly those relating to patent protection.

These provisions have caused great concern in developing countries because they enhance global protection for 'formal' innovations that satisfy established patent requirements, without protecting traditional innovations - thus favouring the interests of technologically advanced countries and large corporations.

The CBD, along with a whole host of other environment, social and human rights agreements, are effectively subordinate to the WTO and the TRIPs agreement, and do not have the enforcement power afforded by the WTO's dispute settlement and sanctions mechanism. However, both the national implementation efforts and the Doha-mandated review of TRIPs offer some scope for interpreting, amending, or supplementing the TRIPs Agreement to align IPRs with the objectives of the CBD. TRIPs provides some flexibility by allowing the use sui generis laws for plant variety protection, which could include recognition of rights of farmers and indigenous peoples over their plant varieties and seeds.

2.4 UPOV Convention on Plant Variety Protection

UPOV, the International Union for the Protection of New Varieties of Plants, is an intergovernmental organisation with headquarters in Geneva, established by the International Convention for the Protection of New Varieties of Plants. This Convention (the UPOV Convention) aims to grant exclusive intellectual property rights to breeders of new plant varieties. It first entered into force in 1968, and has since been revised three times, with the latest Act entering into force in 1998. It has a total of 54 member countries, including many OECD countries, and its Council meets once a year. Under a cooperation agreement with WIPO, the Director General of WIPO is the Secretary General of UPOV. Protection through plant breeders rights is weaker compared to patents, but in recent years there has been a trend towards increasingly strict protection.

[21] Dutfield G., 'Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation' (2003). UNCTAD-ICTSD. IPRs and Sustainable Development. Issue Paper No. 1.

2.5 The World Intellectual Property Organisation (WIPO)

WIPO is a specialised UN agency responsible for promoting intellectual property worldwide. It administers 23 IPR treaties, including on patent law and procedures, copyright, trademarks and industrial design. A fundamental part of WIPO's activities is the progressive development and application of international norms and standards which are applied in States which sign a given treaty. The highest decision making body is the WIPO General Assembly, and negotiations in relation to various treaties is conducted through designated Committees. WIPO also has also signed a cooperation agreement with the WTO.

The Paris and Berne Conventions, agreed in the mid-late 1800s to provide protection in foreign countries for inventions (patents) and copyright respectively, remain the cornerstones of WIPO's treaty system, but subsequent treaties have widened and deepened the protection they offer. A number of WIPO initiatives are essentially seeking to move the global patent system towards an increasingly extensive and uniform system.

The WIPO-administered Patent Cooperation Treaty (PCT), agreed in 1970, enables the filing of a single international patent application to simultaneously seek protection in over one hundred countries throughout the world, including developing countries. It thus simplifies and reduces the cost of obtaining international patent protection. The PCT system is expanding rapidly: the number of member states has more than doubled in the last eight years to 115, and the number of international applications has grown from 2,600 in 1979 to about 114,048 in 2002.

The Patent Law Treaty (PLT) is an international harmonisation treaty adopted in June 2000 to standardize divergent requirements applied in national and regional patent systems. Users of the patent system will thus be able to rely upon predictable and simple procedures for filing national and regional patent applications and for maintaining patents in all contracting parties. The PLT will enter into force after ten States have ratified. For more information see www.wipo.int.

2.6 Free Trade Agreements as vehicles for upgrading IPRs

The US and Europe are increasingly seeking to use regional or bilateral free trade agreements as a means to enhance IPR protection in developing countries to levels above WTO requirements, in line with those of their own countries. The US recently started negotiating a FTA with Colombia, Ecuador and Peru. The proposed FTA requires each party to allow patents for the following ‘inventions’: a) plants and animals, and b) diagnostic, therapeutic and chemical processes for treatment of humans and animals. This would mean that it would be possible to patent genes and parts of living organisms, as is permitted by US IPR law. Allowing the patenting of living organisms opens the possibility of patent holders gaining rights over a species, variety, individual or hybrid. The proposed FTA also seeks to extend patent protection beyond the normal 20 year period.

The proposal has provoked significant concern at the potential commercial exploitation of Andean countries’ biodiversity by US biotechnology countries and impacts on biodiversity conservation. It would also be an infringement of existing agreements between these and other Andean countries which are not party to the FTA.

An official source in Colombia commented on the government's surprise at the aggressive promotion by the US of the IPR protection provisions in the agreement.[22]

3. International initiatives for TK protection

3.1 The CBD process

The *Sixth Conference of the Parties (COP 6)* in May 2002 adopted the non-binding Bonn Guidelines, developed by the CBD Working Group on Access and Benefit-Sharing. The Guidelines, intended for use when developing legislative, administrative or policy measures and contracts on ABS, have a number of provisions relating to Intellectual Property Rights (IPRs). They suggest that Parties which use genetic resources should consider adopting "measures to encourage the *disclosure of the origin of the genetic resources and of the origin of traditional knowledge*, innovations and practices of indigenous and local communities in applications for intellectual property rights" [emphasis added].

Following up the commitment made at the World Summit for Sustainable Development (Johannesburg, August 2002), the ABS Decision of the *CBD COP7* (February 2004) mandates the Working Groups on ABS and 8(j) to: "elaborate and negotiate an *international regime* on access to genetic resources and benefit-sharing with the aim of adopting an instrument/instruments to effectively implement the provisions in Article 15 and Article 8(j) of the Convention". While the term 'legal' is not actually used, the language used is about as close as it can get.

The COP7 Decision on Article 8(j) requests the Working Group to: "review and, if appropriate, make recommendations regarding the international regime on access and benefit-sharing with a view to including *sui generis* systems and measures for the protection of knowledge, innovations, and practices of indigenous and local communities".

There is some concern however that the process to develop the international regime will be led by the Working Group on ABS, where discussions focus mainly on genetic resources as opposed to TK issues, and lean towards reaffirming national sovereignty over genetic resources. The Working Group on Article 8(j) is more centred on the concerns of indigenous and local communities and more open to participation of their representative organisations. Nevertheless the CBD forum as a whole is more in tune with indigenous peoples' perspectives and open to their participation than other forums where proposals for international measures for TK protection have been put forward, notably WIPO and the WTO. At the CBD COP7 meeting, the activity and influence of indigenous peoples' organisations, facilitated through the Indigenous Peoples' Forum, was greater than ever before.

3.2 Review of WTO/TRIPs

In October 1999, twelve developing countries from Asia, Africa and Latin America submitted two papers to the WTO General Council with several proposals. One proposal argued that patents are inconsistent with the CBD provisions on access to genetic resources and benefit-sharing should not be granted; another that 27.3(b)

[22] La biodiversidad esta en la mira de Estados Unidos en el Tratado de Libre Comercio con Colombia. El Tiempo.com- Economia, 2 June 2004.

should be revised to take into account the CBD's objectives and the protection of the rights and knowledge of indigenous and local communities. The African Group also proposed that a footnote be added the 27.3(b) sentence on plant variety protection, stating that any sui generis law can provide for "the protection of the innovations of indigenous farming communities in developing countries".

Two reviews have been taking place in the TRIPs Council, as required by the TRIPs Agreement: a review of Article 27.3(b) which deals with patentability or non-patentability of plant and animal inventions and the protection of plant varieties; and a review of the entire TRIPs agreements.

At the WTO Ministerial Conference in Doha, 2001, a Ministerial Declaration was adopted in which WTO member states instructed the TRIPs Council, in pursuing its work programme, including under the review of Article 27.3(b), to examine the relationship between TRIPs, the CBD and the protection of traditional knowledge and folklore. As a contribution to this examination, Brazil, China, Cuba, Dominican Republic, Ecuador, India, Pakistan, Thailand, Venezuela, Zambia and Zimbabwe jointly submitted a number of proposals to the TRIPs Council in June 2002. These included that TRIPs should be amended to require patent applications relating to biological materials or traditional knowledge to disclose the source and country of origin of the biological resource and traditional knowledge used in the invention, and to provide evidence of prior informed consent granted by authorities under the relevant national regimes, and of fair and equitable benefit-sharing under the national regime of the country of origin. The deadline for negotiations specifically mandated in the Doha Declaration is 1 January 2005.

3.3 WIPO's Inter-Governmental Committee

In 1999, Colombia submitted a proposal that the draft Patent Law Treaty (PLT) should require all patents relating to biological and genetic heritage to be subject to having been acquired in accordance with access and benefit-sharing regulations of the country of origin. As a result, a separate Inter-Governmental Committee (IGC) on Genetic Resources, Traditional Knowledge and Folklore was established in 2000 to discuss IPR issues relating to genetic resources, protection of traditional knowledge and protection of expressions of folklore.

At the IGC meeting in June 2002, two approaches on how patent law might promote benefit-sharing and prevent misappropriation of TK were discussed. One was to require patent applicants to disclose the origin of genetic resources and/or associated TK, which some countries feel should be supported by documented evidence of prior informed consent and compliance with ABS regulations. The other was to improve the availability of traditional knowledge already in the public domain to patent examiners, to identify cases where the requirement of novelty is not met due to the existence of 'prior art'. This could be done by compiling a list of publications where TK is regularly documented, or a database of public domain knowledge. India is a strong proponent of TK databases, and has started to develop a Traditional Knowledge Digital Library (TKDL) which it wants to make available to patent examiners in India and elsewhere.

Prior art searches are already a central part of patent application examinations and no country has opposed the idea in principle. But if made public, TK databases would

make it far easier to access TK and hence provide further opportunities for biopiracy. Furthermore, such databases would not protect unpublished TK and would not necessarily record the particular 'invention' for which a patent is sought, which means their effectiveness would be limited[23]. Another concern is that TK databases may also be used by governments as a means of asserting national control over traditional knowledge, without sufficient guarantees that the rights of indigenous and local communities will be fully respected.

On disclosure of origin of genetic resources and TK in patent applications, the last IGC meeting in March 2004 accepted the proposal of the CBD to conduct further work. There was a desire on the part of many developing countries to ensure that this work is taken up by other WIPO committees responsible for patent issues, notably the committee on Patent Cooperation Treaty reform and the Standing Committee on the Law of Patents. However, politically, the most feasible proposal may be the weakest where patent applicants are encouraged or expected to disclose origin but not obliged to. The stronger version would require applicants to comply with the CBD's ABS provisions, as set out in the Bonn Guidelines which refer to: "a legally recognised certification of origin system as evidence of Prior Informed Consent and mutually agreed terms". Of course such a system should require evidence of PIC obtained from TK holders, and not just national governments, but it may be unrealistic to expect this to be agreed internationally. However, this does not prevent developing countries from introducing such a requirement in their national patent offices.

Several developing country delegations at IGC meetings have repeatedly called for an international legally binding *sui generis* regime to protect traditional knowledge of indigenous and local communities, given that national regimes cannot apply in user countries which limits their ability to prevent biopiracy. However, proposals for a legally binding instrument have been repeatedly opposed by developed countries. As a result, the IGC is focusing on developing voluntary guidance for the development of national laws for TK protection, including an agreed set of recommended objectives, principles and legal norms. The recognition of customary law has been proposed as one such principle, and further work is needed to provide guidance on what this means in practice. A number of delegations have also emphasised the need for PIC of TK holders, and for TK protection to be guided by the CBD.

In October 2003, the IGC's mandate was extended for another two years, with an emphasis on accelerating work particularly on the international dimension of TK protection. So there it is still possible that agreement could be reached on the need for an international regime, so that such a process could be initiated, even if IGC does not continue. However, the CBD process to develop an international 'instrument' for ABS and TK probably offers more scope for progress, although the US has not ratified the CBD, and any legal agreement under the CBD is unlikely to have much influence on WIPO and WTO/TRIPs.

Progress on TK protection at WIPO IGC is slow and it currently seems unlikely that it will give rise to anything significant given the strong polarisation between developed and developing countries. The WIPO/IGC process is also strongly situated within the conceptual framework of existing IPRs, with discussions being led mainly by

[23] See Footnote 11.

government IPR experts, and with very limited participation of indigenous representatives. The WTO is even less open to consideration of TK protection issues and less likely to achieve progress on this since countries may need to concede significant economic interests in return.

3.4 Establishing an independent developing country initiative

One possible way forward, proposed by Graham Dutfield and Peter Drahos, would be for concerned developing countries to act strategically as a group. They could agree on a set of standards for protection of traditional knowledge of indigenous peoples, developed in cooperation with indigenous peoples, enact these in their national laws, and link the national regimes of participating countries. Once a significant number of developing countries agree to participate, then some developed countries would be likely to join. In the longer term, developing countries could work towards the creation of a multilateral treaty on indigenous knowledge.

An International Seminar on Traditional Knowledge was organised by the government of India and UNCTAD in April 2002, with representatives from Brazil, Cambodia, Chile, China, Colombia, Cuba, Egypt, Kenya, Peru, Philippines, Sri Lanka, Thailand and Venezuela. Countries recognised the limitations of national law alone to prevent biopiracy and suggested components of a 'framework for international recognition of various sui generis systems, customary law and others for TK protection'. These include "local protection to the rights of TK holders through national level sui generis regimes including customary laws"; registers of TK to prevent misappropriation; certificate of origin, PIC and benefit-sharing as a condition of use by other countries, particularly for IPR protection of commercialisation; and an internationally agreed instrument that recognises such national protection and ensures national laws on TK are respected worldwide.[24]

3.5 FAO Treaty on Plant Genetic Resources and Farmers' Rights

The *International Treaty on Plant Genetic Resources for Food and Agriculture* (formerly the International Undertaking on PGRs) was approved by the UN Food and Agriculture Organisation (FAO) in November 2001 and entered into force on 29 June 2004. Its objectives are the conservation and sustainable use of plant genetic resources for food and agriculture (ie. agricultural biodiversity) and the fair and equitable sharing of benefits derived from their use. To date, 54 countries have ratified the Treaty representing a range of both developing and industrialised countries. The treaty establishes a multilateral system to facilitate ABS, through standard Material Transfer Agreements, which also apply to transfer to third parties and subsequent transfers. For the first time, it recognises Farmers Rights in a binding international instrument.

Article 9 sets out the following measures for that governments should take to protect and promote farmers' rights:
"(a) protection of traditional knowledge relevant to plant genetic resources for food and agriculture;
(b) the right to equitably participate in sharing benefits arising from the utilisation of plant genetic resources for food and agriculture;

[24] See footnote 11.

(c) the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture".

However, since the treaty's approval in 2001, some countries, such as the Philippines have chosen to develop laws that institutionalise plant variety protection systems and monopolistic IPRs at the expense of the rights of farmers to their seeds. Furthermore, there is concern that the treaty could be undermined by economically powerful countries seeking rights to privatise genetic resources covered by the treaty. While the Treaty states that no IPRs may be obtained on the genetic resources it covers, the UK, the EU and others insist that they have the right to obtain IPRs if the resources are modified. Developing countries seeking to defend the rights of farmers are likely to face some tough struggles in the upcoming negotiations on a universal Material Transfer Agreement which will set out the rules of access to the common pool resources covered by the Treaty.[25] The position of the FAO itself has been called into question following its apparent leaning towards GMOs and IPRs in its recent annual report.

There is also concern that industrialised countries will not provide sufficient funding for conservation efforts of farmers as required by the Treaty. The Treaty provides the legal framework for the 1996 Leipzig Plan of Action for the conservation and sustainable use of agricultural seeds. This Plan called for significant new and additional funding for on-farm conservation of threatened diversity developed by farmers, but was put on hold until the Treaty became law.

The *People's Plan of Action on Agriculture, Food Security and Farmers' Rights*, was agreed by over 120 NGOs and Peoples Organisations at a meeting held in Leipzig, just prior to the FAO 4th International Technical Conference. It calls for strengthening systems which promote collective rights over the individuality of IPR, and cultural and agricultural diversity by supporting women farmers, indigenous peoples, farmers' rights and land rights. However, the Technical Conference could not agree on how to treat Farmers' Rights.

At the recent international conference of La Via Campesina, the global farmer's movement reasserted their commitment to conserving the seeds of humanity, campaigning for the survival of ecologically-supportive farming and calling for the adoption of food sovereignty policies.

4. National Sui generis regimes for TK protection

4.1 CBD Decisions and guidance

The CBD COP 6 Decision on Article 8(j) invited "Parties and Governments, with the approval and involvement of indigenous and local communities, to develop and implement strategies to protect traditional knowledge, innovations and practices based on a combination of appropriate approaches, respecting customary laws and practices, including the use of existing intellectual property mechanisms, sui generis systems, customary law, the use of contractual agreements, registers of traditional knowledge,

[25] UK Agricultural Biodiversity Coalition. 'International Seed Treaty comes into force today but will it undermine farmers efforts to conserve biodiversity?'. BIO-IPR, 29 June 2004. www.grain.org/bio-ipr

and guidelines and codes of conduct". COP 6 also called for further information gathering and analysis on the role of customary laws and practices in relation to the protection of genetic resources and traditional knowledge, innovations and practices, and their relationship with IPRs.

In addition, the CBD Working Group on Article 8(j) was requested to address the issue of sui generis systems for TK protection, focusing in particular on:

- Compiling and assessing existing indigenous, local, national and regional sui generis systems
- studying existing systems for handling and managing innovations at local level and their relation to existing national and international systems of IPRs, with a view to ensure their complementarity
- identifying the main elements to be taken into consideration in the development of sui generis systems;
- the equitable sharing of benefits arising from the use of TK, innovations and practices of indigenous and local communities.

The COP7 Decision on Article 8(j) invites Parties and Governments to:

- "Consider appropriate measures, with the full and effective participation of indigenous and local communities, to implement at local, national, subregional, regional and international levels *sui generis* systems and other new innovative mechanisms that ensure the protection of traditional knowledge, innovations and practices taking into consideration customary law and traditional practices"; and
- "Strengthen the capacity of indigenous and local communities to protect, use, preserve, maintain and promote their traditional knowledge, innovations and practices relevant for the conservation and sustainable use of biological diversity."

Furthermore, the Decision requested the Working Group on Article 8(j) to: " Further develop, as a priority issue, elements for *sui generis* systems, listed in the annex to the decision, for protection of knowledge, innovations and practices of indigenous and local communities and ensure benefit-sharing arrangements for these communities when their traditional knowledge and associated genetic resources are accessed".

Recognition of customary law and PIC are amongst the potential elements to be considered when developing a sui generis regime set out in the Annex to the Decision:

- "Recognition of elements of customary law relevant to the conservation and sustainable use of biological diversity with respect to: (i) customary rights in indigenous/traditional/local knowledge; (ii) customary rights regarding biological resources; and (iii) customary procedures governing access to and consent to use traditional knowledge, biological and genetic resources.
- "A process and set of requirements governing prior informed consent, mutually agreed terms and equitable sharing of benefits with respect to traditional knowledge, innovations and practices associated with genetic resources"

4.2 National level initiatives to develop sui generis regimes

Sui generis regimes can be a modification or extension of an existing IPR to cover something previously unprotected, or a new IPR instrument to protect something previously unprotected or under-protected. They can also be an alternative to conventional IPRs, which are specifically adapted to the needs, aspirations and worldview of TK holders and their TK systems. Many NGOs and indigenous groups

have advocated this as the best approach for legal protection of TK. However the term 'sui generis' is open to interpretation. National sui generis regimes have tended to focus on commercial and benefit-sharing objectives and to draw on existing IPR concepts, rather than fully reflecting indigenous peoples' needs and aspirations. The latter would mean taking a more comprehensive approach, which entails not only legal protection of TK rights, but in-situ conservation of TK systems, securing land and resource rights, empowerment and self-determination.

A number of countries have started to develop sui generis regimes for TK protection. WIPO has compiled a review of national and regional experiences with sui generis regimes, covering the African Model Law and its implementation in Nigeria and Zambia, as well as laws of Brazil, China, Costa Rica, Peru, Philippines, Portugal, Thailand and the US (see WIPO/GRTKF/IC/5/INF/6, www.wipo.int). These laws typically set out the objectives of TK protection, nature and scope of rights protected, identity of the rights holders, and institutional arrangements and procedures (eg. PIC), enforcement and dispute settlement.

Sui generis regimes for TK protection often recognise the collective rights of indigenous peoples and their customary law, although the latter may be emphasised in certain provisions rather than giving effect to customary law, and the authority of customary legal systems as a fundamental principle across the board, and superseding all other legal norms. Furthermore, the issue of PIC and benefit-sharing is not always addressed in a manner which fully reflects the collective 'ownership' of knowledge which may require collective decision-making by several communities or an indigenous group as a whole[26]. There are however, some laws, such as the OAU model law on community rights and access to biological resources, which do contain quite far-reaching provisions recognising customary law, whether it is written or not.

Panama introduced a 'Special System for Registering the Collective Rights of Indigenous Peoples' for the protection of their cultural identity and traditional knowledge in June 2000. It aims to protect the collective intellectual property rights of indigenous peoples over their tangible cultural expressions (art, music, dances etc), and their intangible cultural expressions, and as of 2001, explicitly covers biodiversity-associated TK. Requests for protection can be made by indigenous peoples represented by their general congresses or traditional authorities to the Department of Collective Rights and Folkloric Expressions, within the national IPR office, without charge or services of a lawyer, and granted without time limit. Rights by others to use and commercialise the cultural manifestations of indigenous peoples must conform to the regulations of the indigenous group concerned.

Peru's law for protection of collective knowledge of indigenous peoples, adopted in August 2002, aims to protect knowledge relating to the properties of biological resources, and obliges 'interested parties' to obtain PIC of communities providing the knowledge. It also creates a Fund for the Development of Indigenous Peoples into which 5% of the value of future sales generated from commercial use of TK must be paid, as a means to share benefits amongst all indigenous knowledge holders for the use of collective knowledge. The law also establishes three types of register, a

[26] See Tobin B. and Swiderska K. (2001). Speaking in Tongues: Indigenous Participation in the development of a sui generis regime to protect traditional knowledge in Peru. IIED series on Participation in Policy-Making for Access and Benefit-Sharing. www.iied.org/blg

national Public Register, national Confidential Register and Local register - the latter two would not be publicly accessible. Registration is intended to prevent patenting of TK which has been publicly disclosed, but community rights over TK are not dependent on registration.

4.3 Prior Informed Consent

PIC has often been identified by indigenous peoples as a fundamental demand or concern, particularly in relation to ensuring respect for indigenous knowledge, protection of medicinal and other traditional resources, and the right to determine standards for development[27]. In the Philippines, the Indigenous Peoples' Rights Act of 1997 requires PIC for all natural resources within indigenous territories, in accordance with customary laws and practices of the peoples concerned.

In practice PIC typically involves a participatory process, collective decision-making and, in some cases, written agreement. Recognition of the diversity within and among indigenous peoples, unique customary legal and organisational structures, cosmo-visions and lifestyles is required in order to develop flexible and appropriate procedures for local-level PIC.

However, experience with community-level PIC in the context of ABS measures has proved difficult. In the Philippines, for example, local PIC has become a major concern for academic and research organisations, due to the time and costs involved, and has also dampened interest in commercial bioprospecting. The low awareness of bioprospecting among local officials and communities requires a significant educational effort to obtain PIC that is truly informed. However, much can be learned from experience in other sectors (eg. mining, logging and oil) involving negotiation of agreements with indigenous peoples to protect natural resource rights and land tenure, as well as indigenous peoples' declarations and codes of ethics for researchers. A number of communities, such as the Inuit Tapirisat in Canada and the Kuna in Panama have articulated culturally appropriate ways in which PIC might be sought and undertaken within their territories[28].

5. NGO and Indigenous Proposals and Initiatives for TK protection

5.1 Traditional Resource Rights as the basis of sui generis regimes

Darrell Posey set out an alternative vision for TK protection based on Traditional Resource Rights. This vision is rooted in the belief that protection of traditional knowledge will only be adequate if it is conserved, maintained and enhanced in-situ, as part of the lands, territories and cultures of the peoples themselves. This means that "self-determination is at the heart of any effective sui-generis regime".[29]

Any sui generis regime would have include the following basic objectives:

- Encouragement of biodiversity conservation;
- Promotion of social justice and equity
- Effective protection of TK and resources from unauthorised collection, use,

[27] Posey D. (1996). Traditional Resource Rights: International Instruments for Protection and Compensation for Indigenous Peoples and Local Communities'. IUCN
[28] Laird S. ed. (2002). Biodiversity and Traditional Knowledge: Equitable Partnerships in Practice.
[29] Posey D. (1996). Traditional Resource Rights: International Instruments for Protection and Compensation for Indigenous Peoples and Local Communities'. IUCN

documentation and exploitation
- Prior informed consent
- Recognition and reinforcement of customary laws and practice, and traditional resource management systems, that are effective in conserving biodiversity.

Furthermore, the system would have to be "based on an integrated rights approach guided by human rights principles and concern for the environment" and "developed in close collaboration with indigenous peoples and local communities through a broad-based consultative process that reflects a country's cultural diversity".

'Traditional Resource Rights' is the process needed to develop effective sui generis systems, which acknowledges indigenous peoples' rights to control access to traditional resources[30] and territories. It is a framework for developing multiple systems that reflect the diversity of contexts where sui generis systems are required, rather than a ready-made product.

TRRs emerge from four processes:
1. *Identifying 'bundles of rights'* expressed in existing moral and ethical principles, including legally binding instruments (eg. ILO 169), UN agreements and declarations on human rights, and declarations of indigenous peoples. They include for example, the right to self-determination, land rights, PIC, and cultural heritage rights.
2. *Recognising rapidly evolving 'soft-law'*: non-legal agreements, declarations of principles, resolutions, charters, codes of practice etc, which recognise customary law and practice, and enjoy strong political expectations that they will be respected by the international community.
3. *Harmonising legally binding agreements*: this means that countries should review all international agreements they have signed up to, on environment, development, trade and human rights, to identify synergies between them and develop a consistent international position – with human rights principles and law as the foundation for this process. For the implementation of CBD Article 8 on in-situ conservation, a rights driven approach is needed to guarantee equity. It also means that "states should develop model sui generis systems that respect customary law and practice and indigenous jurisprudence as fundamental elements of national law".
4. '*Equitising*' to provide marginalized indigenous and local communities with favourable conditions to influence all levels and aspects of policy planning and implementation.

This last process is crucial if TK is to be effectively protected in accordance with the world-view and rights of indigenous and local communities. The current imbalance of power and resources means that pro-active efforts are required to ensure the effective participation of indigenous communities in policy and legal processes for TK protection and to ensure that their rights are fully respected in practice. Posey identifies a number of efforts required for 'equitising':
- providing funding for effective participation of indigenous and local communities in international for a, and at national, regional and local levels;
- providing funding to enable indigenous and local communities to maintain and

[30] Posey (1996) defines 'Traditional resources' as including: "tangible and intangible assets and attributes deemed to be of spiritual, aesthetic, cultural and economic value to indigenous and local communities".

develop their own local regimes for regulating access to TK and conserving biodiversity (eg. community registers, demarcation of territories and community controlled research);

- establishing Ombudsman offices to provide free legal advice and representation for indigenous and local communities in all international offices and secretariats dealing with issues that affect them, including the CBD, FAO and WTO Secretariats, as well as National Ombudsman Offices;
- a ten-year Global Consultation where indigenous and local communities develop their own guidelines and principles for a rights-based sui generis system to protect TK. This could take place under the auspices of the CBD and meet annually.

Another important element is the strengthening of indigenous representative organisations and their federations at regional and national levels so that they can defend indigenous rights, make effective demands, negotiate on an equal footing with government and others, and provide an effective focal point for protecting TK and facilitating PIC with indigenous communities.

5.2 Third World Network Model Law on community intellectual rights

The Third World Network has developed a model national sui generis law – the 'Community Intellectual Rights Act' for recognising local community rights over their collective knowledge, elaborated by Nijar in 1996. The Act declares and recognises the community as the owners of community knowledge in perpetuity, and custodians of knowledge for past, present and future generations. PIC of the community must be sought for any access to their knowledge and can be refused, and the integrity of the knowledge cannot be impaired. No exclusive monopoly rights can be given in respect of the knowledge and the knowledge is inalienable. Furthermore, all elements of the culture, system and practices of communities are formally recognised. This means that "the entire identity and integrity of the knowledge system replete with its values, rituals and sacredness is accorded recognition".[31]

5.3 The Mataatua Declaration

The *Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples* was agreed in 1993 at the International Conference on the Cultural and Intellectual Property Rights of Indigenous Peoples, convened by the Nine Tribes of Mataatua in New Zealand. Over 150 Delegates from fourteen countries attended, including indigenous representatives from Japan, Australia, Cook Islands, Fiji, India, Panama, Peru, Philippines, Surinam, USA and Aotearoa. The Declaration notes that existing mechanisms are insufficient for the protection of Indigenous Peoples Intellectual and Cultural Property Rights. Its recommends that indigenous peoples should develop a code of ethics which external users must observe when recording their traditional and customary knowledge; reacquire traditional lands to promote customary agricultural production; and establish a body to monitor the use of indigenous cultural property in the public domain, advise on the protection their cultural heritage, and enable mandatory consultation for any new legislation affecting intellectual property rights.

[31] Khor M. (2002). Intellectual Property, Biodiversity and Sustainable Development: Resolving the difficult issues. TWN

The Declaration also recommends that states, national and international agencies, in the development of policies and practices, must recognise that indigenous peoples are the guardians of their customary knowledge and have the right to protect and control its dissemination; and accept that the intellectual rights of indigenous peoples are vested in those who created them. Further, they must develop, in full cooperation with indigenous peoples, an intellectual rights regime which incorporates collective as well as individual rights, and that the 1st beneficiaries of TK are the direct descendents of traditional guardians of the knowledge. It also declares a moratorium on any further commercialisation of indigenous medicinal plants and human genetic materials until indigenous communities have developed appropriate protection mechanisms.

5.4 Community Protocols and Registers

Given the lack of protection for TK globally, and the lack of legal requirement for, or application of, PIC at local community level in many countries, community protocols offer one way forward to enhance community control over genetic resources and related traditional knowledge, through collective actions to assert their rights. Such protocols might set out the community's rights, basic conditions for access to and use of TK, steps to be followed for PIC, and sanctions, in accordance with a community's customs, rituals and customary laws and practices. They can also be developed specifically to protect rights over knowledge in community registers and establish rules for access to registers, and different protocols might be developed for research and commercial access.

For example, in the Southern Philippines a Talaandig community has formulated and implemented its own Community Protocol to govern access to biological resources in the Mt. Kitanglad Range Nature Reserve which is part of their ancestral domain. The protocol includes elements from the Philippines Indigenous Peoples Rights Act. The Partners of Community Organisations (PACOS) in Sabah, Malaysia, has also explored the implementation of such protocols with indigenous communities.

Because community protocols are expressed through community rules and practices, they do not depend on any national or local law for communities to be able to exercise them, although they would obviously be strengthened through recognition in formal law. Experience in the Philippines and Sabah suggests that, by strengthening community institutions, initiatives and confidence, the development of community protocols will strengthen the communities' capacity to deal with external pressures more generally.[32]

Community registers of biodiversity and traditional knowledge have been developed in a number of countries, through participatory processes at community level, facilitated by NGOs. Their purpose has ranged from conservation and sustainable management of biodiversity and related knowledge, to implementing access and benefit sharing provisions and enhancing the ability of communities to claim rights over resources, to strengthening local governance and democratisation. Registers of traditional crop varieties have been developed to enhance food security through assertion of rights over such resources and dissemination of knowledge about their management and use. Similarly, registers of traditional medicine have been developed

[32] Community Protocol: An instrument to protect the rights of communities to biological and genetic resources and traditional knowledge. SEARICE Review. January 2002. Philippines.

both to strengthen local health systems and rights over resources. In India, where there is considerable experience of developing Peoples' Biodiversity Registers, these processes have often served to rekindle a sense of value in traditional knowledge amongst communities. In Kerala, the development of PBRs was identified as a priority for the state's five year development plan.[33]

Community registers are either prepared in documented/illustrated form in local languages, or in some cases, in video form to be more accessible for communities. They are generally kept by communities, with a copy sometimes also kept by the associated NGO. Nevertheless, there are clearly risks associated with such documentation in the absence of any legal instrument which recognises community ownership of registers and the TK they contain.

In view of this risk, some community registers have only recorded knowledge which is already widely known, and not that which is sacred or individually held, or have only noted that knowledge relating to a certain plant or illness exists, so that this could still be used to contest false claims over TK. In Canada, the Kaska Dena people are developing an electronic website and database of traditional knowledge, mainly as an educational tool to promote the dissemination of TK, and part of the database is protected by a password, so that only members of the community can access it. In India, some local communities have passed resolutions asserting ownership over PBRs, but the legal status of such resolutions is unclear. KSSP, an NGO in Kerala formulated a draft law that would enable village Panchayats to pass resolutions asserting control over information in the registers.

6. Agreements and fora on Human Rights and Indigenous Peoples

6.1 ILO Convention 169 on Indigenous and Tribal Peoples

The *International Labour Organisation Convention 169 Concerning Indigenous and Tribal Peoples in Independent Countries*, which entered into force in 1991, calls on governments to develop actions to protect the rights of indigenous and tribal peoples, with the participation of the people concerned (Article 2.1). Such actions will include measures for "promoting the full realisation of the social, economic and cultural rights of these peoples with respect for their social and cultural identity, their customs and traditions and their institutions" (Article 2.2 (b)). While intellectual or resource rights are not specifically mentioned, these form a critical part of social, economic and cultural rights. Furthermore Article 7 of ILO 169 provides that: "the people concerned shall have the right to decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual well-being". Article 8 requires that: "in applying national laws and regulations to the peoples concerned, due regard shall be had to their customs or customary laws".

The Convention has been ratified by 17 countries[34]. In addition some countries are signatories of ILO 107, the preceding convention on indigenous and tribal populations which was revised into ILO 169. Although ILO 107 is no longer viewed as an active

[33] Anuradha RV, Taneja, B., Kothari A (2001). Experiences with participation in biodiversity law and policy making in India. IIED Series on Participation in Policy-Making for Access and Benefit-Sharing. www.iied.org/blg

[34] Norway, Mexico, Colombia, Bolivia, Costa Rica, Paraguay, Peru, Honduras, Denmark, Guatemala, the Netherlands, Ecuador, Fiji, Brazil, Venezuela and Argentina.

process, some of its signatories such as India are considering signing ILO 169. REF ADD

6.2 UN Draft Declaration on the Rights of Indigenous Peoples

The *UN Draft Declaration on the Rights of Indigenous Peoples,* agreed in 1993 by the Working Group on Indigenous Populations, is considered the most complete and representative statement of principles and demands for indigenous rights because of its broad and long consultation process with indigenous leaders. It stresses the right to (inter alia):

- Self-determination, representation and full participation
- Special measures to control, develop and protect sciences, technologies and cultural manifestations, including human and other genetic resources, seeds, medicines, knowledge of the properties of flora and fauna and oral traditions;
- Control access and assert ownership over plants and animals vital to indigenous cultures; and to own, develop, control and use the lands and territories, including flora and fauna and other resources which they have traditionally owned or otherwise occupied or used;
- Free and informed consent (ie. PIC).
- Just and fair compensation for any such activities that have adverse environmental, economic, social, cultural or spiritual impact.
- Collective as well as individual human rights

The Draft Declaration also includes provisions on the rights of indigenous peoples to maintain and develop their own indigenous decision-making institutions and on the recognition of customary law. It is currently working its way up through the United Nations system to the General Assembly. The UN International Decade of the World's Indigenous People (1995-2004) has as one of its main objectives the adoption of a UN Declaration on the Rights of Indigenous Peoples, within the scope of the Decade. At the 9th session of the UN Working Group on the Draft Declaration in 2003 it was discussed that due to the limited progress to date, there would be two sessions of the Working Group in 2004 before the meeting of the UN Commission on Human Rights to review the Decade and its mandates in 2005.

6.3 UN Permanent Forum on Indigenous Peoples

The *UN Permanent Forum on Indigenous Peoples* was established in 2000. It serves as an advisory body on indigenous issues to the UN Economic and Social Council, with a mandate to make recommendations on indigenous issues relating to economic and social development, culture, the environment, education, health and human rights. The Permanent Forum also advises other UN programmes, through the Council, and seeks to promote the integration and coordination of activities relating to indigenous issues within the UN system. It meets once a year and its next session will in May 2005 in New York. Its members include government representatives and representatives nominated by indigenous people on the basis of 7 geo-cultural regions that they have devised.

At its third session in May 2004, whose special theme was indigenous women, the Forum encouraged WIPO to take practical steps to ensure the inappropriate and unauthorised documentation of traditional knowledge does not occur, and to reinforce the capacity of indigenous peoples and local communities to make informed decisions on whether, and how, documentation should occur. It also made recommendations to

WIPO encouraging the active participation of indigenous peoples and local communities in its work on traditional knowledge, and funding to facilitate this participation.

The Forum recommended that WIPO develop, under the auspices of the Permanent Forum, and in close consultation with indigenous peoples and local communities and the Forum, guidelines, ethical codes of conduct, best practices and practical guides on intellectual property issues, and access to and use of TK by commercial users, ethnologists and others. Similarly, it advised that the CBD, the Office of the UN High Commissioner for Human Rights, UNESCO, and the WTO, develop establish such codes and guidelines, under the auspices of the Forum and in close cooperation with in indigenous peoples.

Furthermore, the Forum confirmed its readiness to provide expert input to the work of WIPO on intellectual property and traditional knowledge, such as its work on studying how customary and indigenous laws and protocols could be recognised and applied within national, regional and international systems for protection of traditional knowledge.

6.4 UN Commission on Human Rights

The UN Commission on Human Rights has adopted a *Resolution on "Intellectual Property Rights and Human Rights"*, which refers to the consequences of plant breeder's rights and the patenting of GMOs for the basic right to food, and the reduction of control by communities (especially indigenous communities) over their own genetic and natural resources and cultural values. It requests TRIPs to take fully into account agreed human rights conventions during the review of TRIPs.[35]

7. Protecting TK on the basis of customary laws and practices

7.1 Understanding customary law systems

Customary law systems are usually founded upon a set of principles or rules, which encompass both the natural and social spheres – for example, maintaining harmony and equilibrium, equity, reciprocity and duality. They also encompass rituals, spiritual beliefs, and secrecy regimes associated with certain types of knowledge. They are flexible, fluid systems, the laws being applied when necessary by the relevant traditional authority for addressing a particular issue. Customary laws are not normally written down, although some indigenous groups have recently started to codify them.

Many traditional societies have been influenced to some extent by national laws, and have incorporated some elements of these into their own legal norms. In some cases, customary laws have been significantly weakened or are no longer applied as a result of external forces driving social and cultural change (including lack of recognition of traditional authorities by governments). Customary laws may still be applied for certain issues, but these might relate to social spheres such as family and marriage, for example, rather than to natural biological resources and traditional knowledge. Nevertheless, in more isolated communities, customary laws and their systems of

[35] Dutfield G., 'Protecting Traditional Knowledge and Folklore: A review of progress in diplomacy and policy formulation' (2003). UNCTAD-ICTSD. IPRs and Sustainable Development. Issue Paper No. 1.

application often remain in tact. The challenge for protecting community intellectual rights is to reflect the customs, rules and norms of the community, whether these be traditional or customary in the strict sense or a combination of elements recognised and practiced by communities.

While a number of studies have been conducted on customary management and conservation of biological resources, as well as on customary land rights, water rights etc, relatively little work has been done on customary laws and rights for protection of traditional knowledge relating to biological resources.

7.2 Recognising customary laws and rights in formal law

A critical issue for the protection of community rights over TK is the recognition of existing customary laws for TK by formal legal systems, both within and outside indigenous territories. Many countries have stated that protection of traditional knowledge should be based on customary law, particularly in international fora. However, the relationship between indigenous peoples and national governments is often problematic. Recognition of indigenous peoples' customary law and authorities lies at the heart of the struggle for self-determination, land and natural resources – yet governments often feel threatened by loss of authority and resource control.

In some countries, state laws ignore and do not provide a means for effectively enforcing customary law. In others, customary law is recognised to some extent, eg. in relation to ancestral land rights, or the right of indigenous peoples to apply customary law within traditional territories (as in Peru's 1993 Constitution). But even where customary law is recognised in national constitutions or statutory law, this usually does not extend beyond traditional territories, and customary law is often only upheld when it does not conflict with formal law or other interests, subject to the discretion the judge. Thus, TK protection efforts also need to address the legal status and enforcement of customary laws more broadly, in order to ensure that such laws are recognised and complied with in practice.

In order to gain recognition of customary law for TK, the existence of rights over TK in customary law first needs to be established. Such rights may be explicitly expressed or dealt with in customary law principles and norms. If not, then their existence can be demonstrated through 'rights-creating practices', although such rights are more difficult to get formally recognised.

In some cases, national law recognises TK to be the cultural patrimony of indigenous peoples, such as in Peru and Panama. This implies that indigenous peoples' custodianship over TK and right to decide over its use, in accordance with customary laws and practices, is also recognised. In others, national constitutions recognise the rights of indigenous peoples to maintain their customs and institutions. The Constitution of the Philippines provides that "the State shall recognise, respect and protect the rights of indigenous cultural communities to preserve and develop their cultures, traditions and institutions".

In many South Pacific Island States, as well as numerous countries in Africa, Asia and South America, national law and policy explicitly grants rights to indigenous or local communities to control biological resources on their traditional territories and/or their

TK through the application of customary law and practice.[36] In Ecuador and Venezuela recognition of collective intellectual property rights of communities over ancestral knowledge is enshrined in the Constitution. Costa Rica's Biodiversity Law recognises and protects 'sui generis community intellectual rights', stating that "this right exists and is legally recognised by the mere existence of the cultural practice or knowledge related to genetic resources and biochemicals; it does not require prior declaration, explicit recognition nor official registration".

Bangladesh's draft Biodiversity and Community Knowledge Protection Act prohibits the violation of 'Common Property Regimes' that include various rights, relations, arrangements and cultural practices, *whether or not they have legal expressions or recognition*, by which communities own, use or have access to biological and genetic resources[37]. In the OAU's Model Law for the Protection of Rights of Local Communities and Farmers, the State recognises and protects community rights "as they are enshrined and protected under the norms, practices and customary law found in and organised by the concerned local and indigenous communities, whether such law is written or not". The OAU also recognises the 'a priori' character of rights in its Preamble – in other words that community rights and responsibilities for biodiversity and TK are inalienable, pre-existing or primary rights, because they existed long before private rights over biodiversity and concepts of individual ownership emerged.

The recognition of indigenous rights can mean recognition of their law and the sources of their law. Municipal or regional governments have the authority to develop laws delegated to them. But customary law may be recognised because a people are indigenous. For example, in Canada, the Constitution recognises that aboriginal peoples are the original inhabitants of the land and states that their rights are guaranteed. The question is, what is the source of their rights? It could be that the inherent legislative authority of those peoples was never extinguished. Or that these rights have been delegated to them by the state, as for municipal governments, in which case they could be more easily overlooked or overturned.

Some people have argued for the codification of customary law given the practical difficulty of recognising or complying with such a diversity of customary law which is not written down and hence not easily accessible. This, however, has implications for the flexibility and fluidity of customary law systems, and could facilitate the transfer of control over decision-making to external actors.

The only way to guarantee that indigenous peoples' rights will be fully and effectively protected is through the recognition of the authority and legitimacy of customary institutions to apply the law themselves, thus providing the basis for self-governance. As Darrell Posey notes: "each indigenous people must remain free to interpret its own system of laws, as it understands them". Customary law may be silent on some issues such as the external use of TK, or for biological resources and traditional knowledge as a whole, and recognition of customary laws alone may therefore not serve to protect indigenous rights over TK.

[36] UNU-IAS (2004). The Role of Registers and Databases in the Protection of Traditional Knowledge. A comparative analysis.
[37] C. Correa (2001). 'Traditional Knowledge and Intellectual Property: Issues and options surrounding the protection of traditional knowledge'. Quaker United Nations Office, Geneva.

The US is one of the few countries which actually recognises an inherent jurisdiction of unextinguished customary legal rights. Although the scope of this commitment is being increasingly narrowed, there are examples of legal cases which have recognised the inalienable rights of Indians. In Canada, the legal systems is increasingly moving towards recognition of inherent legal authority of aboriginal peoples. Currently, Canadian law states that aboriginal peoples share an inherent right to land and to manage the use of land, which is effectively a recognition of the right to self-governance, and a number of Canadian First Nations have obtained legal recognition of extensive rights of self-governance. However, in one case in Australia, where Aboriginal peoples claimed rights to protection of TK associated to Aboriginal right to land, the judge ruled that if such a right to TK ever existed, it was negated by the Copyright Act which effectively extinguished any prior Aboriginal rights. Obviously the judge's reasoning should be questioned, particularly as Copyright law was developed without any consideration to Aboriginal peoples' rights.

There are also cases where national authorities are bound by treaty not to take any action which will affect indigenous peoples' rights over their natural resources without first consulting them – for example under the Treaty of Waitangi in New Zealand. Although this may not empower indigenous peoples to exercise full self-governance, national authorities may be required to provide appropriate protection for rights over TK to give effect to the treaty[38].

If the case can be put that rights over TK exist in common law, and by law are not extinguishable, then this could provide a good argument for revising or introducing elements of statute law, which would remove the potential of certain laws and IPRs (eg. Copyrights) to extinguish these common law rights.

The legal options and challenges for the recognition of customary law vary between countries, notably those whose legal systems are based on British or common law (eg. Canada, Kenya and other British colonies), and those based on Roman/Dutch or civil law (eg. Spain, France and their former colonies).

To summarise, some of the key challenges surrounding the protection of TK on the basis of customary law are the following:

- recognising the authority of customary law for TK protection issues, both within and outside indigenous peoples' territories, and at international level.
- ensuring that customary law and rights are recognised in practice by formal legal systems and cannot be extinguished or overruled, even when there is a conflict between them, whether customary law is written down or not;
- enabling indigenous institutions to develop, apply and interpret customary law through their own customary institutions and law systems;
- allowing flexibility to recognise diverse customary legal systems;
- understanding key underlying principles and processes of customary law systems which need to be recognised and strengthened in formal law.
- understanding the factors which influence the choice of customary and national law by communities for TK and biological resources

[38] UNU-IAS (2004). The Role of Registers and Databases in the Protection of Traditional Knowledge. A comparative analysis.

Some sources of information on TK and CL not already included as references

GRAIN website: www.grain.org. See also BIO-IPR and other electronic mail-outs.

WIPO Accredited Observers web-page- www.wipo.int/tk/en/igc/ngo/ngopapers.html

WIPO Fact Finding Mission (FFM) on IP and TK (2001)– www.wipo.int/tk/en/publications/index.html
[See in particular Part II case study by Anil Gupta on traditional medicine among the Kani (Kerala) and customary governance (p.47-48). Plus Darshan Shakar's analysis of ritual-based customary protocols in India (p.59-60 of FFP, Part I)]

Queen Mary Intellectual Property Institute dossier on IP: www.scidev.net/dossiers/ip/

ICTSD website: www.iprsonline.org [information and references on IPRs, TRIPs and TK protection]

Kerry ten Kate and Sarah Laird (1999). The Commercial use of Biodiversity. Earthscan

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Candace S. Greene and Thomas A Drescher. The Tipi with Battle Pictures: The Kiowa Tradition of Intangible Property Rights. [recognition of customary law]