

Protection of Indigenous Knowledge: Mismatch Between The Convention on Biological Diversity and TRIPS Agreement

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ABSTRACT

Malaysia is in the midst of drafting a national law to regulate access to its genetic resources and to ensure equitable sharing of benefits derived from its commercialisation. One of the issues being addressed in the drafting process relates to the protection of indigenous peoples' resources and traditional knowledge. The Convention on Biological Diversity (CBD) establishes an obligation to seek prior and informed consent for the use of any traditional knowledge and seeks to ensure benefit-sharing. The contemporary international intellectual property rights (IPR) framework under the Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS Agreement), however, does not contain such a requirement for benefit-sharing. Thus, the main objective of this article is to study the protection of indigenous peoples' resources and knowledge under the existing IPR legal framework. The relationship between the IPR system under the TRIPS Agreement and the access and benefit-sharing principles of the CBD relating to traditional knowledge will be the main focus of the analysis. This article will demonstrate the existing international IPR framework does not provide adequate protection for traditional knowledge and is inconsistent with provisions of the CBD.

Keywords: access and benefit-sharing, traditional knowledge, indigenous knowledge, TRIPS Agreement, Convention on Biological Diversity

ABSTRAK

Malaysia sedang merangka undang-undang bagi mengawal akses terhadap sumber genetik dan bagi menjamin perkongsian saksama sebarang faedah yang diperolehi dari pengkomersialannya. Salah satu isu yang sedang dibincangkan adalah mengenai perlindungan terhadap kepentingan sumber orang asal dan pengetahuan tradisional. Konvensyen Kepelbagaian Biologi (CBD) mengandungi keperluan untuk mendapatkan kebenaran awal lagi bebas sebelum pengetahuan tradisional digunakan dan memastikan perkongsian saksama faedah. Walaubagaimanapun kerangka bagi perlindungan harta intelek (IPR) dibawah "Trade-Related Aspects of Intellectual Property Rights Agreement" (TRIPS Agreement) tidak mempunyai peruntukan mengenai perkongsian saksama faedah. Maka, objektif utama artikel ini adalah bagi mengkaji bentuk-bentuk perlindungan bagi sumber orang asal dan pengetahuan tradisional dibawah kerangka undang-undang sediaada. Artikel ini akan secara khusus melihat hubungan diantara sistem IPR dibawah TRIPS Agreement dan prinsip-prinsip akses dan perkongsian faedah dibawah CBD. Melalui artikel ini, kita akan melihat bahawa kerangka IPR sediaada tidak mempunyai peruntukan yang mencukupi bagi melindungi kepentingan orang asal terhadap pengetahuan tradisional mereka dan ini adalah bertentangan dengan peruntukan dibawah kerangka CBD.

Kata kunci: akses dan perkongsian saksama faedah, pengetahuan tradisional, Perjanjian TRIPS, Konvensyen Kepelbagaian Biologi

INTRODUCTION

In the biotechnology¹ and bioprospecting² industries, traditional knowledge is an invaluable asset to scientific research geared towards the identification of plants, or their by products, with pharmacological value that could be utilised in the production of medicines within the international market. Traditional knowledge is also essential to the food security and health of millions of peoples in the developing world. In many countries, traditional medicines provide the only affordable treatment available to poor or marginalised peoples,

such as indigenous peoples. Traditional knowledge has played, and still plays, a vital role in the daily lives of the vast majority of people.

The international community has only recently sought to recognise and protect traditional knowledge. The parameter of the present study considers the traditional knowledge of indigenous peoples³ and the legal framework established under the Convention on Biological Diversity⁴ (CBD). The CBD sets out principles governing access to genetic resources and the knowledge associated with them, and the sharing of benefits arising from such access (ABS). The relationship between the

intellectual property rights' (IPR) system under the Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS Agreement) and the ABS principles of the CBD in the context of traditional knowledge are of particular importance. Two particular issues are considered in the relationship between IPR provisions in the TRIPS Agreement and the CBD; and traditional knowledge: (i) what is the existing legal framework available for the protection of traditional knowledge; and (ii) does the existing IPR framework provides adequate protection for traditional knowledge?

INDIGENOUS KNOWLEDGE AND BIOPIRACY

The fact that biopiracy has become synonymous with bioprospecting is a concern for indigenous peoples,⁵ as it has involved the misappropriation of indigenous peoples' knowledge and biological resources.⁶ Biopiracy is the appropriation of biological resources and knowledge associated with the resources without the prior informed consent⁷ (PIC) of the indigenous peoples and/or of the competent authority, for access and benefit-sharing, under mutually agreed terms. Generally, biopiracy is used to describe the manipulation of IPR to gain exclusive control over biological resources without giving adequate recognition or remuneration to the original possessors of these resources and/or knowledge (who normally are indigenous peoples). In this respect, the issue is not whether a patent should be granted, but whether the original holder of the knowledge underpinning the invention is receiving a fair share of any benefits arising from its commercialisation.

CBD AND PROTECTION OF INDIGENOUS KNOWLEDGE

The CBD was formulated in 1992 to indirectly control the act of biopiracy by introducing the ABS policy to be implemented as national law. Article 8(j)⁸ is specifically concerned with indigenous knowledge and recognises indigenous peoples' status as both providers of knowledge and as conservers of biodiversity. Due to indigenous peoples' contributions in both the knowledge and conservation of biodiversity, their contributions must be "respected" and consent must be sought before such knowledge can be disseminated or used, and the equitable sharing of the benefits is to be "encouraged".⁹ As a result, States are encouraged to include such communities in negotiation for benefit-sharing and PIC mechanism. Even though a State is not obligated to dictate unilaterally how benefit should be shared in a private transaction, the State has an obligation to "encourage" the equitable sharing of benefits.¹⁰

Some view that by using the words "respect" and "encourage", CBD does not explicitly recognises the

indigenous peoples' rights to their biodiversity and knowledge.¹¹ Additionally, critics argue that the lack of mechanisms to control outsiders' access to biological resources (for example, a binding code of conduct) or to determine the equitable sharing of benefits renders the CBD ineffective.¹² Some argue that although the words "respect" and "encourage" seemingly soften the impact of the provisions, they do not affect the binding nature of the instrument. States are nonetheless obligated to respect and protect indigenous peoples' knowledge and biological resources.

However, the CBD has limitations. The provisions of the CBD only bind the 193 contracting State parties,¹³ and are not directly binding on individuals, corporations, NGOs or sub-national entities. Non-State entities can only be bound by the provisions of the CBD if the State parties adopt national legislation expressly extending the provisions to such entities. In such circumstances, they are subject to relevant national law and not directly CBD. A further limitation of the CBD stems from that fact that its provisions do not cover purely domestic scenarios, where the parties engaging in, and affected by, the collection, sampling, bioprospecting and commercialisation exist within the same State. As a result, such scenarios are governed purely by the national law of the State in which they occur, rather than by the provisions of the CBD.¹⁴

Most importantly the CBD merely provides a legal framework concerning biological diversity for States and must be considered in light of the Bonn Guidelines on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising Out of Their Utilization (Bonn Guidelines).¹⁵ The guidelines should assist Parties, Governments and other stakeholders in developing an overall ABS strategy, and in identifying the steps involved in the process of obtaining access to genetic resources and benefit-sharing. More specifically, these voluntary guidelines are meant to assist States, Governments and other stakeholders when establishing legislative, administrative or policy measures on access and benefit-sharing and/or when negotiating contractual arrangements for access and benefit-sharing. Among other issues, the guidelines deal with PIC, mutually agreed terms and guidelines for the roles, responsibilities and participation of stakeholders. The guidelines recognize that all relevant stakeholders should be involved in access determination, but add that the question of which stakeholders need to be involved can only be answered on a case-by-case basis. Local and indigenous communities are explicitly noted as stakeholders who need to be involved in consultations as well as in PIC procedures that are in accordance with traditional practices. While most stakeholders were supporting the contents of the guidelines, criticism was voiced on the voluntary status of the guidelines and their lack of elaboration.

The other supplementary agreement to the CBD is the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Nagoya Protocol). It provides a transparent legal framework for the effective implementation of ABS.¹⁶ The Nagoya Protocol will create greater legal certainty and transparency for both providers and users of genetic resources by: (i) establishing more predictable conditions for access to genetic resources; and (ii) helping to ensure benefit-sharing when genetic resources leave the contracting party providing the genetic resources. This agreement is now open for signature until 1 February 2012 and is yet to enter into force. Therefore, for purposes of this paper, discussions will only be made to Bonn Guidelines and not the Nagoya Protocol.

RIGHT TO PROVIDE CONSENT FOR ACCESS AND SHARE BENEFITS (ABS)

The following paragraphs will discuss the ABS policy under CBD and Bonn Guidelines in the context of indigenous peoples' knowledge and biological resources. The discussion is not intended to give complete description of the framework but to understand the issue in developing future system of protection for indigenous peoples.

The CBD recognises the sovereign rights of the States over their biological resources and imposes a duty on the national governments to develop proper regulations to control the access to biological resources and the sharing of benefits.¹⁷ The issue of ABS can be found in Article 15 of the CBD. Access is to be permitted on mutual agreed terms¹⁸ and is subject to the PIC of the providing country through its competent national authority.¹⁹ While CBD is silent on the details of PIC, the Bonn Guidelines²⁰ discuss PIC in greater detail. Although the Bonn Guidelines similarly provide that the PIC for access to biological resources has to be obtained from the competent national authority,²¹ it also mandates that the "established legal rights of indigenous and local communities associated" with such genetic resources should be respected and the consent of relevant indigenous peoples should be obtained "as appropriate to the circumstances" and "subject to domestic laws".²² Furthermore, while the CBD requires the consent of the indigenous knowledge holders prior to the use or dissemination of traditional knowledge,²³ the Bonn Guidelines further require the PIC of indigenous peoples in relation to access to their biological resources and the nature of the involvement of the traditional knowledge holders before bioprospecting commences.²⁴

The Bonn Guidelines also contain provisions on the roles, responsibilities and participation of stakeholders.²⁵ The guidelines recognise that all relevant stakeholders

should be involved in access determination, but add that the question of which stakeholders need to be involved can only be answered on a case-to-case basis.²⁶ Indigenous peoples are explicitly noted as stakeholders who need to be involved in consultations, as well as in PIC procedures in accordance with their traditional practices. This is intended to place the marginalized groups in a position in which their concerns must be heard and respected.²⁷ Moreover, States are encouraged, in the course of implementing the CBD, to introduce laws clarifying the property rights of indigenous peoples.²⁸ Hence, the Bonn Guidelines have two principal effects: they elevate the position of the marginalized stakeholders as active negotiation partners in consultations; and they encourage the introduction of their land rights. The ability for indigenous peoples to negotiate on their own and the legal recognition of land rights are preconditions for empowerment and may contribute to sustainable development.²⁹

The second right of indigenous peoples under ABS policy is the right to share the benefits arising from the utilisation of biological resources and traditional knowledge. The issues considered by the relevant provisions are the means and manners by which indigenous peoples can benefit from the utilisation of their resources and knowledge; and the nature of the mechanism for benefit-sharing. The attainment of fair and equitable benefit-sharing is the third objective of CBD³⁰ and considers three parties: (i) the bioprospector, normally a foreigner; (ii) the State; (iii) and the owner (indigenous peoples in the present scenario).³¹

CBD principally emphasises benefit-sharing between two countries³² and is seemingly less concerned with benefit-sharing between the State and the indigenous peoples. The absence of a clear system of protections in matters arising between the State and indigenous peoples allows for potential inter-community conflicts between a State and its indigenous communities. Furthermore, CBD provisions concerning the obligation to share benefits arise in the context of access to biological resources.³³ The CBD, however, contains only one provision concerned with access to indigenous knowledge.³⁴ The benefit-sharing obligation under this article arises when access to knowledge, innovations and practices of indigenous is sought and calls on contracting parties to "encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices."

However, the CBD is silent on the type of benefits that indigenous peoples can claim. A temporal distinction between short, medium and long (-term) benefits is commonly used in any ABS agreement. Short-term benefits comprise those payments and in-kind transfers which immediately accompany access to biological resources.³⁵ The medium term benefits comprise the phase between the extraction of resources and the final commercialisation that creates actual profits for the

user.³⁶ The long term benefits refer to the point in time when successful product development has been achieved and profits arise from commercialisation.³⁷ The majority of benefits realised so far through ABS agreements are reported to be non-monetary, such as capacity-building and the provision of equipment for legal and scientific institutions in the providing countries.³⁸ In such scenarios, the State and its scientific institutions are the principal beneficiaries of ABS agreements, rather than the indigenous peoples whose knowledge and resources are utilised in the course of bioprospecting.

PROTECTION OF INDIGENOUS KNOWLEDGE AND IPR SYSTEM

The issue of the protection of indigenous knowledge has also been discussed in relation to IPR system³⁹ in broader terms. Contemporarily, the debate continues as to whether the protections accorded to indigenous knowledge by the IPR systems envisaged by the TRIPS agreement and the CBD are favourable to indigenous people. The theoretical arguments concerning the use of IPR systems as a means of protecting indigenous rights to traditional knowledge must be elaborated upon in order to understand the debate concerning the relationship between the CBD and the TRIPS Agreement in the context of the protection of indigenous knowledge.

THEORETICAL ARGUMENTS: IPR AS PROTECTION OF INDIGENOUS KNOWLEDGE

During the United Nations World Conference on Human Rights in Vienna in 1993, States agreed that all human rights are universal, indivisible, interdependent and interrelated⁴⁰ and that IPR, as provided under Article 15 of the International Covenant on Economic, Social and Cultural Rights (ICESCR),⁴¹ are part of the corpus of international human rights law. Article 15 provides the right of everyone (including indigenous peoples) to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he or she is the author.⁴² This provision is supplemented by the General Comment No. 17 (2005) of the CESCR which provides an interpretation of each element of the provision and establishes the scope and content of IPR.⁴³ Therefore, indigenous peoples' rights relating to resources and knowledge are already recognised by the international human right as a cultural right.

To most indigenous peoples, IPR is an effective rhetorical vehicle to keep the issues of autonomy and self-determination on the bargaining table. However, some communities see IPR as an obstacle to, rather than promoting, the integrity of cultural and political aspirations.⁴⁴ United Nation Development Program

Consultation on the Protection and Conservation of Indigenous Knowledge in Sabah in 1995 has documented this issue in the Asian context. The Asian indigenous peoples' deliberation primarily emphasised self-determination and the assertion that "the indigenous peoples' struggle for self-determination is very strong counter-force to the IPR system vis-à-vis indigenous knowledge, wisdom and culture".⁴⁵ Therefore the struggle for self-determination cannot be separated from the campaign against IPR systems, particularly their applications on the biological resources and indigenous knowledge.

However, the forum has further referred to IPR as a "western, threatening, new form of colonisation, exploitative".⁴⁶ The perspective is *contra posit* to the view that IPR is a means to protect indigenous peoples' knowledge and resources. Anthropologist Gudeman views the differences between western and eastern societies as the reason that IPR conventions are considered irrelevant to many societies that are rich in biodiversity. The social and political differences result in differences of opinions as to which rights are to be recognised and negotiated between the western and the eastern societies. Gudeman⁴⁷ suggests that in a community economy (amongst indigenous or traditional societies), innovations are cultural in nature. Innovations are products of "common" community land, material resources, knowledge and practice that are built up prior to innovation and provide the means for developing new products. The community economy is therefore another dimension of the market forces.⁴⁸

Brush⁴⁹ takes the view that traditional knowledge, in particular cultural knowledge, cannot be adequately conserved by through documenting the knowledge or by storing the products of the knowledge in museums. Traditional knowledge can only be conserved by maintaining its use and IPR potentially allows communities to harness market forces to achieve this objective. IPR is also seen as an incentive to indigenous peoples for maintaining environmental stewardship and to increase their economic return. The theory of steward and user is where public goods like forest and natural resources, are converted into private goods (medicine or drug) for profit to all parties and maintaining conservation. IPR therefore links biological resources with cultural knowledge for larger public purposes.⁵⁰ Anuradha⁵¹ further argues that the juxtaposition of biodiversity and cultural diversity among local population is not a coincidence, and that cultural diversity or innovation has arisen as a human adaptation to the biodiversity and has in turn nurtured it.

The use of IPR as a means of protecting traditional knowledge within a national system depends upon the accountability of the respective State's political structure. For instance, the success of the Costa Rican government in promoting the capitalisation of its biological resources has much to do with its stable

political institutions. Structural impediments limit the flow of resources to many indigenous peoples in less developed countries. The flow of resources into these communities is not as efficient as the flow of resources out of the communities. As a result, compensation made to national governments is unlikely to reach indigenous peoples.⁵² Michael Dove⁵³ cautions that the political-economic elites of less developed countries may support IPR because they present unique opportunities for north-south wealth transfer, but represent "an opportunity not to conserve resources but to appropriate as much as possible as any value realised from these resources". Incentive mechanisms in an ideal IPR system will create alternative frameworks to provide incentives to knowledge holders to maintain and improve skills. Recognition and possible economic benefits from IPR will encourage knowledge holders to convey knowledge to future generations. Traditional knowledge should be documented, registered and protected in community registers, database or network.⁵⁴

The above discussions demonstrate that IPR is an important form of protection not only for indigenous peoples' resources and knowledge,⁵⁵ but also as the right to their self-determination and autonomy.⁵⁶ The incentive system also encourages indigenous peoples to privatise their resources and knowledge. The question remains as to the extent that the existing IPR system protects indigenous knowledge in relation to ABS principles in the TRIPS Agreement and the CBD.

RELATION BETWEEN THE TRIPS AGREEMENT AND CBD

While the theoretical arguments in the previous section support the view that the IPR system can effectively protect the interests of indigenous peoples in relation to indigenous knowledge through the use of ABS agreements, the relationship between the protection of indigenous knowledge and the CBD and TRIPS Agreement now needs to be considered. This analysis is important to demonstrate any gaps between theoretical justifications for the protection of indigenous peoples' knowledge and the actual legal provisions.

Before proceeding further, it is worth mentioning the relevant IPR protection in issue, i.e. patent under Article 27 of the TRIPS Agreement.⁵⁷ Article 27(1) mandates patent protection for all new products and processes generated using any fields of technology⁵⁸ including biotechnology. Article 27(3)(b) has been introduced with special reference to inventions based on genetic resources and envisages different modes of protection by an effective *sui generis* system. While some items, such as plants, animals and biological processes for the production of plants or animals, are excluded from all forms of protection, there is an obligation to provide patent protection for micro-organisms and non-biological and microbiological processes for the

production of animals and plants.⁵⁹ An option for a *sui generis* form of protection for new plant varieties is also provided by this provision.⁶⁰

While implementing the obligations under Article 27(3)(b), developing countries⁶¹ experienced difficulties in reconciling the conflict between the obligation under Article 27(3)(b) and the protection of indigenous knowledge associated with genetic resources under Article 8(j) of the CBD.⁶² Even though it is expressly stated in the CBD that the implementation of the obligations under IPR should not run counter to the objectives of the CBD,⁶³ many countries could not find solutions to the conflicts that emerged from the TRIPS Agreement and CBD. The turmeric and basmati cases reflect the weaknesses of existing IPR system when patent protections⁶⁴ are afforded to new products of biotechnology based on existing knowledge rather than new knowledge.⁶⁵ Though the patent system offers possibilities for the revocation of such patents,⁶⁶ patenting of existing knowledge, particularly when it involves products based on indigenous knowledge, is not preventable. Furthermore, unlike CBD, there is no requirement in the TRIPS Agreement for a patent applicant to disclose information on indigenous knowledge used and to produce arrangement on the sharing of benefits arising from the use of indigenous knowledge in the new inventions that are protected through patents. In other words, the TRIPS Agreement does not provide a safeguard to prevent the patenting of an innovation which is based on traditional knowledge and does not require benefit-sharing for the use of such knowledge. In this sense, the TRIPS Agreement is in conflict with ABS provisions in the CBD.

During the review of Article 27(3)(b) at the TRIPS Council Meetings in 1999 and 2000, many developing countries recognised the conflict and demanded that there should be explicit provisions in the TRIPS Agreement to: (i) prevent the grant of patents to existing indigenous knowledge; and (ii) ensure the sharing of benefits derived from the patents granted to new inventions based on indigenous knowledge.⁶⁷ In response, developed countries argued that the existing provisions on patenting are adequate and the problem arises from the absence of properly documented indigenous knowledge readily available to patent offices in order to perform searches regarding the existence of such knowledge as prior art.⁶⁸ The debate continued during the WTO Ministerial Meeting at Doha, resulting in the WTO requesting the TRIPS Council to consider the potential conflicts between Article 27(3)(b) and the CBD⁶⁹ and provide express provisions in the TRIPS Agreement stipulating the disclosure of the information in the patent specification, including the origin of the genetic resources and the indigenous knowledge associated with them and the benefit-sharing requirement.⁷⁰ Developed countries opposed this proposal, on the basis that it would require new conditions for the grant of patent⁷¹

and the identification of the source and geographical origin of genetic resources was not always practical. The European Union, while agreeing to the need for disclosure of information, joined with the USA and argued that it should not be made a condition precedent for the grant of a valid patent.⁷² This debate is ongoing.

Tobin⁷³ argues that if patent application procedure requires disclosure and PIC, market force will provide strong inducement for user to identify legitimate provider and seek approval. The solution will only involve minor changes to patent application procedure on information of use and PIC and does not necessitate amending the patent law or require the examination of the ABS agreement by the patent office.⁷⁴ Although minor, these changes will dramatically impact the preservation of indigenous knowledge. Tobin⁷⁵ argues that such requirements can be incorporated in the Certificate of Origin issued by the relevant competent national authority, which will bear the following information: (i) name of the owner; (ii) tangible and intangible resources; and (iii) rights and limitation.

The debate is also concerned with whether benefit-sharing can be achieved through contractual agreements. Contract law can be used for achieving PIC without pursuing the proposal to establish a link between⁷⁶ the CBD obligations and the TRIPS Agreement.⁷⁷ Gopalakrishnan examined this argument in the Indian context and concluded that there is a problem in creating an international binding obligation to enact PIC and benefit-sharing legislation amongst States.⁷⁸ To achieve international compliance with PIC provisions, all States must enact legislation mandating PIC, whether it is obtained in their own territory or in the territory of another State. The domestic law must prohibit the use of genetic resources and indigenous knowledge associated with them within another State without PIC, as well as prohibiting the use of genetic resources and indigenous knowledge associated with them within the States without PIC from that country.⁷⁹ This alone will enable the knowledge holder, though with difficulty, to take action against misappropriation of the knowledge without permission by either a foreign or domestic bioprospector.

The Indian Biological Diversity Act⁸⁰ prohibits access to Indian genetic resources and traditional knowledge without PIC by foreigners⁸¹ but does not contain any provision to prohibit the use of genetic resources outside the State without PIC. If genetic resources are accessed without permission and used in another country, the Indian traditional knowledge holder will not be in a position to take effective action in that country in the absence of similar legislation.⁸² There is also no obligation to obtain PIC by the Indian or foreign patent applicant if the origin of the genetic resource lies outside India.⁸³ This will enable an Indian or a foreigner in India to bypass the biodiversity law of

another country and enjoy the full benefit of commercial utilisation of traditional knowledge without having to enter into any contractual obligation for benefit-sharing. Furthermore, it may not be possible to enforce a court order from India prohibiting the use of such genetic resources where such an act is not prohibited in the country in which it is to be enforced.

CONCLUSION

The existing IPR legal framework does not provide adequate protection for indigenous peoples' knowledge and biological resources. While Article 8(j) of the CBD creates an obligation to seek PIC for the use of any traditional knowledge and ensure benefit-sharing and IPR is theoretically an important method of protection for traditional knowledge, the existing IPR system was not designed for the protection of traditional knowledge in its original form, as oral knowledge and often undocumented. The nature of traditional knowledge makes the determination of its existence as prior art difficult, if not impossible, for patent officers and therefore facilitate biopiracy when patents are granted on innovations that were based upon existing knowledge. Furthermore, the existing IPR system does not have the requirement for benefit-sharing as provided in the CBD and there is an ongoing debate to amend TRIPS Agreement in order to impose PIC and benefit-sharing and strengthen the link between the TRIPS Agreement and the CBD.⁸⁴

NOTA

¹ Article 2 of CBD defines biotechnology as any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.

² Bioprospecting involves the access to biological resources and indigenous knowledge as an important lead in drug discovery and other specific uses.

³ Indigenous knowledge is often used interchangeably with traditional knowledge. Indigenous knowledge is seen as the traditional knowledge of indigenous peoples. Thus not all traditional knowledge holders may be indigenous, but all indigenous peoples are traditional knowledge holders.

⁴ 31 I.L.M. 1992.

⁵ Indigenous peoples is not defined by the United Nations Declaration on the Rights of Indigenous Peoples 2007 (UNDRIP). However, in the context of Malaysia, indigenous peoples are the Orang Asli and the natives of Sabah and Sarawak.

⁶ Article 2 CBD defines "biological resources" to include genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity. "Genetic resources" means genetic material of actual or potential value.

⁷ In UNDRIP, consent has to be in a form of "free, prior and informed consent". See Article 10, 18 and 32(1) for examples.

⁸ Article 8(j) CBD provides "Subject to its national legislation, 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 the benefits arising from the utilization of such knowledge, innovations and practices".

⁹ Article 8(j) CBD.

¹⁰ See R. Nordin, "Regulating Access to Genetic Resources and the Sharing of Benefit through the Access and Benefit Sharing ("ABS") Agreement: Transaction Cost Theory" (2008) *Malaysian Journal on Science and Technology Studies* 6, pp 89-99, p 92.

¹¹ Bengwayan, Michael A., *Intellectual and Cultural Property Rights of Indigenous and Tribal Peoples in Asia*, Minority Rights Group International, London, 2003.

¹² Tobin, B., 'Recognising Indigenous Rights over Collective Knowledge', (1997) *Bulletin of the Working Group on Traditional Resources Rights*, Winter 1997, p 56. See also Tobin, B. *Access to Genetic Resources. Strategies for Benefit Sharing*, ACTS, Nairobi Press, 1997.

¹³ Representing 193 State Parties to the Convention as at 2011.

¹⁴ Carrizosa, S, Brush, S, Wright, B.D and Mc Guire, P.E. (Eds.) *Assessing Biodiversity and Sharing the Benefits: Lessons from Implementing the Convention on Biological Diversity*, IUCN The World Conservation Union, 2004.

¹⁵ Bonn Guidelines were formulated by an Ad Hoc Open-Ended Working Group on ABS of the CBD and adopted at the Sixth Conference of the Parties in April 2002. See Decision VI/24 at <http://www.biodiv.org/decisions> for details (11 August 2011).

¹⁶ See the COP's decision on the adoption of Nagoya Protocol, COP 10 Decision X/1 dated 29 October 2010.

¹⁷ Article 15 (1) CBD recognizes the sovereign rights of States over their natural resources and authority to determine access to genetic resources rests with the national governments and subject to national legislation.

¹⁸ Article 15 (4) CBD provides that "Access, where granted, shall be on mutually agreed terms and subject to the provisions of this Article".

¹⁹ Article 15 (5) CBD provides that access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party.

²⁰ Article 28 Bonn Guidelines.

²¹ Article 28 Bonn Guidelines.

²² Article 31 Bonn Guidelines.

²³ Article 8(j) of the CBD.

²⁴ Article 8(j) of the CBD. UNDRIP has a similar provision in Article 32(1) which provides that the free, prior and informed consent of the relevant indigenous peoples is required prior to the approval of any project affecting their land, territories and other resources on the basis that indigenous peoples have the right to determine and develop priorities and strategies for the development of their land and resources.

²⁵ Parts II and III Bonn Guidelines.

²⁶ Article 17 Bonn Guidelines.

²⁷ See also Article 32(1) UNDRIP.

²⁸ See also Article 26(3) of UNDRIP which provides that States are obligated to give legal recognition and protection to the lands, territories and resources of the indigenous peoples concerned in accordance with the customs, traditions and land tenure systems.

²⁹ Similar requirement is found in the International Labour Organisation Convention No 169 on Indigenous and Tribal Peoples (ILO 169), Article 15(1).

³⁰ One of the three objectives of the CBD as set out in its Article 1, is the "fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding".

³¹ In Malaysia, by virtue of the principles in *Sagong Bin Tasi and Ors v Kerajaan Negeri Selangor and Ors* (2002) 2 MLJ 591 and *Kerajaan Negeri Selangor & Ors v Sagong Bin Tasi & Ors* (2005) 6 MLJ 289, Malaysian court recognises the land rights of the Orang Asli.

³² See in particular, Articles 1, 15, 16, 17, 18 and 19 CBD.

³³ Articles 15.7, 16 and 19 CBD.

³⁴ Article 8(j) CBD.

³⁵ Examples, access to ex situ facilities and databases; advance payments; bioprospecting fees (up front fees); payments per sample (sample fees); share in research budget and/or equipment for laboratories; fees to trust funds for conservation & sustainable use of biodiversity.

³⁶ Examples, acknowledgement in publications; research collaboration; scientific and administrative capacity-building; participation in product development; contributions to local economy; protection of local applications of IPR; joint ventures; research funding.

³⁷ Examples, access to research results and exchange of experience; joint ownership of patents & other IPR; participation in value added; share in royalties.

³⁸ Merck - InBio Agreement in Costa Rica is one of the examples.

³⁹ Although IPR system covers other protections like copy right and trade mark, this paper will only focus on patent and the corresponding knowledge like medicinal knowledge.

⁴⁰ Rosemary J. Combe, 1998, 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by The Recognition of Indigenous Knowledge and The Conservation of Biodiversity' 1998 *Indiana Journal of Global Legal Studies* 6, pp 59-83.

⁴¹ International Covenant on Economic, Social and Cultural Rights 1966, a copy is accessible at <http://www.ohchr.org/english/countries/ratification/3.htm> (10 March 2010).

⁴² ICESCR, Article 15 paragraph 1(c) of ICESCR.

⁴³ General Comment No. 17 (2005), accessible at [http://www.unhchr.ch/tbs/doc.nsf/\(Symbol\)/E.C.12.GC.17.En?OpenDocument](http://www.unhchr.ch/tbs/doc.nsf/(Symbol)/E.C.12.GC.17.En?OpenDocument) (11 August 2011).

⁴⁴ Rosemary J. Combe, 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in 1998, International Law Posed by The Recognition of Indigenous Knowledge and The Conservation of Biodiversity' p 69.

⁴⁵ Rosemary J. Combe, 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by The Recognition of Indigenous Knowledge and The Conservation of Biodiversity' 1998, p 69.

⁴⁶ Rosemary J. Combe, 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by The Recognition of Indigenous Knowledge and The Conservation of Biodiversity' 1998, p 69.

⁴⁷ Stephen Gudeman, 'Sketches, Qualms, and other Thoughts on Intellectual Property Rights' in S.B. Brush and D. Stabinsky (eds.), *Valuing Local Knowledge: Indigenous People and Intellectual Property Rights*, 1996, p 104.

⁴⁸ Stephen Gudeman, 'Sketches, Qualms, and other Thoughts on Intellectual Property Rights' in S.B. Brush and D. Stabinsky (eds.), *Valuing Local Knowledge: Indigenous People and Intellectual Property Rights*, 1996, p 104.

⁴⁹ Steven B. Brush, 'Whose Knowledge, Whose Genes, Whose Rights?' in S.B. Brush and D. Stabinsky (eds.), *Valuing Local Knowledge: Indigenous People and Intellectual Property Rights*, 1996, p 4-5.

⁵⁰ Rosemary J. Combe, 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by The Recognition of Indigenous Knowledge and The Conservation of Biodiversity' 1998, p 69.

⁵¹ R.V. Anuradha, 'In Search of Knowledge and Resources: Who Sows, Who Reaps?' 1997 *Rev. of Eur. Comm. & Int'l Envtl. L.* 6, pp 263-273.

⁵² Rosemary J. Combe, 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by The Recognition of Indigenous Knowledge and The Conservation of Biodiversity' 1998, p 69.

⁵³ Rosemary J. Combe, 'Intellectual Property, Human Rights & Sovereignty: New Dilemmas in International Law Posed by The Recognition of Indigenous Knowledge and The Conservation of Biodiversity' 1998, p 65.

⁵⁴ Anil K. Gupta, 'Getting Creative Individuals and Communities Their Due: Framework for Operationalising Article 8(j) and 10C (1)' 1997. Draft paper invited by CBD Secretariat accessible at <http://csf.Colorado.edu/sristi/papers/getting.html> (10 April 2011).

⁵⁵ See also UNDRIP and ILO 169 in general.

⁵⁶ See Articles 3 and 4 UNDRIP for the corresponding provisions.

⁵⁷ Other protections such as trademark and copyright are less controversial.

⁵⁸ Article 27(1) TRIPS Agreement.

⁵⁹ Article 27(3)(b) TRIPS Agreement.

⁶⁰ Article 27(3)(b) TRIPS Agreement.

⁶¹ Including but not limited to India.

⁶² N. S. Gopalakrishnan, 'TRIPS And Protection Of Traditional Knowledge of Genetic Resources: New Challenges To The Patents System' (2005) *The European Intellectual Property Review*, pp 11-18 accessible at <http://uk.westlaw.com/search/default> (15 April 2010).

⁶³ Article 16(5) CBD provides "Member states shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives".

⁶⁴ "Patent system", "patent law" and "patent policy" in this article refer to Article 27 of the TRIPS Agreement.

⁶⁵ See Siddhartha Prakash, 'Trade and development Case Studies: India, Trade and Development Centre' accessible at <http://www.itd.org/issues/india6.htm#Tumeric>. See also case study Ranjit Devraj, US Corporate 'Biopirates' Still

Staking Claim On Basmati Rice. Monday, October 9, 2000 by the InterPress Service, <http://www.commondreams.org/headlines/100900-01.htm>; Chakravarthi Raghavan, 'NGOs Campaign against Basmati Patents', December 2000 <http://www.twinside.org.sg/title/2129.htm>. (19 April 2011).

⁶⁶ Article 32 TRIPS Agreement provides "an opportunity for judicial review of any decision to revoke or forfeit a patent shall be available". Most of Patent Act provide on revocation of patents. For Indian Patent Act 1970, see Section 64 on revocation of patents and Sections 301-307 of U.S.C on re-examination of patents. For Malaysian Patent Act 1983, see Section 33C on rectification of Patent Register by court.

⁶⁷ See Minutes of the Meetings; IP/C/M/24 dated 17 August 1999; IP/C/W/163 dated 8 November 1999; IP/C/W/195 dated 12 July 2000 and IP/C/W/206 dated 20 September 2000, all accessible at WTO website at http://www.wto.org/english/tratop_e/trips_e/gil_docs_e.htm (11 August 2011).

⁶⁸ See IP/C/M/162 dated 29 October 1999; IP/C/W/209 dated 3 October 2000; IP/C/W/254 dated 13 June 2001.

⁶⁹ Para 19 of the Doha Declaration accessible at http://www.wto.org/English/tratop_e/dda_e/dohaexplained_e.htm (11 August 2011). See WT/MIN(01)/DEC/1 dated 20 November 2002.

⁷⁰ See the representations made by India and Asian and African countries, IP/C/W/195 dated 12 July 2000; IP/C/W/356 dated 24 June 2004 and IP/C/W/350 dated 26 June 2002.

⁷¹ Particularly the USA. See IP/C/W/257 dated 1113 June 2001; IP/C/W/341 dated 25 March 2002 and IP/C/W/393 dated 28 January 2003.

⁷² See IP/C/W/383 dated 17 October 2002 and WT/CET/W/223 dated 14 February 2003.

⁷³ Tobin, B., 1997, p 56.

⁷⁴ IP/C/W/383 dated 17 October 2002 and WT/CET/W/223 dated 14 February 2003.

⁷⁵ IP/C/W/383 dated 17 October 2002 and WT/CET/W/223 dated 14 February 2003.

⁷⁶ For a summary of the different views expressed by countries see note, 'The Relationship between the TRIPS Agreement and the Convention on Biological Diversity', Council for TRIPS, JOB(02)/58 dated 18 June 2002.

⁷⁷ Arguments of the United States in the TRIPS Council, IP/C/W///257 June 2001.

⁷⁸ N. S. Gopalakrishnan, 'TRIPS And Protection Of Traditional Knowledge of Genetic Resources: New Challenges To The Patents System' (2005) *The European Intellectual Property Review*, pp 11-18 accessible at <http://uk.westlaw.com/search/default> (15 April 2010).

⁷⁹ N. S. Gopalakrishnan, 'TRIPS And Protection Of Traditional Knowledge of Genetic Resources: New Challenges To The Patents System' (2005) *The European Intellectual Property Review*, pp 11-18 accessible at <http://uk.westlaw.com/search/default> (15 April 2010).

⁸⁰ Indian Biological Diversity Act 2002 accessible at http://www.nbaindia.org/act/act_salient.htm. (20 Feb 2011).

⁸¹ Section 3(1) Biological Diversity Act reads: "No person referred to in subsection (2) shall without previous approval of the National Biodiversity Authority obtains any biological resource occurring in India or knowledge associated thereto for research or for commercial utilization or for bio-survey and bio-utilisation".

⁸² N. S. Gopalakrishnan, 'TRIPS And Protection Of Traditional Knowledge of Genetic Resources: New Challenges To The Patents System' (2005) *The European Intellectual Property Review*, pp 11-18 accessible at <http://uk.westlaw.com/search/default> (15 April 2010).

⁸³ Section 6(1) Biological Diversity Act reads: "No person shall apply for any intellectual property right, by whatever name called, in or outside India for any invention based on any research or information on a biological resource obtained from India without obtaining the previous approval of the National Biodiversity Authority before making such application".

⁸⁴ This article is part of the research under Geran Galakan Penyelidik Muda of UKM (UKM-GGPM-CMNB-138-2010) and Dana Intensif Penyelidik Muda of UKM (UKM-DIPM-103-2011).

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