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TRADITIONAL KNOWLEDGE AND GENETIC RESOURCES

Document prepared by Mr. Yin Xintian,
Director General, Legal Affairs Department,
State Intellectual Property Office (SIPO), Beijing

TRADITIONAL KNOWLEDGE AND GENETIC RESOURCES

I. INTRODUCTION

With the emergence of knowledge-based economy and the development of modern science and technologies, especially biotechnology, the economic, scientific and commercial value of genetic resources and traditional knowledge associated with the resources have attracted widespread attention from areas including food and agriculture, biological diversity and the environment, human rights, cultural policy, trade and economic development. And the issues of efficient and effective protection of traditional knowledge and rights and interests of traditional knowledge holders have been generated from the discussions of certain international fora such as Convention on Biological Diversity (CBD) and Food and Agriculture Organization (FAO). Certainly the intellectual property issues related to traditional knowledge have appeared along with the discussions. It's expected that the intellectual property system could play an important role in the protection of traditional knowledge as well as the solutions to problems faced by other international fora. Therefore, the World Intellectual Property Organization (WIPO) were requested by its member states to undertake exploratory groundwork and facilitate discussions on intellectual property issues regarding genetic resources and traditional knowledge.

In response to the requests of WIPO Member States and the expectations from other international fora, the WIPO General Assembly, at its 26th Session, held from September 26 to October 3, 2000, established an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore ("the Intergovernmental Committee"). Three primary themes, namely intellectual property issues that arise in the context of (i) access to genetic resources and benefit-sharing, (ii) the protection of traditional knowledge, innovations and creativity, and (iii) the protection of expressions of folklore, including handicrafts, have been decided to be discussed in the forum of the Committee. The Intergovernmental Committee had held two sessions in 2001.

This presentation will focus on general information about traditional knowledge and genetic resources matters, and the main considerations of the Intergovernmental Committee.

II. TRADITIONAL KNOWLEDGE

1. Term of Traditional Knowledge

What's traditional knowledge? The definitions had different meanings while they were developed and used for different purposes, such as for sociological, historical or legal purposes. The concept of "traditional knowledge" may refer to indigenous knowledge, traditional medicine, or "knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity". Under the framework of CBD, traditional knowledge could be "a term used to describe a body of knowledge built by a group of people through generations living in close contact with nature". WIPO currently uses the term "traditional knowledge" to

refer to tradition based literary, artistic or scientific works; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information, etc. Given this highly diverse and dynamic nature of traditional knowledge it may not be possible to develop a singular and exclusive definition of the term. However, there still exists the need to delineate the scope of the subject matter of the term for the purpose of facilitating further discussions on protection of traditional knowledge.

Therefore, the International Committee, upon consensus of the Member States, has decided to contribute efforts to delineating the scope of the subject matter for the purpose of having a definition of "traditional knowledge," assessing on the availability and scope of intellectual property protection for traditional knowledge within the scope of the subject matter covered by the definition, and identifying any elements of the subject matter that require additional protection.

2. Possible Means for Protection of Traditional Knowledge

Intellectual property protection of traditional knowledge may be made in two ways: first, the application of existing standards to traditional knowledge subject matter, and, second, the development of new intellectual property standards for the protection of traditional knowledge.

(1) *Intellectual property protection of traditional knowledge*

The application of existing standards to traditional knowledge protection may take the following forms:

(i) Trademarks. Traditional knowledge holders may have their knowledge protected through registering collective and certification trademarks to establish signs under which goods manufactured in accordance with particular traditional methods or standards are sold.

(ii) Geographical indications. Traditional knowledge holders can also use geographical indications to protect their traditional products.

(iii) Patents. Traditional knowledge and inventions or innovations based on traditional knowledge could be protected by patents, subject to requirements for granting patents. For instance, for those traditional knowledge held by certain group people, collective filing of patent applications may made by associations of traditional knowledge holders on behalf of their members.

(iv) Copyright and Related Rights. Traditional knowledge holders may seek to protect their "moral rights" using the moral rights concept in copyright and to protect compilations of traditional knowledge documentation through the concept of original and non-original database protection.

(v) Trade Secret. Certain elements of traditional knowledge may be protected by means of trade secret as well as the law of unfair competition.

(2) *Possibility of developing new intellectual property tools over traditional knowledge*

Because of the characteristics of traditional knowledge, such as transmission from generation to generation, belonging to a territory or nation, and being developed in a constantly changing environment, the current intellectual property system, since its objective of protection of private rights, does not fully address the need of protection of traditional knowledge. However, while the collectivity of creation and ownership may not be the only aspects of traditional knowledge in all cases, and the intellectual property system itself is in a course of progress, the possibility to develop new intellectual property tools for protection of traditional knowledge may not be impossible. In this regard, the broad concept of "intellectual property" in the WIPO Convention, which provides that "intellectual property shall include existing intellectual property rights "*and* all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields," has established a strong basis for developing new intellectual property standards on protection of traditional knowledge.

3. Distributions of Traditional Knowledge to Intellectual Property System

Traditional knowledge may be used as prior art in course of patent examination. The purpose of such consideration is to prevent patent applications involving traditional knowledge from being granted patents. Such consideration could be a measure to protect the interests and benefit of legitimate traditional knowledge holders. However, due to the characters of traditional knowledge that developed by communities and distributed by oral means and the reasons of lack of documents recording traditional knowledge, patent examiners are not able to search and use the related traditional knowledge to evaluate patent applications which are generated from traditional knowledge. Therefore, the problem of documentation of traditional knowledge should be solved first.

III. GENETIC RESOURCES

1. Background Information

Issues concerning genetic resource and related traditional knowledge and their relationship with intellectual property rights were mentioned primarily in "Convention on Biological Diversity"(CBD). The Convention was adopted on June 5,1992, and took effect by the end of 1993. The main principles established by CBD include: the Member States have sovereign right to exploit their own resources pursuant to their own environmental policies, access to genetic resource shall be subject to prior informed consent of the providing party, and the benefits arising from the commercial and other utilization of genetic resources should be shared in a fair and equitable way. Both access to genetic resources and sharing benefits shall be upon mutually agreed terms, namely contractual agreements.

The objectives of the Convention include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. To make the objectives come true, the Member States

of the Convention need to obtain technologies related to biological diversity, because conservation of biological diversity need to be supported by advanced technological means and measures. Correspondingly, the development, exploitation and commercialization of advanced technologies, especially biotechnology, rely on rich and available genetic resources. Due to the protection of intellectual property is very important to the development and exploitation of advanced technologies, the Convention can not avoid itself from involving intellectual property issues which concern the relationship among access to genetic resource, bio-technical inventions and intellectual property protection.

2. Intellectual Property Issues Related to Access to Genetic Resource and Benefit Sharing

According to discussions held by other international fora such as CBD and FAO and proposed tasks of the WIPO Intergovernmental Committee on genetic resource, traditional knowledge and expression of folklore, Intellectual property issues related to access to genetic resource and benefit sharing may appear from four main aspects, namely:

(i) Intellectual property clauses in contractual agreements for access to genetic resources and benefit sharing. Such agreements may face intellectual property issues in respect of ensuring control over *ex-situ* use of genetic resource, technology transfer and joint research and development. Possible intellectual property clauses in such agreement may focus on ownership of intellectual property rights, license granting back and sharing royalties obtained from utilization of intellectual property rights.

(ii) Role of intellectual property rights in legislative, administrative and policy measures to regulate access to genetic resources and benefit sharing. In development of national and regional legislation on access to genetic resources and benefit sharing, the role of intellectual property rights should be considered in context of prior informed consent procedures, ensuring the recording of ownership interests in inventions that arise from access to or use of genetic resources, transfer of and access to technology in the context of benefit sharing, and joint research and development as a form of non-monetary benefit sharing.

(iii) Role of intellectual property rights in multilateral systems for facilitated access to genetic resources and benefit sharing. The issues regarding this aspect include possible intellectual property–based benefit-sharing mechanisms, access to genetic resources covered by intellectual property, and the holders' rights of traditional knowledge associated with genetic resources placed in the multilateral system, and so on. In this regard, FAO has recently obtained some achievements on the matter. In November 2001, the Conference of FAO adopted a binding International Treaty on Plant Genetic Resources for Food and Agriculture ("the International Treaty"). According to the International Treaty, access to plant genetic resources for food and agriculture protected by intellectual and other property rights shall be consistent with relevant international agreements, and with relevant national laws. The International treaty also provides that the benefit generated from the use of plant genetic resources shall be shared fairly and equitably through the following mechanisms: the exchange of information, access to and transfer of technology, capacity-building, and the sharing of the benefits arising from commercialization.

(iv) The relationship between intellectual property protection for biotechnological invention and access to genetic resources and benefit sharing. Issues regarding this aspect may include indication of origin source of the genetic resource in certain documents, particularly in patent applications on biotechnological inventions obtained by using genetic resources for the purpose of verifying prior informed consent and sharing subsequent benefits.

3. Intellectual Property Clauses of Contractual Agreements

Among the four aspects mentioned above, intellectual property clause in contractual agreements regarding transfer of genetic material is very important and useful. And the issues regarding intellectual property clauses were particularly addressed by member states as the primary task of the Intergovernmental Committee at its first session.

Typical Intellectual property clauses relate to access to genetic resources and benefit sharing may include:

(i) sharing of intellectual property rights: The contractual agreements may provide that the providers of genetic materials are entitled to the ownership of the intellectual property rights on inventions which are the outcome of resource utilization;

(ii) sharing royalties from use of intellectual property rights: The parties may also agree to pay royalties obtained from the commercial exploitation of inventions to providers under certain percentage;

(iii) grant-back licenses: Under a "grant-back clause," genetic resource providers are ensured the right to use any patented inventions derived from the use of transferred genetic resource.

Besides, the intellectual property clauses may provide some obligation to recipients of genetic resources, such as use the genetic resources for research purposes only or not seeking patent protection on genetic material or genes.

IV. TRADITIONAL KNOWLEDGE PROTECTION IN CHINA

China is a developing country with a long history and richest traditional knowledge and genetic resources. For instance, as a result of the intelligent activities over thousands of years in the past, China is unique in its traditional medicine technology and its systematic theory. The researchers in traditional medicine have been guided to use patent system to protect traditional medical practices and prescriptions where it is appropriate. Meanwhile, we have made some achievements in making our traditional knowledge into searchable documentation for Chinese traditional medicine.

In respect of protection of genetic resources, China is one of the first signatory states of CBD and has made great efforts to perform the obligations of the Treaty. At the same time, China also takes active measures to coordinate the relationship between the objectives of

CBD and protections Intellectual property. In 1998, the Ministry of Science and Technology and the Ministry of Health jointly promulgated a regulation on administration of human genetic resources. According to the regulation, the human genetic resources found in China shall be exclusively belonged to Chinese entities and should not be transferred to others without authorization. Any foreign party that has legally obtained the genetic resources should not disclose the information related to genetic resources to the public by means of disclosure, publication and applying for patent. While any invention, based on such genetic resources and made under the cooperation between Chinese and foreign entities, could be applied for patent protection, the very patent right should be co-owned by the cooperating parties, and the benefits brought by the utilization of the invention should be shared fairly and equitably between the parties.

V. CONCLUSION

Issues concerning intellectual property protection of traditional knowledge and genetic resources are new and complex problems in the field although they have been dealt with for several years. They may cause the innovation of the present intellectual property systems as well as the emergence of new form of intellectual property rights. To make objectives available, we need to pay great attention and efforts to basic elements of the issues such as documentation of traditional knowledge, recording ownership of traditional knowledge, indication origin of genetic resources in documents relating intellectual property rights, etc. It's believed that adequate intellectual property protection on traditional knowledge including those associated with genetic resources can promote the progress of our whole society.

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