



Positive Protection: Protecting Genetic Resources Related to Traditional Knowledge in Indonesia

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Abstract

Genetic Resources is a foundation of human life, as a source of food, industrial raw materials, pharmaceuticals, and medicines. From its utilization may provide a financial benefit to the provider and the user of it. Unfortunately, most of it obtained from developing countries through biopiracy, including Indonesia. Furthermore, in the early 1980s, access and benefit sharing (ABS) to genetic resources became an international issue. It leads to the adoption of the Convention on Biological Diversity (CBD) in 1992. However, since it was approved, the whole ideas of excellence of it could not be implemented, a problem on it still arises. Intellectual property right laws, in certain aspects, are possible for using to protect traditional knowledge from their utilization. However, at the same time, intellectual property regime also becomes “a tool” to legitimate of biopiracy practices.

Due to international massive pressure, mostly in developing countries, it proposes two kinds of protections, which are positive protection and defensive protection. This paper will examine one of it, which is positive protection. By using the normative method and qualitative approach, this paper identified at least two kinds of positive protections that we can develop in order to protect genetic resources related to traditional knowledge, which are optimizing the patent law and developing the sui generis law. Furthermore, it can be done by some revision by adding new substances, an improvement on the articles, or even by doing the deletion on certain articles. Moreover, in order to develop the sui generis law, it identified several minimum elements that shall be contained on it, inter alia: the purposes of protection; scope of protection; criteria of protection; the beneficiaries of protection: the holder of traditional knowledge; the kind of

rights to be granted; how the rights acquired; how to enforce it; how the rights lost or expired; and dispute resolution.

Keywords: *Positive Protection, Genetic Resources, Traditional Knowledge.*

A. Introduction

Indonesia as a developing country that rich in natural resources, arts and culture has a wide range of traditional knowledge that requires legal recognition and protection as an internationally recognized work of the nation. Knowledge, technologies and resources are the fundamental needed for human life, including Traditional Knowledge (TK). Traditional knowledge is essential for food security and people health in developing countries.

Indonesia has billion of Genetic Resources (GR)¹ and traditional knowledge related to genetic resources. It has economic values that need to be maintained and developed, so it can be utilized in a sustainable manner for the Indonesian prosperity, as mandated in the Constitution of The Republic of Indonesia. TK needs to be protected because some of TK innovations and practices also have significantly contributed for human life such as traditional agriculture, medicine, environmental conservation, traditional selection and breeding methods, pest and disease management, etc. TK also often becomes a starting way to be success for modern industries, particularly the development of new pharmaceutical products, cosmetics, agriculture, etc. For instance, Shaman Pharmaceutical, a pharmaceutical company that headquartered in San Francisco has a project called ethno-medically driven drug discovery process. This project was carried out in order to find new compounds that can serve as a remedy by exploiting TK. Conducting the comparative researches of plants used by two particular tribes to treat the same disease did this project. This project is expected to be able to minimize the cost of research.²

The rapid development of modern biotechnology over the past decades has enabled us to use Genetic Resources (GR). Developments in

¹ Genetic Resources (GRs) refer to the genetic material of actual or potential value. Genetic material is any material of plant, animal, microbial or other origin containing functional units of heredity. Examples include material of plant, animal, or microbial origin, such as medicinal plants, agricultural crops and animal breeds. <http://www.wipo.int/tk/en/genetic/>, accessed on 22-08-2017.

² Carsten Fink, *Patent Protection, Transnational Corporations, and Market Structure: A Simulation Study of the India Pharmaceutical Industry*, in Imas Rosidawati, (2013). "Konsep Perlindungan Pengetahuan Tradisional Berdasarkan Asas Keadilan melalui Sui Generis Intellectual Property System (The Concept of Traditional Knowledge Protection Based on the Principle of Justice through the Sui Generis of Intellectual Property System)". *Jurnal Hukum Ius Quaiustum*, 20(2): 163.

utilizing GR is as new products that contribute to human well-being, such as food sources into effective medicines, make GR can no longer be regarded as ordinary commodities, because GR as well as commodities that have commercial value, at the same time, it also has benefit for non-commercial utilization:

- a. In commercial utilization, companies can use and take the advantages of GR to develop specific enzymes, genes, or small molecules. All of these then be utilized further by making it into a product that is beneficial for the human life, such as making it as medicines;
- b. In non-commercial utilization, through the researches and analysis, GR can be used to increase the knowledge or understanding of the environment and the natural world.

In line with that, the prospect of developed countries toward the value of TK is quite different from the perspective of developing countries. From the perspective of developed countries, they tend to think how they can get the widest access to the knowledge for creating new products, and get huge benefits from commercialization of it. Meanwhile, from the view of developing countries, especially those that have a wealth of biodiversity and TK, they tend to think how to create fair and equal equitable sharing of benefit that arising from the utilization of their TK related to GR. However, despite there is an existing different perspective between developed and developing countries, it was agreed that to protect the TK which is very important for both parties. Due to some reason such as: First, it plays an important role in the economic and social life of those countries. Placing value on such knowledge helps to strengthen the cultural identity and the improved use of such knowledge to achieve social and development goals, such as sustainable agriculture, affordable and appropriate public health, and conservation of biodiversity; Second, developing and developed countries are implementing international agreements that may affect how knowledge is associated with the use of GR is protected and disseminated, and thus how their national interests are safeguarded.³ Moreover, TK has huge potential to create sustainable economic development in many countries.

As previously mentioned, as well as having historical value and cultural value, it also has economic value. Nevertheless, the purpose to protect TK is not merely due to it, TK should be protected due to pharmaceutical companies and bio-prospectors which are misappropriating on it and making huge profits.⁴ Mostly these companies before getting patent rights on medical products, cosmetics, and etc., they would conduct some research starting from a kind of TK, which is owned by a group of

³ WIPO Publication No. 920 Booklet No. 2: Page 10. Available at Secretariat of WIPO.

⁴ Graham Dutfield, (2006), *Protecting Traditional Knowledge: Pathways to the Future*. Geneva, Switzerland: ICTSD, p. 15.

indigenous people. This knowledge is often got without permission from the owner of the knowledge. In addition, most of the owners sometimes do not get the benefit share from the utilization of it. These circumstances, in the end, encourage the spirit from several developing countries to demand justice for accessing and sharing the benefit (ABS).

According to the discussion on ABS implementation itself, there are several reasons that can be used by developing countries and development agencies why TK should be maintained, protected, and developed. Generally, at least five possible reasons why TK should be protected are as follows:

1. Equity considerations

The custodians of TK should receive fair compensation if the TK leads to commercial gain;

2. Conservation concerns

The protection of TK contributes to conserving the environment, biodiversity, and sustainable agricultural practices;

3. Preservation of traditional practices and culture

Protection of TK would be used to raise the profile of the knowledge and the people entrusted with it both within and outside communities;

4. Prevention of appropriation by unauthorized parties or avoiding biopiracy;

Protection of TK is one way to reduce the number of biopiracy on medical TK, and also to ensure fair and equitable treatment between the holder and the user of TK itself;

5. Promotion of its use and its importance to the development

In addition, rather than protecting TK in a way to limit access to it, the government should be the aim to promote the use of TK itself, complimenting this with measurement to prevent misappropriation.⁵

In sum, concerns to the TK will be lost faster; lead the international communities to primarily focus on the need to control the actions of the scientific and commercial sector and in the particular the unapproved and uncompensated use of the TK. It is important, because the loss of it is impacting to loss of global cultural diversity, and it is automatically affecting to conservation and biodiversity.

B. Discussion

In order to protect the Traditional Knowledge (TK) related to Genetic Resources (GR), World Intellectual Property Organization (WIPO)

⁵ Carlos M Correa, (2001), *Traditional Knowledge and Intellectual Property: Issues and Options Surrounding the Protection of Traditional Knowledge: a Discussion Paper*. Geneva: Quaker United Nations Office, p. 5.

generally proposes two forms of protection that are Positive and Defensive Protection. In establishing such protection, each protection model developed will depend on the circumstances and needs of each country. As suggested by Daniel Robinson⁶ there is no size fits all formula for TK protection.

Defensive protection of TK is one way to prevent third parties from obtaining or exercising invalid IPRs over the TK. It can be an effective way of blocking and preventing granted IP rights to the wrong parties. However, it does not automatically stop the misappropriation act on TK. It needs national regulations. National regulations are the primary mechanism for achieving protection and practical benefits for TK holders. While Positive protection requires legal recognition of rights over TK, either under IPRs regime or sui generis regimes. Based on Secretariat of CBD Report, it noted some countries such as Indonesia and Paraguay still rely on IPRs regime to protect their TK. Although, some special characteristics of TK, such as communal and lack of written evidence are not suitably protected by conventional intellectual property systems. Finally, the awareness that IPRs system is ineffective to protect it, raises an awareness from some developing countries to develop their own sui generis systems in order to protect their TK.

After the ratification of the Nagoya Protocol, next step that should be done by the Government of Indonesia is to implement the provisions of the Nagoya Protocol through national legislation and to prepare the supporting infrastructure both at national and regional level. Specifically, these elements are suggested in order to prevent the misappropriation of TK and ensure the equitable benefit sharing from the industrial and the commercial uses. Article 15 and Article 16 of the Nagoya Protocol mandates to the Parties shall take appropriate and proportionate national legislation on access and benefit sharing from the utilization of genetic resources and traditional knowledge related to genetic resources. In line with it, according to the Indonesian Summit on Sustainable Development (ISSD) that was held on January 21st, 2004 in Yogyakarta, it achieved an agreement which is mandating to the Government of Indonesia in order to implement the national development that cannot be separated from the sustainability of national plan development and which is set forth in the points of Biodiversity Action Plan for Indonesia. One of the proposal is to establish the national legislation in order to ensure the implementation of Access and Benefit Sharing (ABS) from the genetic resources utilization.⁷

⁶ Daniel Robinson, (2007), *Exploring Components and Elements of Sui Generis Systems for Plant Variety Protection and Traditional Knowledge in Asia*. Switzerland: ICTSD, p. 21.

⁷ Suhartini. May 16th, (2009), "Peran Konservasi Keanekaragaman Hayati dalam Menunjang Pembangunan yang Berkelanjutan (The Role of Biodiversity Conservation in Supporting the Sustainable Development)". *Proceedings of the National Seminar on Research,*

1. Amendments to the Patent Law

When we talk about ABS from the utilization of genetic resources related to traditional knowledge, IPRs is an important law. It is a tool to protect it. There is a connection between the misappropriation/biopiracy on the utilization several traditional knowledge and the fact that commercialization arises from it. In many countries, the legitimacy of the biopiracy practices usually involves the Patent Law, including in Indonesia. In Indonesia, an effort to protect traditional knowledge related to genetic resources cannot be separated from the Patent Law implementation. Patent Law is very important, especially in the medical field. Through the Patent law, the inventors protect their inventions. Contrary, the Patent Law also often becomes the legitimacy of the biopiracy practices and unfair practices to the certain countries (most are poor countries and developing countries).

In the context of Indonesia, biopiracy on the genetic resources related to traditional knowledge was caused by several provisions in Indonesian Patent Law No.13 of 2016. Several articles in Indonesian Patent Law are suspected the possibility to protect the traditional knowledge related to genetic resources in Indonesia. The certain of those articles are:

First, Article 9 (b) states that patent cannot give to the invention related to the methods of examination, treatment, therapy and/or surgery applied to animals and/or humans. Contrary with Article 27 paragraph (3) TRIPs Agreement states that “the members may also exclude from patentability: a) diagnostic, therapeutic and surgical methods for the treatment human or animal”. The use of the word ‘may’ shows that for the country who’s allowed to give the patent into that invention are legal. As a result, although in Indonesia the invention related to the methods of examination, treatment, therapy and/or surgery applied to animals and/or humans cannot be protect under The Indonesian Patent Law, but it is possible to be registered in another countries.

Second, Article 9 (e) also exclude from the object of a patent which is a patent for all living creatures except microorganism, and essentially biological processes for the production of plants or animals or microbiological processes. However, due to the absence of international uniformity resulted eventhough in Indonesia it cannot be patented, but is possible in other country.

Third, Article 49 Paragraph (1) states that the objection to a patent is obliged with the reason. In the relation to the provision on the Article 3 Paragraph (2) about Prior art, it is clear that traditional knowledge is excluding. It can be certain that the objection to one patent with the reason

that the patent is lack of novelty due to it known since long times ago through the traditional knowledge, definitely cannot be accepted. Ineffectiveness of Patent Law that cannot protect the traditional knowledge, after ratified by the Nagoya Protocol, demanding to the Government of Indonesia to amendment the Patent Law. Moreover, in order to protect the traditional knowledge, except the amendment on several articles in Patent Law, some countries also had already been amended several regulations related to it. Those countries are India,⁸ Egypt,⁹ South Africa,¹⁰ and Switzerland.¹¹

The amendment of Patent Law itself, can be done by adding new substances, an improvement on the articles, or even by doing the deletion on certain articles. In relation to the genetic resources related to traditional knowledge protection, the amendment to Patent Law at least the changes include among others:

- a. Any patent application derived from the utilization of genetic resources related to traditional knowledge Indonesia by foreign parties are obliged to mention the source of origin of genetic resources that are used, if the applicant cannot reveal its origin, the patent application must be rejected;
- b. Any patent application derived from the utilization of genetic resources related traditional knowledge by foreign parties, mandatory the approval document from the owner of the knowledge and/or public authority who is appointed to act for and on behalf of the owner of the traditional knowledge on the basis of prior inform consent (PC);
- c. In the new Patent Law, it should consider traditional knowledge as a prior inform consent;
- d. Any patent application derived from the utilization of genetic resources related to traditional knowledge by foreign parties shall be accompanied by a fair and equitable benefit sharing.

In addition, according to the document of WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional and Folklore that states in the context of traditional knowledge protection, should be undertaken in a comprehensive manner, potentially using both positive and defensive forms of protection. However, defensive protection is no substitute for positive protection, it intended as a preventive tool to

⁸ India protects their traditional knowledge related to genetic resources through the Patents Act 1970 as amended by Patents Act 2005, also through the sui generis law, Biological Diversity Law No. 18 of 2002.

⁹ Egypt protects their traditional knowledge related to genetic resources through the Law on the Protection of Intellectual Property Rights, Law No. 82 of 2002.

¹⁰South Africa protects their traditional knowledge related to genetic resources through the Amendment of Patents Act 2005.

¹¹ Switzerland protects their traditional knowledge related to genetic resources through Federal Law of June 25, 1954 on Patents for Inventions (status as of January 1st, 2012).

preventing other parties from gaining intellectual property (IP) rights,¹² and learn from the success of India through the Traditional Knowledge Digital Library (TKDL) in order to protect their traditional knowledge, thus the revision of Patent Law, it should be considered the information that sources from traditional database that recognizes by the Government of Indonesia as the prior art. Therefore, if in the future there is a cancellation of a patent application because the knowledge does lack novelty due to already known through traditional knowledge, it becomes acceptable and granted.

2. Sui Generis Law

In addition to effective the patent law to protect genetic resources related to traditional knowledge in Indonesia, another regulation that possible to consider by the government is through the establishing the sui generis law. Some CBD members are noted been used the sui generis law in order to protect their traditional knowledge. For the examples, Brazil which is using Provisional Act No.2.186-16, dated August 23rd, 2001, India through the Biological Diversity Act, 2002 18, and the Philippines through the Indigenous Peoples Rights Act of 1997 (Republic Act No. 8371) to protect their traditional knowledge related to genetic resources.

The development of sui generis system as a tool to protect traditional knowledge is in line with the WIPO 3rd Intergovernmental Committee on The Intellectual Property and Genetic Resources Traditional Knowledge and Folklore statement which states that specific sui generis mechanism have been developed within general IP law to deal with particular practical needs or policy objectives relating to specific subject matter: include specific legal provisions and practical or administrative measures.¹³ In order to develop the sui generis law, it is possible for the Government refers to the Committee's formulation. It identified several important questions that the system must contain in order to be effective, which are as follows:

- a) What is the (policy) objective of the protection?
- b) What is the subject matter?
- c) What criteria should this subject matter meet to be protected?
- d) Who owns the rights?
- e) What are the rights?
- f) How are the rights acquired?
- g) How to administer and enforce the rights?; and
- h) How are the rights lost or how do they expire?¹⁴

In line with it, it should also be noted that overall the most important substance to be aware of the sui generis law is the recognition of indigenous

¹²WIPO/GRTKF/IC/6/8 (2004). Available at Secretariat of WIPO.

¹³WIPO/GRTKF/IC/3/8 (June 13th to 21st, 2002). Available at Secretariat of WIPO.

¹⁴ *Ibid*, p. 16.

people as the owner of traditional knowledge. In addition to the above, according to Agus Sardjono, there is another important thing that should also be considered in order to establish the sui generis law related to traditional knowledge protection, which are as follows:¹⁵

1. To prevent the disintegration, it should be remembered that although the people of Indonesia consists of hundreds of tribes, the tribe is unity. It has the collective rights on the Indonesian's traditional knowledge including traditional medical knowledge. Thus, the knowledge of particular indigenous peoples, for example, the knowledge of *Jamu* is not the only Java's property but its shared heritage of the unity of the local Indonesian community. Hence, another Indonesian outside of Java also can use it.
2. In a sui generis law, it must ensure the sustainable development of the local indigenous community creativity. Thus, all Indonesian can do the utilization and development of traditional medicine. In other words, the law should not hinder the creativity development of traditional knowledge itself.

Moreover, in the level of implementing regulations, it can use the Government Regulation No. 41 of 2006 about Licensing to Conduct Research and Development for Foreign University, Foreign Research and Development Institute, Foreign Corporations, and Foreigner in Indonesia. It puts the obligation to the foreign parties to ask the research permission from the Government before they conduct research in Indonesia, including research related to the traditional knowledge related to genetic resources.

C. Conclusion

Traditional knowledge must have a definite protection considering that traditional knowledge is one of the fundamental needed for human life. At least two kinds of positive protections that we can develop in order to protect TK related to GR optimizes the patent law and develop the sui generis law. Furthermore, it can be done by some revision by adding new substances, an improvement on the articles, or even by doing the deletion on certain articles. Moreover, in order to develop the sui generis law, it identified several minimum elements that shall be contained on it, inter alia: the purposes of protection; scope of protection; criteria of protection; the beneficiaries of protection: the holder of traditional knowledge; the kind of rights to be granted; how the rights acquired; how to enforce it; how the rights lost or expired; and dispute resolution.

¹⁵ Agus Sardjono, (2010), *Hak Kekayaan Intelektual dan Pengetahuan Tradisional (Intellectual Property Rights and Traditional Knowledge)*. Bandung: Alumni, pp. 252-253.

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