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Protection of Plant Varieties In the Provisions of International Conventions

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Abstract: *Plant varieties are part of biodiversity that needs to be protected both nationally and in the provisions of international conventions. This biodiversity is highly valuable because it is a part of genetic resources. The biodiversity needs to be maintained, preserved and protected to support economic development in the agricultural sector. The type of research used in examining legal issues was normative legal research. This study used statute approach, conceptual approach, and comparative approach. The results indicated that CBD granted the developing countries the rights to monitor access to genetic resources as a way to restore balance between developing countries and industrialized countries. The rights were granted to developing countries to optimally protect, preserve, regulate and support the utilization of germplasm. UPOV provided benefits to its member countries, in the form of: increasing activity and capital in breeding activities, providing more choices of plant varieties to farmers and consumers, increasing farmer income and developing rural areas and developing foreign markets. ITPGRFA protected the rights of farmers based on the contribution and role of farmers and the local community in preserving plant varieties that were partly from plant genetic resources belonging to Indonesia. CITES had a mission and goal to prevent the species of wild plants and animals from extinction in nature through the development of a system for controlling the trade of animal and plant species and their products internationally.*

Keywords: *Plant Varieties Protection; International Convention.*

INTRODUCTION

Plant varieties in a country's territory are included in the category of natural resources for which they are subject to the principle of sovereign right of state. On the other hand, the provisions of Intellectual Property Rights (IPR) provide protection for plant varieties in the form of patents and *sui generis*. This is the beginning of the problem mainly related to plant varieties, where these plant varieties cannot be protected under the IPR regime since plant varieties will obtain legal protection if they meet the requirements including varieties of new, unique, uniform, stable and

named plant species.[1] Plant varieties are protected under Law No. 29 of 2000 concerning Protection of Plant Varieties, hereinafter referred to as Law on PPV.[2]

In the context of legal protection on plant varieties, it is an effort regulated by Law to prevent IPR violations by unauthorized persons. While the purpose of legal protection against IPR is intended to provide legal clarity[3] regarding the relationship between invention as the work of human intellectuals and the creator or inventor or between rights holders and users who use the intellectual property. The existence of legal clarity and the owner of intellectual property rights is a legal recognition and reward given to people for the efforts and creative human works that have been created.

Economically, protection of plant varieties will benefit local communities and local government. Plant varieties as traditional knowledge do not only need to be conserved in order to maintain the wealth of biodiversity, but also need to be utilized optimally. Indonesia has a rich diversity of plant varieties, but the Indonesian people have not been able to enjoy maximum economic benefits from the use of biological resources, especially in the form of plant varieties. Plant varieties are threatened due to over-exploitation by other parties so they do not provide economic value to local communities and the country. Therefore, the protection of plant varieties in international convention is essential.

METHOD

The type of research used in examining legal issues was normative

[1]Law No. 29 of 2000 Concerning Protection of Plant Varieties, (State Gazette of 2000 No. 241, Additional State Gazette No. 4043, hereinafter abbreviated to Law 29/2000).

[2]Article 2 Paragraph (1) Law on PPV

[3]Abdurkadir Muhammad. (2001). *Kajian Hukum Ekonomi Hak Kekayaan Intelektual*. Bandung: Citra Aditya Bakti. p. 143. He explained that legal protection of intellectual property rights is a legal system consisting of the legal system elements, namely: a) the subject of protection. The subjects are the owner or right-holder, law enforcement officer, registration officer, and violation of law, b) object of protection, the objects are all types of intellectual property rights regulated by the Law, such as copyright, brand, patent, industrial design, trade secrets, integrated circuit layout, protection of plant varieties, c) registration of protection. Protected Intellectual Property Rights are only those that have been registered and proven by the registration certificate, unless the law regulates otherwise, d) duration of protection. Intellectual Property Rights are protected by law. e) legal protection measures, if it is proven that there has been a violation of intellectual property rights, the offender must be punished, both criminal and civil penalties.

legal research. The approach in this study used statute approach, conceptual approach, and comparative approach.[4]

The solution to legal issues in this study was carried out through 2 (two) stages. The first stage was conducting searches, collecting legal materials, both primary and secondary legal materials. The second stage was analyzing collected legal materials from the first stage.

DISCUSSION

International Convention on Biological Diversity *(CBD)*

Species diversity as the richness of national biological resources needs to be managed optimally, in order to support the life sustainability of the Indonesian nation. With the existence of Law No. 5 of 1994 concerning the Ratification of the Convention on Biological Diversity (CBD), where the sovereign right of state[5] is recognized for the existing genetic resources in its territorial area, Indonesia is obliged to protect, preserve, regulate and support the utilization of germplasm optimally.

The potential of biodiversity provides a balance of human life. Conversely, the increasing extinction rate of biodiversity will have fatal consequences for the survival of human life. Protection of biodiversity is a prerequisite for the successful implementation of the principle of justice between generations. For example, if indigenous people experience loss or distruption from their ecosystem due to the extinction of biodiversity, then they will lose access to a decent level of life and welfare.[6]

The potential of natural resources and energy, both renewable resources, unrenewable resources and continuous resources are important for the continuation of the regeneration of human life. Biological resources or biodiversities[7] are

[4] Peter Mahmud Marzuki. (2010). *Penelitian Hukum*. 6th Edition. Jakarta: Prenada Media. p. 133

[5] Nurul Barizah. (2010). *Intellectual Property Implications on Biological Resources (Indonesia's Adoption of International Intellectual Property Regimes and The Failure to Adequately Address The Policy Challenges In The Area Of Biological Resourses)*. Jakarta: Nagara, p. 158

[6] Mas Achmad Santoso. (1996). *Aktualisasi Prinsip-prinsip Pembangunan Berkelanjutan yang Berwawasan Lingkungan Dalam Sistem dan Praktek Hukum Nasional*, published in 3rd Edition of Environmental Law Journal. pp. 1-21, See in Saifullah. (2007). *Hukum Lingkungan, Paradigma kebijakan kriminal di bidang Konservasi Keanekaragaman hayati*. Malang: UIN Malang Press. Malang. p. 12

[7] Biodiversity is "the wealth of life on earth, millions of plants, animals and

renewable resources and are used for various aspects of human life needs such as food, clothing, shelter, medicine, ritual values, education, scientific research, supporting cultivation, culture and tourism, recreation, and aesthetic value.

CBD is an international agreement on biodiversity with a global and comprehensive scope. The Convention on Biological Diversity was signed on June 5, 1992 in the Earth Summit in Rio (United Nations Conference on Environment and Development). This Convention came into effect on December 29, 1993 and has been ratified by 174 countries.

The provisions in CBD consist of five basic principles in managing biodiversity as follows:

(1) State sovereignty over genetic resources,[8]
(2) Granting the related parties access to genetic resources,[9]
(3) Access to genetic resources subject to the provisions of reciprocal agreement agreed upon by the parties,[10]
(4) Access to genetic resources subject to Prior Informed Consent (PIC),[11]
(5) Fair Acces and Benefit Sharing obtained from the use of genetic resources.[12]

microorganisms, genetics contained and ecosystems built into the environment" United Nations Convention of Biological Diversity, endorsed by UNCED in article 2 Use of Terms: For the purposes of this convention: "Biological Diversity" means the variability among living organisms from all sources including, inter-terresterial, marine and other aquatic ecosystems and ecological complexes of which they are part; these ecosystems and the ecological complexes of which they are part of; this includes diversity within species and of ecosystems. This Convention was subsequently ratified into Law No. 5 of 1994. According to Article 1 concerning the Convention on Biological Diversity, biodiversity is diversity among living things from all sources including land, seas and other aquatic ecosystems and ecological complexes which are part of their diversity; including diversity within species, between species and ecosystems.

[8]Article 15 (1) of the CBD, states that recognizing the sovereignty rights of States over natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.

[9]Article 15 (2) of the CBD, states that Each Contracting Party shall endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties and not to impose restrictions that run counter to the objectives of this Convention.

[10]Article 15 (4) of the CBD, states that access, where granted, shall be on mutually agreed terms and subject to the provisions of this Article.

[11]Article 15 (5) of the CBD introduces the principle of Prior Informed Consent, meaning 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. Prior Informed Consent is the procedure for obtaining a consent clearly stated in national regulations. This Article also requires that only the central government is able to consent. However, Article 8 of the CBD implicitly states that the consent shall be obtained from local communities or indigenous people living in the area where the genetic resources are accessed.

[12]Article 15 (7) of the CBD regulates profit sharing from commercial use of genetic resources. This provision of CBD requires

CBD introduces biodiversity conservation as a matter of mutual concern for all humanity and this is an integral part of the development process. This Convention establishes the principles for justice and equality of rights in the benefit sharing generating from the use of genetic resources, especially those intended for commercial purposes.

While the goals of CBD are:

(1) Biodiversity conservation,
(2) Sustainable use of biodiversity components, and
(3) Equitable and equal benefit sharing from the use of genetic resources including appropriate access to genetic resources and relevant and appropriate technology transfer, all rights arising from genetic and technological resources with appropriate funding.[13]

CBD seeks to promote the conservation of biodiversity, sustainable use, and benefit sharing from fair and equitable use of biological resources. CBD also pays attention to the rights and interest of communication from the community through Prior Informed Consent (PIC), and implies a fair and equitable benefit sharing from the use of biological resources.

As a CBD member country, Indonesia is legally bound by the agreement contained therein. Indonesia's membership in CBD is marked by the ratification of this International Convention through the provisions of Law No. 5 of 1994 concerning Ratification of the CBD. The point of this Convention is Article 3 which recognizes that States have the sovereign right to use their biological and genetic resources.

As the agreement framework, the provisions in the CBD are realized as goals and policies rather than obligations. Each country can determine the best way to implement CBD at the national level.

Conservation in the essential meaning contains the concept of preservation and development of natural and energy resources for the needs of mankind on earth in the present and future. Therefore, the concept of conservation implicitly includes moral aspect and human responsibility to protect, maintain, save and preserve natural resources

each country to develop its own approach to be taken, Fair Access and Benefit Sharing shall be upon mutually agreed terms.

[13] Article 1 of the CBD

and energy for future generations.[14] The idea of conservation arises due to concerns about the scarcity of natural and energy resources. Natural and energy resources are limited. If it is continuously exploited and processed, the amount of natural resources will decrease and eventually will run out.[15]

The International Union For The Protection of New Varieties of Plants *(UPOV)*

UPOV is an intergovernmental organization based in Geneva. UPOV derives from French which stands for *French for Union Internationale Pour La Protection Des Obtentions Vegetales*. Basically, UPOV aims to provide and support an effective system for the protection of plant varieties, with the aim of encouraging the development of plant varieties, for the benefit of the community.

UPOV was established with the signing of UPOV in Paris on December 2, 1961. UPOV *came* into force on August 10, 1968, after being ratified by England, Netherlands and Germany. UPOV was revised on November 10, 1972, October 23, 1978, and March 19, 1991, with the aim of balancing the development of plant breeding technology and experience gained from the implementation of UPOV.

UPOV as UPOV management organization consists of several countries. UPOV member countries are obliged to recognize the achievement of plant variety breeders, by providing intellectual property rights. To obtain such protection, the variety must meet the requirements in the form of: (i) different from existing or known varieties, (ii) uniform, (iii) stable and (iv) new[16].

Although Indonesia is not a member of UPOV, in the drafting of the Law on PPV, many countries refer to this UPOV. This can be seen in the general explanation section and some provisions contained in the

[14] Saifulla.(2007). *Hukum Lingkungan, Paradigma Kebijakan Kriminal di bidang Konservasi Keanekaragaman Hayati,* Malang: UIN Malang Press. p. 27

[15] According to the conservation movement, the meanings of scarcity are: (1) there is inevitable scarcity, (2) the use of natural and energy resources is not sustainable and wise, (3) social impacts include the separation of human relations with nature, reduced value of unity in social groups, etc. (4) economic impacts include changes in national structure in relation to productivity and costs. Barnet and Moore. See in Sukanto and Pradono.(1996). Ekonomi Sumber Daya Alam dan Energi. Yogyakarta: BPFE. pp. 51-52.

[16] Rahmi Jened Parinduri Nasution. (2013). Interface *Hak Kekayaan Intelektual dan Hukum Persaingan (Penyalahgunaan HKI)*. Jakarta: Raja Grafindo. p. 190

Articles of Law on PPV such as the Explanation of Article 19 paragraph 4. In the General Explanation of the Law on PPV, it is mentioned that:

"This is in accordance with the International Convention on the Protection of Plant Varieties, where the date considered as the date of receipt for the variety submitted with priority rights is the date of receipt of the first PPV rights request abroad. For PPV rights request from Indonesia to apply for PPV rights in other countries, the applicant will be given the same priority treatment".

According to UPOV on the definition of varieties, the protection of plant varieties was not found in the 1978 UPOV convention, but it was found in Article 1 of the 1991 UPOV convention that the variety of breeder's invention is defined as:

> "a plant grouping within a single botanical taxon of the lowest known rank, which grouping, irrespective of whether the conditions for the grant of a breeder's right are fully met, can be:
> 1. Defined by the expression of the characteristics resulting from a given genotype or combination of genotypes
> 2. Distinguished from any other plant grouping by the expression of at least one of the said characteristics, and
> 3. Considered as a unit with regard to its suitability for being propagated unchanged.

In essence, what is meant by varieties according to the 1991 UPOV Convention is a group of plants that can be defined by characteristics expressed from innate genotypes and can be distinguished from the same taxonomy of botanists with at least a visible characteristic. This means that even though they are of the same species, protected plant varieties must have different physical characteristics, because different physical characteristics are expressions of different genotypic characters.

According to Article 1 of UPOV, plant varieties protected by the breeder's rights shall meet new requirements, such as being different from the existing ones, uniform and stable. The period of protection of the breeder rights in the 1978 UPOV convention is a minimum of 15 years and a maximum of 18 years, while the period of protection in the 1991 UPOV convention is a minimum of 20 years and a maximum of 25 years. Thus, basically Indonesia adopted the provisions of 1991 UPOV convention in providing a period of protection as

stipulated in Article 4 Paragraph 1 of the Law on PPV.

International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

Indonesia applies the provisions of Law No. 4 of 2006 concerning the Ratification of the International Treaty on Plant Genetic Resources for Food and Agriculture to protect biodiversity in Indonesia.[17] The provisions of Law No. 4 of 2006 are expected to prevent the collection of plant varieties by other parties or other countries. Plant varieties must be better managed to meet food needs and agricultural cultivation system.

Article 1 of ITPGRFA states that the goals of the conservation agreement are sustainable use of plant genetic resources for food and agriculture and benefits sharing from fair and equitable use of plant varieties, sustainable agriculture, and food security that are in line with the Convention on Biodiversity.[18]

While Article 2 of ITPGRFA[19] states the important definitions of:

> *For the purpose of this Treaty, the following terms shall have the meanings hereunder assigned to them. These definitions are not intended to cover trade in commodities; "In situ conservation" means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or*

[17] Law Concerning the Ratification of the International Treaty on Plant Genetic Resources for Food and Agriculture, Law No. 4 of 2006, LN No. 23 of 2006, TLN. No. 4612.

[18] Article 1 of ITPGRFA

[19] Article 2 of ITPGRFA contains: For the purpose of this Treaty, the following terms shall have the meanings hereunder assigned to them. These definitions are not intended to cover trade in commodities: "In situ conservation" means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated plant species, in the surroundings where they have developed their distinctive properties. "Ex situ conservation" means the conservation of plant genetic resources for food and agriculture outside their natural habitat. "Plant genetic resources for food and agriculture" means any genetic material of plant origin of actual or potential value for food and agriculture. "Genetic material" means any material of plant origin, including reproductive and vegetative propagating material, containing functional units of heredity. "Variety" means a plant grouping, within a single botanical taxon of the lowest known rank, defined by the reproducible expression of its distinguishing and other genetic characteristics. "Ex situ collection" means a collection of plant genetic resources for food and agriculture maintained outside their natural habitat. "Centre of origin" means a geographical area where a plant species, either domesticated or wild, first developed its distinctive properties. "Centre of crop diversity" means a geographic area containing a high level of genetic diversity for crop species in in situ conditions.

> *cultivated plant species, in the surroundings where they have developed their distinctive properties; "Ex situ conservation" means the conservation of plant genetic resources for food and agriculture outside their natural habitat; "Plant genetic resources for food and agriculture" means any genetic material of plant origin of actual or potential value for food and agriculture; "Genetic material" means any material of plant origin, including reproductive and vegetative propagating material, containing functional units of heredity; "Variety" means a plant grouping, within a single botanical taxon of the lowest known rank, defined by the reproducible expression of its distinguishing and other genetic characteristics; "Ex situ collection" means a collection of plant genetic resources for food and agriculture maintained outside their natural habitat; "Centre of origin" means a geographical area where a plant species, either domesticated or wild, first developed its distinctive properties; "Centre of crop diversity" means a geographic area containing a high level of genetic diversity for crop species in in situ conditions.*

ITPGRFA has guaranteed fair an equitable benefits sharing from the results of access to plant varieties to the plant varieties-owned country. ITPGRFA also recognizes the sovereign rights of member countries to food crops and agriculture. The sovereign rights of the member countries include the right to determine access to plant varieties by other parties from other member countries and the right to struggle for benefit sharing. Indonesia's participation in ITPGRFA aims to provide assurance of benefit sharing to local communities in Indonesia for the use of plant varieties by parties from other countries.

Article 9 in ITPGRFA guarantees the rights of farmers so that the lives of farmers in Indonesia will be better and local communities will get benefit sharing on the utilization of plant genetic resources including plant varieties. The provisions in Law No. 4 of 2006 provides legal force for the provision of benefit sharing on the utilization of plant varieties in Indonesia.

Article 13 of ITPGRFA states that the utilization of plant genetic resources for food and agriculture based on the arrangement of the multilateral system can be realized in a fair and equitable benefit sharing. This applies to plants registered in ITPGRFA and includes access and benefit sharing as well as its facilities.

ITPGRFA can provide legal protection for the position of plant varieties in Indonesia. Indonesia has a regulation to provide legal protection for communal rights of local communities over the use of plant varieties by other parties, namely Law No.12 of 1992, Law No. 5 of 1994, Law on PPV and Law No. 4 of 2006.

ITPGRFA aims to support food security and sustainable agriculture through the conservation and utilization of plant varieties including fair and equitable benefit sharing. ITPGRFA also aims to protect the rights of farmers based on the contribution and role of farmers and the local community in preserving plant varieties that partially belong to Indonesia.[20] Most farmers in Indonesia rely heavily on plant varieties as varieties used in crop cultivation system.

This is because plant varieties have been tested in agricultural lands so that plant varieties are cultivated for generations in local communities. The superiority of plant varieties in crop cultivation system has been tested with environmental and geographical conditions in Indonesia. The participation of farmers in preserving these plant varieties is the main reason for the need to provide benefit sharing for the utilization of plant varieties to farmers and local communities as owners of these plant varieties.

The preservation of plant varieties is carried out to maintain variety diversity. Plant varieties are the basic material and the original variety in plant breeding activities. Plant Breeding uses plant varieties and superior plant varieties in producing Essential Plant Varieties (EPV). In fact, plant varieties do not have new elements in the plant breeding process because these plant varieties have been cultivated by local people and farmers for generations.

The relationship between ITPGRFA and plant varieties is that ITPGRFA can provide legal protection for the position of plant varieties in Indonesia, both in the management and the preservation of existing plant varieties in Indonesia. Therefore, the farmers and local community play an important role in

[20] Agency for Agricultural Research and Development, Plant Preservation (online) available at: http:// www.litbang.deptan.go.id/beritat/one/349/. Accessed on September 1, 2016

managing and preserving these plant varieties.

CITES (Convention on International Trade in Endangered Species)

CITES is an international agreement that regulates the trade in certain species of wild flora and fauna, such as endangered species. This convention is based on the fact that there is a high number of hunting of endangered species, followed by a large number of trades exploiting flora and fauna.

CITES is a global agreement with the focus on protecting species of wild plants and animals. Although CITES binds the parties legally, CITES is not a substitute for law in each country. CITES shall be respected by those who make laws for CITES implementation at the national level. Often, the laws on the protection of wild plants and animals at the national level do not yet exist (especially those who have not ratified CITES), the punishments are not balanced with crime rates, and there is lack of law enforcement on wildlife trade.[21]

The mission and goal of this Convention is to prevent the species of wild plants and animals from extinction in nature through the development of a system to control trade in species of animals and plants and their products internationally. The control is based on the fact that exploitation for commercial purposes of wild animal and plant resources is one of the biggest threats to the survival of the species after habitat destruction.

There are 4 (four) main things as the basis of the formation of convention, namely:

1. The need for long-term protection of wild animals and plants;
2. Increased value of wild plants and animals sources for humans;
3. The high number of participation of community and the State in protecting wild plants and animals;
4. The more urgent need for international cooperation to protect these species from over-exploitation through international trade control.[22]

To achieve these goals, the species on the basis of their scarcity determined by the CITES Member

[21] Zimmerman. (2003). *The Black Market for Wildlife: Combating Transnational Organized Crime in the Illegal Wildlife Trade. Vanderbilt Journal of Transnational Law*. Vol. 36. No.1657. p. 25

[22] *Ibid.*

Conference are classified into 3 (three) groups or Appendixes, namely Appendix I, Appendix II and Appendix III. The CITES Management Authority carries out convention rules including controlling permits, based on recommendations provided by the Scientific Authority. The Scientific Authority is obliged to provide recommendations to the Management Authority that a species can be traded in accordance with the principle of "non-detriment finding", which is a non-destructive principle based on scientific findings and the precautionary principle.[23]

The international cooperation is highly important because the exploitation of plants and animals is strongly influenced by world market demand. Hunting and smuggling of animals and plants are frequently triggered by high prices in consumer countries. The division of responsibility among consumer and producer countries for the conservation of the world's flora and fauna, is a shared responsibility. In fact, it is highly unlikely for a country to continuously monitor the exploitation of wild life and its exports, the system of legislation regarding the protection and management of plants and animals, and the possibility of the law enforcement. This needs to be understood for a country like Indonesia since the country is rich in biodiversity, has a large area, but is geographically vulnerable to smuggling of the species.

CITES member countries have an obligation to implement CITES provisions in the terms of controlling the circulation of species of animals and plants both those traded abroad and within the country. Thus, a two-door system for controlling the circulation/trade of wild animals and plants needs to be implemented, both in the exporting and importing countries.[24]

In order to effectively implement CITES, the national legislation system shall refer to CITES provisions. There are 4 main things to be covered in national legislation related to CITES implementation[25], namely:

1. Appoint one or more management and Scientific Authority;

[23] *Ibid.*

[24] *Ibid.*

[25] *Ibid.*

2. Prohibit trade in specimens that violate the provisions of convention;
3. Enforce the law by providing sanctions/punishments for violations of the trading system above;
4. Confiscate the illegally traded or owned specimens in CITES Appendix .

The control system in CITES is carried out through the CITES standard licensing system issued by the Management Authority, and enforced by law enforcement agencies such as Customs and Police (including Quarantine in Indonesia). CITES forms an international legal framework intended to prevent the trade in endangered species and to obtain effective arrangements for other species that are not endangered. In addition, CITES provides a mechanism (opportunity) for international cooperation that provides equal division of responsibilities between producer and consumer countries.[26]

The implementation of the CITES Convention in Indonesia in the trading of orchid plants has been regulated in accordance with Law No. 5 of 1990 concerning Conservation of Biological Resources and their Ecosystems, hereinafter abbreviated as Law No. 5 of 1990 as the law specifically regulates the preservation of plants and animals and their ecosystem, and classifies orchid plants into two groups, namely: protected and unprotected orchid plants by the law. Whereas in the CITES Convention, orchid plants are classified in Appendix I and II. According to the provisions of the CITES Convention, the violations of the orchid plant trade included in the CITES Appendix shall be subject to sanctions. However, according to Law Number 5 of 1990, sanctions are only imposed on violators of orchid plants which are protected by law, while there is no sanctions for orchid plants that are not protected by law. With the differences in the principles of classification, the legal protection of orchid plant trade is inconsistent in implementing the CITES Convention in Indonesia. The division of classification regarding the legal protection status of orchid plants shall be adjusted to the provisions of CITES Convention, so that the provisions of the orchid plant trade in an effort to sustainably utilize biological resources between national

[26] *Ibid.*

and international provisions can be in line.

CONCLUSION

The discussion of international conventions, either CBD, UPOV, ITPGRFA or CITES, has a relationship with the protection of plant varieties. The conclusions of the international conventions are as follows:

1. CBD granted the rights to the developing countries to monitor access to genetic resources as a way to restore balance between developing countries and industrialized countries.The developing countries were granted the rights to protect, preserve, regulate and support the utilization of germplasm optimally. In essence, the CBD granted the rights to the developing countries to monitor access to genetic resources as a way to restore balance between developing countries and industrialized countries. As a result of granting the rights to developing countries, they were obliged to protect, preserve, regulate and support the utilization of germplasm optimally. This included providing protection for plant varieties in Indonesia. CBD also accommodated the interests of protecting plant varieties through conservation and sustainable use of genetic resources for food and agriculture. Plant genetic resources (PGR) have an important meaning in supporting the fulfillment of food needs both directly and indirectly. A number of varieties of plant commodities have been used intensively as food.
2. UPOV provided benefits to its member countries, such as in the form of: increasing activity and capital in breeding activities, providing more choices of varieties to farmers and consumers, increasing farmers' income and developing rural areas and developing foreign markets. However, it should be noted that the provisions of UPOV can be beneficial or otherwise detrimental to the interests and rights of farmers and protection of plant varieties. UPOV protected the industrial interests of

breeding, but did not protect plant varieties related to the interests of farmers. UPOV did not protect plant varieties and especially the interests of farmers.

3. ITPGRFA (International Treaty on Plant Genetic Resources for Food and Agriculture), protected the rights of farmers based on the contribution and role of farmers and the local community in preserving plant varieties partially from PGR belonging to Indonesia.
4. CITES (Convention on International Trade in Endangered Species) had a mission and goal to prevent species of wild plants and animals from extinction in nature through the development of a system to control trade in species of animals and plants and their products internationally. The control was based on the fact that exploitation in commercial interests of animal resources and plant varieties was one of the biggest threats to the survival of a species after habitat destruction, therefore it was necessary to provide protection for plant species (including plant varieties).

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