

Public Interest in Plant Variety Protection: A Comparative Study of Compulsory Licensing in Indonesia and India for Food Security

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Abstract

This research aims to analyze and compare the legal frameworks of compulsory licensing in the Plant Variety Protection systems of Indonesia and India in accommodating public interest parameters and to analyze the granting of compulsory licenses for public interest in supporting food sovereignty and security in Indonesia. This research uses a normative



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juridical method with comparative and statutory approaches. The study utilizes secondary data, including primary and secondary legal sources, analyzed qualitatively to examine the regulatory differences in compulsory licensing regimes between Indonesian and Indian jurisdictions. The results of this research are: First, The findings indicate that India possesses a more comprehensive legal framework through the PPVFR Act, which explicitly integrates farmers' rights as a core element of public interest. In contrast, Indonesia's regulations remain administratively centered with an ambiguous definition of "public interest". A fundamental difference lies in the activation procedures: India allows for swifter intervention against seed monopolies to ensure price stability, whereas in Indonesia, the mechanism is not yet optimally implemented due to a lack of technical implementing regulations capable of responding effectively to food crises. Second, the results indicate that while compulsory licensing is legally accommodated within Indonesia's PVP system as a public interest instrument, its implementation remains suboptimal in supporting food sovereignty. Consequently, compulsory licensing remains passive, prioritizing the protection of breeders' exclusive rights over its strategic role in ensuring seed accessibility for smallholder farmers.

KEYWORDS: *Compulsory Licensing; PVP; IPR; Royalties; Food Security*

Introduction

The condition of plants that naturally have not been genetically engineered in order to get superior varieties has weaknesses, such as small size, the taste of the fruit produced is not sweet, the fruit produced is small and not dense, less resistant to pests and diseases, and so on. However, with genetic engineering or plant breeding, superior plant varieties will be obtained from previous plants so as to increase the productivity of the breeding plants. Genetic engineering or biotechnology is an action to change the gene structure by inserting new genes into the gene structure used ¹. Genetic engineering carried out in a modern way can have opportunities to

¹ Dyah Ochtorina Susanti, *Ukum Bioteknologi (I) Perlindungan Hukum Terhadap Bioteknologi Bidang Pertanian Dan Kesehatan: Perspektif HAKI Dan Lingkungan*. (Yogyakarta: Laksbang Justitia, 2019).

improve life and welfare for human life ². The results of genetic engineering that have superior properties are then utilized to meet the needs of human life. Genetic engineering as well as conventional breeding is used to improve plant traits in terms of increasing plant resistance to biotic and antibiotic resistance. Biotic and antibiotic resistance are factors that can reduce plant productivity which results in a decrease in the quantity and quality of the crop produced. One example of genetic engineering is the existence of transgenic plants or Genetically Modified Organisms (GMOs) which are defined as genetically modified organisms (GMOs). GMOs are defined as the original organisms that exist in living things and are then changed or mixed with other genetics that have advantages by means of genetic engineering ³. Plant varieties produced by GMO products have superior properties so that the need and demand for GMO products are increasing. This has an impact on increasing the productivity of GMO products so as to provide a food surplus which can indirectly improve the welfare of the people in a country.

Indonesia as one of the agricultural countries that has great biological wealth will provide opportunities for profit when it is able to do effectiveness in agriculture. However, based on data from the Central Bureau of Statistics, Indonesia's rice imports increased from 429,207.3 tons of rice in 2022 to 3,062,857.6 tons of rice in 2024 ⁴. This gives an indication that Indonesia as an agricultural country has not been able to meet the basic needs of rice as the main food of the Indonesian people. Based on this, one of the ways that can be done to solve the problem of lack of food productivity in Indonesia is through increasing the area of planting and harvesting by

² Amy Estiati and M. Herman, "Regulasi Keamanan Hayati Produk Rekayasa Genetik Di Indonesia," *Analisis Kebijakan Pertanian* 13, no. 2 (2016): 129, <https://doi.org/10.21082/akp.v13n2.2015.129-146>.

³ Yuwono Prianto and Swara Yudhasasmita, "Tanaman Genetically Modified Organism (GMO) Dan Perspektif Hukumnya Di Indonesia," *Al-Kauniah: Jurnal Biologi* 10, no. 2 (2017): 133–42, <https://doi.org/10.15408/kauniah.v10i2.5264>.

⁴ Badan Pusat Statistik, "Impor Beras Menurut Negara Asal Utama, 2017-2023," Badan Pusat Statistik, 2024, <https://www.bps.go.id/id/statistics-table/1/MTAoMyMx/imp-or-beras-menurut-negara-asal-utama--2017-2023.html>.

increasing the planting index through genetic engineering ⁵. Genetic engineering used to increase rice production due to the increasing demand for rice production as a staple food. The high demand for rice has made researchers look for ways to be able to increase higher production yields by involving the genetic engineering process.

Genetically engineered products that have superior varieties protected by Plant Variety Protection rights provide opportunities for holders of these rights to be able to utilize these superior plant varieties in order to increase productivity. However, because plant breeders sometimes only focus on finding new superior varieties, the implementation of plant variety rights is usually ignored, thus not helping to increase productivity. Compulsory licensing regulated in Indonesia in Article 44 of Law Number 29 of 2000 on Plant Variety Protection provides an opportunity for others to be able to utilize Plant Variety Protection to increase the productivity of the plants concerned while still paying attention to the exclusive rights of the right holder of Plant Variety Protection, namely moral rights and economic rights.

Based on the Performance Report of the Center for Plant Variety Protection and Agricultural Licensing for the last 5 (five) years, from 2019 to 2023, applications for Plant Variety Protection have continued to increase from 51 varieties to 103 varieties. But with regard to the issuance of Plant Variety Protection certificates, the same thing did not happen, but fluctuated from 36 certificates in 2019 but decreased in 2020 to 21 certificates and thereafter continued to increase to 93 certificates ⁶. The issuance of Plant Variety Protection certificates in such fluctuating

⁵ Risa Mahdewi and Desia Rakhma Banjarani, "Food Safety of Genetically Modified Organism According To International Law and Its Implementation in Indonesia," *Lampung Journal of International Law* 2, no. 1 (2020): 41–56, <https://doi.org/10.25041/lajil.v2i1.2031>.

⁶ Kantor Pelindungan Varietas Tanaman, "Laporan Kinerja Pusat Perlindungan Varietas Tanaman Dan Perizinan Pertanian," n.d.

conditions indicates that plant breeders have not maximally applied for certificates to be issued as Plant Variety Protection certificates.

Based on Article 1 point 1 of Law Number 29 of 2000 on Plant Variety Protection, Plant Variety Protection is a special protection given by the state, in this case represented by the Government and implemented by the Plant Variety Protection Office, to plant varieties produced by plant breeders through plant breeding activities. Of the 93 Plant Variety Protection certificates that have been granted by the Plant Variety Protection Office, not all are exercised by the licensees of plant variety protection. For licenses that are not utilized for the benefit of the people in Indonesia, licenses should be granted to other parties who can utilize them so as to increase agricultural productivity. If agricultural productivity increases, it will provide positive benefits for the people in Indonesia. This is in accordance with the provisions of the mandatory license for the protection of plant varieties in Article 46 of Law Number 29 of 2000, which states that the Government can implement the mandatory license itself if the variety is very important for food and drug policy.

However, the implementation of compulsory licensing in Indonesia still faces serious obstacles. To date, the use of compulsory licensing to support food sovereignty has been passive. Ambiguity in the interpretation of the "public interest" parameter and complex bureaucratic procedures make it difficult for the government to respond quickly to seed shortages at the farmer level. This contrasts sharply with India, which, through the Protection of Plant Varieties and Farmers' Rights (PPVFR) Act 2001, has adopted a more progressive approach. India explicitly integrates farmers' rights as an integral part of the public interest, allowing for more decisive intervention against PVP rights holders if community needs are not met at reasonable prices.

Comparative studies between Indonesia and India are relevant because the two countries share similar agrarian characteristics but have different

legal policy directions. India is often considered a model for developing countries in challenging the dominance of international standards (UPOV) to protect domestic food sovereignty. Conversely, Indonesia is still struggling to find the right formula to harmonize breeder protection with the pressing need for national food security.

Method

This research includes normative research with the type of normative juridical method with comparative and statutory approach this research is designed to conduct an in-depth analysis and comparison of the regulatory frameworks governing compulsory licensing within the Plant Variety Protection (PVP) systems of Indonesia and India, specifically focusing on how both jurisdictions construct 'public interest' parameters within their domestic policies. Furthermore, the study aims to dissect the urgency and effectiveness of granting compulsory licenses as a state intervention mechanism to overcome seed accessibility barriers, ultimately formulating a legal protection model capable of synergizing exclusive breeders' rights with the mandate of national food sovereignty and security in Indonesia. The normative legal research method is defined as a research method on laws and regulations both in terms of the hierarchy of laws⁷ and regulations vertically, as well as the harmony of laws and regulations horizontally⁸. The study utilizes secondary data, including primary and secondary legal sources, analyzed qualitatively to examine the regulatory differences in compulsory licensing regimes between Indonesian and Indian jurisdictions. The method of collecting legal materials carried out in this research includes literature study and document study. The data

⁷ Efren Nova and Riki Afrizal, "Perlindungan Hukum Terhadap (Suatu Kajian Yuridis Normatif) Terhadap Implementasi Undang-Undang No 11 Tahun 2012 Tentang Sistem Peradilan Pidana Anak Di Sumatera Barat," *UNES Journal of Swara Justisia* 6, no. 4 (2023): 480, <https://doi.org/10.31933/ujsj.v6i4.298>.

⁸ Kornelius Benuf, Siti Mahmudah, and Ery Agus Priyono, "Perlindungan Hukum Terhadap Keamanan Data Konsumen Financial Technology Di Indonesia," *Refleksi Hukum: Jurnal Ilmu Hukum* 3, no. 2 (2019): 145–60, <https://doi.org/10.24246/jrh.2019.v3.i2.p145-160>.

obtained in this research is analyzed which is written descriptively and analyzed qualitatively.

Result and Discussions

Comparison of Compulsory Licensing of Plant Variety Protection for Public Interest between Indonesia and India

The agricultural sector is the main sector for rural communities who are on the poverty line, especially in developing countries ⁹. So that the existence of new technology in agriculture will have an impact on reducing poverty levels by increasing crop yields and reducing production costs so as to reduce food prices and the availability of more and better jobs ^{10 11}. The protection of intellectual property rights cannot reach matters related to efforts to be able to produce advances in the field of agricultural technology because it is at the experimental stage. Therefore, to protect intellectual property rights in agriculture, developing countries are given the choice to protect through patents or create a sui generis system. The system used by Indonesia in providing protection for plant varieties is the sui generis system, namely Law Number 29 of 2000 concerning Protection of Plant Varieties which provides a requirement that protected plant varieties must have new, superior, stable, uniform characteristics.

Determining the criteria for granting protection to plant varieties that do not yet have an agreement and differences in interpretation make it difficult to protect new and superior plant varieties. Genetic engineering

⁹ Arsianita Nur Fattah and Eko Priyo Purnomo, "Analisis Kebijakan Alih Fungsi Lahan Pertanian Ke Non – Pertanian Di Kabupaten Klaten Tahun 2013-2016 (Studi Kasus Kecamatan Ceper Kabupaten Klaten)," *Jispo (Jurnal Ilmu Sosial Dan Ilmu Politik)* 8, no. 1 (2018): 113–40.

¹⁰ N. Lalitha, "Diffusion of Agricultural Biotechnology and Intellectual Property Rights: Emerging Issues in India," *Ecological Economics* 49, no. 2 (2004): 187–98, <https://doi.org/10.1016/j.ecolecon.2004.03.022>.

¹¹ Sri Mulyani, Aqil Teguh Fathani, and Eko Priyo Purnomo, "Perlindungan Lahan Sawah Dalam Pencapaian Ketahanan Pangan Nasional," *Rona Teknik Pertanian* 13, no. 2 (2020): 29–41, <https://doi.org/10.17969/rtp.v13i2.17173>.

that produces products or genetic engineering techniques that have never been discovered or utilized will be considered new by most developed countries because it is included in unique products or techniques ¹². However, in the realm of plant varieties, the standards for genetic engineering techniques or products are lower because it is difficult to determine the obscurity of a plant variety. For a plant variety to be protected, it must meet an even lower standard, which is that it must be distinct in the sense that the plant variety must have a combination that must be protected ¹³. On the other hand, if a criterion can be met, then in the future plants that grow in the wild that have not undergone genetic engineering techniques can be found so that they can be preserved for the benefit of future generations. For example, genetic engineering inventions in the future will become increasingly complex. Therefore, the process of duplication to be commercially utilized will be more complex in the future when compared to the process of production and application in industry today. If in a biotechnology innovation patent, duplication is all that is required, then in a biotechnology innovation patent, duplication is all that is required.

Biological aspects in the protection of plant varieties provide new challenges related to Law Number 29 of 2000 concerning Protection of Plant Varieties due to the legal aspects that must be able to protect the interests of plant breeders and those who utilize the results. In the duplication process to produce plant varieties that can be protected, a detailed written explanation is required and a suitable storage place for samples of protected material ¹⁴. Article 2 paragraph (1) of Law Number 29

¹² Derek Wood, "European Patents for Biotechnological Inventions - Past, Present and Future," *World Patent Information* 23, no. 4 (2001): 339–48, [https://doi.org/10.1016/S0172-2190\(01\)00044-8](https://doi.org/10.1016/S0172-2190(01)00044-8).

¹³ Antonella Di Fonzo et al., "The Impact of Plant Variety Protection Regulations on the Governance of Agri-Food Value Chains," *Social Sciences* 8, no. 3 (March 2019): 91, <https://doi.org/10.3390/socsci8030091>.

¹⁴ Jason J. Du Mont and Mark D. Janis, "Trends in Functionality Jurisprudence: U.S. and E.U. Design Law," in *Research Handbook on Design Law* (Edward Elgar Publishing, 2021), 30–76, <https://doi.org/10.4337/9781781955888.00009>.

of 2000 concerning Protection of Plant Varieties has requirements that must be met so that varieties can be given plant variety protection, namely new varieties, different from other products so that they have advantages, if duplication is carried out, it has uniform and stable characteristics and is named. For plant varieties that have met the elements to be protected by the plant variety protection regime, other parties who want to utilize plant varieties must agree on the amount of royalties that must be given to holders of plant variety protection rights. Other parties may not utilize plant varieties without the rights of the rights holder ¹⁵. For plant varieties that have been granted protection, it is obligatory to be implemented so that they can be utilized. For plant varieties that have been granted protection, it is mandatory to be implemented so that it can provide benefits to the community and can improve the country's economic level. If the right to protection of plant varieties is not exercised, the option is given to be able to carry out compulsory licensing, which is usually the task assigned to the national patent office, but in Indonesia, the Ministry of Agriculture has this authority through a District Court order. In Indonesia, if the plant variety protection right is not exercised in Indonesia within 36 (thirty-six) months from the date of granting the plant variety protection right or if the plant variety protection right is detrimental to the public interest, the license is granted by the plant variety protection right holder to the applicant based on a District Court decision.

In addition to the main requirements of excellence and novelty, there is also the need for a compulsory license for the duplication of new varieties of plants. Under Article 29 paragraph (1) of the Union for the Protection of New Varieties of Plants (UPOV), compulsory licenses can only be granted on the basis of considerations in the public interest. However, there is an additional provision that grants compulsory licenses to existing patent

¹⁵ Uchenna F. Ugwu, "Maximizing the Differentiation Principle in Regional IP Treaties to Advance Food Security: Limitations in West Africa's Regional IP and Trade Regime," *The Journal of World Intellectual Property*, July 2021, jwip.12193, <https://doi.org/10.1111/jwip.12193>.

holders for integrated biotechnological innovations in plant varieties that fall under the category to be protected. The patent holder must meet the conditions that: contractual permission from the plant variety rights holder is not obtained by the patent holder and the invention is a significant technical advance that can provide significant economic improvement when compared to other protected plant varieties ¹⁶.

Article 29 paragraph (5) letter a of the Union for the Protection of New Varieties of Plants (UPOV) stipulates that the patent holder will be granted a cross license at the time of application if the holder of plant variety rights granted by the patent institution (in Indonesia by the Ministry of Agriculture). The compulsory license can only be used for non-exclusive purposes against a plant variety that has been protected ¹⁷. In Indonesia, Law Number 29 of 2000 on the Protection of Varieties Crops provide opportunities for food monopolies but are still protected by the intellectual property rights system, which is done by granting other evaluations to plant breeders in support of compulsory licenses. Compulsory licenses are required in the service of national welfare for the ultimate goal of food security. Compulsory licenses can only be granted when obtaining permission from the Ministry of Agriculture that has received a District Court decision. Compulsory licensing in plant variety protection can have a negative impact because it does not have clear boundaries related to the scope of the literature because it focuses on the scope of agriculture ¹⁸. Most developing countries do not have strict licensing related to compulsory licenses as is the case in Indonesia based on Article 5 of the 1883 Paris Convention. Unlike in developed countries such as the United States,

¹⁶ Di Fonzo et al., "The Impact of Plant Variety Protection Regulations on the Governance of Agri-Food Value Chains."

¹⁷ Bart Kiewet, "Plant Variety Protection in the European Community," *World Patent Information* 27, no. 4 (2005): 319–27, <https://doi.org/10.1016/j.wpi.2005.07.006>.

¹⁸ Pawarit Lertdhamtewe, "Plant Variety Protection in Thailand: The Need for a New Coherent Framework," *Journal of Intellectual Property Law and Practice* 8, no. 1 (2013): 33–42, <https://doi.org/10.1093/jiplp/jps188>.

compulsory licenses can only be held by the government for national security purposes as stipulated in Article 5 of the 1883 Paris Convention ¹⁹.

The biggest problem that occurs in the world is related to the transformation in the economic sector, to create a more sustainable future ²⁰. As a result, developing countries face more complex problems because they must pay attention to technology and infrastructure sectors that are sustainable and environmentally friendly but still with the main goal of encouraging rapid industrial growth ²¹. Increasing food security in Indonesia can be done one of them by contributing to the presence of superior plant varieties so as to increase the quality and quantity of productivity of superior plants. This can happen because the selling price of the increased quality and quantity of crop productivity produced will be better than the previous one. If the right to protection of plant varieties is not implemented and utilized optimally, then a compulsory license can be submitted by a party capable of utilizing and implementing a compulsory license while still paying attention to royalties as a right that must be received by the holder of plant variety protection rights if both parties agree to grant the compulsory license.

Starting in the early 1990s when the intellectual property rights protection regime was implemented, the plant variety protection sector only developed in developed countries that focused on the industrial sector. In contrast to developing countries that do not emphasize the plant variety protection sector even though providing plant variety protection is important in terms of improving plant varieties for increasing agricultural

¹⁹ Susan Isiko Štrba, "Legal and Institutional Considerations for Plant Variety Protection and Food Security in African Development Agendas: Solutions from WIPO?," *Journal of Intellectual Property Law and Practice* 12, no. 3 (2017): 191–205, <https://doi.org/10.1093/jiplp/jpw209>.

²⁰ Xiao Shan Yap and Bernhard Truffer, "Shaping Selection Environments for Industrial Catch-up and Sustainability Transitions: A Systemic Perspective on Endogenizing Windows of Opportunity," *Research Policy* 48, no. 4 (2019): 1030–47, <https://doi.org/10.1016/j.respol.2018.10.002>.

²¹ Sang Jin Ahn and Ho Young Yoon, "'Green Chasm' in Clean-Tech for Air Pollution: Patent Evidence of a Long Innovation Cycle and a Technological Level Gap," *Journal of Cleaner Production* 272 (2020): 122726, <https://doi.org/10.1016/j.jclepro.2020.122726>.

yields in terms of quality and quantity ²². In developing countries, including Indonesia, the presence of new plant varieties through genetic engineering depends on research conducted by public sector organizations both at the national and international levels. Holders of plant variety protection rights are given a maximum of 36 (thirty-six) months to exercise their rights or harm the interests of the community, then they can grant a compulsory license to another party to exercise plant variety protection rights based on a decision of the District Court. The District Court can only grant a compulsory license to the applicant after there is confirmation from the holder of plant variety protection rights regarding the reasons for not exercising their rights. The decision of the District Court to grant a mandatory license application can only be given after considering the expert opinion of the Plant Variety Protection Office and the relevant rights holder. In addition, the requirements for implementing a compulsory license must also provide royalties to the holder of Plant Variety Protection rights, the amount of which will be decided by the District Court.

From an economic aspect, plant variety protection is given to plant breeders to facilitate the ability of plant breeders to be utilized widely and evenly ²³. For example, the Minister of Agriculture issues a decision to be able to produce varieties protected by the plant variety protection regime for the public interest, namely increasing productivity in the country concerned ²⁴. Therefore, the holder of plant variety protection rights can grant a compulsory license to the state through the Minister of Agriculture so that it can be utilized widely and evenly for the public interest. In order

²² C. S. Srinivasan, "Plant Variety Protection in Developing Countries: A View from the Private Seed Industry in India," *Journal of New Seeds* 6, no. 1 (2004): 67–89, https://doi.org/10.1300/J153v06n01_05.

²³ Jorge Cabrera Medaglia et al., "Comparative Study of the Nagoya Protocol, the Plant Treaty and the UPOV Convention: The Interface of Access and Benefit Sharing and Plant Variety Protection," *SSRN Electronic Journal*, 2019, <https://doi.org/10.2139/ssrn.3393475>.

²⁴ Patrick F. Byrne et al., "Sustaining the Future of Plant Breeding: The Critical Role of the USDA-ARS National Plant Germplasm System," *Crop Science* 58, no. 2 (March 2018): 451–68, <https://doi.org/10.2135/cropsci2017.05.0303>.

for the compulsory license to be utilized for the public interest in general, it must be registered in the General List of Plant Variety Protection, where the holder of the compulsory license must register the compulsory license at the Plant Variety Protection Office which will then be recorded in the General List of Plant Variety Protection. After that, it will be announced in the Official News of Plant Variety Protection as the task of the Plant Variety Protection Office so that the public at large knows about the issuance of the compulsory license. Royalty rights must also be paid to the holder of plant variety protection rights so that the compulsory license can be implemented properly.

After the District Court issues a decision on the use of a compulsory license and has been registered with the plant variety protection office, the holder of the compulsory license rights will have their rights protected to be able to use the compulsory license ²⁵. Therefore, the compulsory license for plant variety protection has binding legal force for the parties because it is obtained through a court decision that has permanent and binding legal force. In addition, if the use of the license is for the benefit of the community in Indonesia, then the reason for granting the compulsory license, the legal basis for granting the compulsory license, the validity period of the compulsory license, and the expiration of the compulsory license can be assumed to be true by the Plant Variety Protection Office. In addition, the provision of royalties to holders of plant variety protection rights who have been granted a compulsory license to the government should also not be set aside. If the amount of royalties and the method of payment of royalties are set aside by the government in this case by the Plant Variety Protection Office or the Ministry of Agriculture on the basis of the general public interest, it will have a negative impact on plant breeders to be reluctant to carry out plant breeding.

²⁵ Edwin L.C. Lai and Isabel K.M. Yan, "Would Global Patent Protection Be Too Weak without International Coordination?," *Journal of International Economics* 89, no. 1 (2013): 42–54, <https://doi.org/10.1016/j.jinteco.2012.07.004>.

In contrast, India adopted the Protection of Plant Varieties and Farmers' Rights (PPVFR) Act, 2001. What is unique about India is its decision not to rigidly follow the UPOV 1991 standards, but rather to integrate farmers' rights as a core part of the public interest.²⁶ The compulsory licensing mechanism under Indian law is comprehensively stipulated in Chapter IX (Sections 47 to 53) of the *Protection of Plant Varieties and Farmers' Rights (PPVFR) Act, 2001*. This legal instrument is specifically designed to prevent monopolies by variety right holders and to ensure the widespread availability of seeds. According to Section 47, after the expiry of three years from the date of the grant of a certificate of registration, any person interested may apply to the Authority for the grant of a compulsory license.²⁷ Such an application may be granted if the right holder fails to satisfy the reasonable requirements of the public regarding the seed or propagating material, or if the variety is not made available to the public at a "reasonable price." This focus on price affordability is a unique hallmark of Indian law, providing a robust mandate for state intervention to protect smallholder farmers.²⁸ Furthermore, Section 50 empowers the Authority to determine the duration and the equitable royalty to be paid to the right holder, while Section 51 emphasizes that the compulsory license is non-exclusive and non-assignable, ensuring that the primary objective remains the fulfillment of public needs and the stability of national food security.

A substantial difference between the compulsory licensing systems in Indonesia and India lies in the precision of the triggering factors stipulated in each country's laws. Article 45 paragraph (1) letter b of Law Number 29 of 2000 (Indonesia) stipulates that a compulsory license may be granted if

²⁶ Pragya Mishra, "From Biopiracy to Biojustice : Legal Reforms for Traditional Knowledge and Agrobiodiversity in India," *Journal of Intellectual Property Rights* 30, no. July (2025): 440–50, <https://doi.org/10.56042/jipr.v30i4.11674>.

²⁷ Fahrul Fauzi, "TANAMAN DI INDONESIA Legal Protection For Plant Breeders And Plant Varieties Under The Framework Of Plant Variety Protection Law In Indonesia," *Wijaya Putra Law Review* 2, no. 2 (2023): 95–116.

²⁸ Widyachandra Hadian Kartadibrata, "The Plant Variety Protection Commission 's Role in Fostering Breeders ' Creativity," *Jurnal Bina Mulia Hukum* 9, no. 2 (2025).

a variety has been used in quantities and in a manner that "does not meet public needs".²⁹ However, this article does not provide a technical explanation of the indicators used to measure whether these needs are met. In contrast, Section 47 (2) (ii) of the PPVFR Act 2001 (India) progressively establishes the parameter of "reasonable price" as the primary indicator.³⁰ This means that in India, even if seeds are available in sufficient quantity on the market, the government has the right to intervene through compulsory licensing if the price set by the PVP rights holder is deemed excessively high and unaffordable for farmers.

The absence of a clause on price affordability in Article 45 of the Indonesian PVP Law often results in the compulsory licensing mechanism in Indonesia being "paralyzed" in the face of monopolistic pricing practices by corporations. Furthermore, differences are also evident in administrative flexibility; Articles 47-49 of the Indonesian PVP Law require bureaucratic examination procedures and place a heavy burden of proof on license applicants.³¹ Meanwhile, India's legal framework, through Section 47, provides a stronger mandate for the PVP Authority to act as a market balancer.³² By adopting price standards as part of the public interest, India has successfully created a system more responsive to food sovereignty, a step that has so far posed regulatory challenges for Indonesia due to the limited definition of "public interest," which is understood only administratively but not economically.

²⁹ Christoph Antons, "Intellectual Property in Asia : ASEAN, East Asia and India," *Deakin Law School Legal Studies Research* 21, no. 16 (2021).

³⁰ Karine E. Peschard, *Patent Politics and Litigation In The Global South* (Massachusetts London: The Mit Press Cambridge, 2023).

³¹ Ilham Nurman, Abdul Karim Uddin, and Andi Bustamin, "Compulsory Licensing in Intellectual Property Rights (IPR): Current Application and Future Prospects in Indonesia," *Fiat Justisia: Jurnal Ilmu Hukum* 18, no. 2 (2024): 127–50, <https://doi.org/10.25041/fiatjustisia.v18no2.3399>.

³² Qazi Mohammad, Sharique Saleem, and Naseem Ahmed, "The Protection of Plant Varieties and Farmer ' s Rights Act (PPVFR) in India : A Crucial Legal Framework for Plant Variety Protection," *Library Progress International* 44, no. 4 (2024): 1202–10.

Compulsory Licensing For The Public Interest In Supporting Food Sovereignty and Security In Indonesia

Plant variety protection will be granted if it has gone through the process of considering and assessing information about genetic engineering on plant varieties. Plant variety protection initially aimed to provide mechanical rather than biological protection. Starting in the 1970s, genetic engineering provided conditions that must preserve the environment and biological properties of plants ³³. Therefore, the choice to preserve the environment along with the biological properties of plants becomes an option for plant breeders. Plant breeders can ignore one of these things because there is no standard requirement that requires plant breeders to comply with these regulations.

Genetically modified crops were initially used for the purpose of increasing productivity in agriculture, but in the early 1990s there was a paradigm shift to the utilization of genetically modified crops for industrial, medical, and other non-food purposes ³⁴. Food crops such as carrots, papaya, potatoes, tomatoes, rice, soybeans or other food crops that were originally used to increase quantity and/or quality in agriculture began to be utilized for other fields such as the beauty industry ³⁵. Advances in genetic engineering, combined with existing natural knowledge, have resulted in the transformation of crops for the benefit of a wider range of sectors than just the food sector. Cooperation by agriculturalists and plant scientists for generations aims to create plant genetic resources³⁶. Plant genetic resources

³³ Salim Musabah Bakhit Al Zefeiti and Noor Azmi Mohamad, "The Influence of Organizational Commitment on Omani Public Employees' Work Performance," *International Review of Management and Marketing* 7, no. 2 (2017): 151–60.

³⁴ Lai and Yan, "Would Global Patent Protection Be Too Weak without International Coordination?"

³⁵ A. Alderborn et al., "Genetically Modified Plants for Non-Food or Non-Feed Purposes: Straightforward Screening for Their Appearance in Food and Feed," *Food and Chemical Toxicology* 48, no. 2 (2010): 453–64, <https://doi.org/10.1016/j.fct.2009.10.049>.

³⁶ I.S Bisht et al., "Farmers' Rights, Local Food Systems, and Sustainable Household Dietary Diversification: A Case of Uttarakhand Himalaya in North-Western India," *Agroecology and Sustainable Food Systems* 42, no. 1 (January 2018): 77–113, <https://doi.org/10.1080/21683565.2017.1363118>.

can be developed and preserved if agriculturalists and plant scientists can cooperate well in various aspects such as sharing knowledge, exchanging seeds, and mixing the desired characteristics of plant populations. The existence of information and resources that cannot be predicted in advance is something that can develop knowledge in the field of genetic engineering. Before the plant variety protection regime was established, naturally occurring resources without genetic engineering processes could be freely traded and considered communal property. The preservation of genetic resources, along with the participation of farmers, is a necessary step to ensure alignment between the demands of farmers and consumers. The absence of farmer participation should not lead to the failure of genetic resource preservation, especially due to the dominant role of The Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPs Agreement) has been a source of contention during negotiations on plant variety protection. Article 27 of the TRIPs Agreement states that its member countries are obligated to provide protection for plant varieties through patent protection, a *sui generis* system, or a combination of patents and a *sui generis* system³⁷. While most industrialized countries implemented this upon ratifying the TRIPs Agreement, the opposite is true for developing countries, where the application of the TRIPs Agreement remains limited. Plant variety protection can be granted through the patent regime, which has both negative and positive aspects. The negative aspect of patent protection for plant varieties is that it is more difficult to obtain. However, the positive aspect is that patent protection is more effective compared to other forms of intellectual property protection.

The International Union for the Protection of New Varieties of Plants (UPOV) is tasked with providing and promoting an effective system for plant variety protection to stimulate the development of plant varieties for

³⁷ Ju-Kyung Yu and Yong-Suk Chung, "Plant Variety Protection: Current Practices and Insights," *Genes* 12, no. 8 (July 2021): 1127, <https://doi.org/10.3390/genes12081127>.

the benefit of society ³⁸. Through UPOV, protection of plant varieties is a mandatory thing to do for plant breeders so that the rights of plant breeders and farmers can be protected ³⁹. Through UPOV, plant variety protection is a mandatory requirement for plant breeders to ensure that both breeders' and farmers' rights are protected. UPOV is a non-profit organization aimed at advancing plant variety protection globally ⁴⁰. All matters related to plant variety protection are handled by UPOV. In Indonesia, Law No. 29 of 2000 on Plant Variety Protection serves as the legal framework for these protections. It is hoped that these measures can help bridge the gap between plant breeders and farmers. This gap can be addressed by implementing clauses on farmers' rights, limiting the profits that plant breeders can obtain, and ensuring that compulsory license requirements for public interest align with field realities. Plant variety rights holders are given the option to exercise their rights exclusively by producing and selling all reproductive materials or propagating the variety according to market needs, or they can grant compulsory licenses to other parties in exchange for royalties, which are received by the plant variety protection rights holder.

Table 1: Plant Variety Protection in Indonesia 2019-2024

Aspect	2019	2020	2021	2022	2023	2024
application for PVP (varieties)	51	50	61	78	103	82
issuance of PVP certificate (certificate)	36	21	43	67	93	44
monitoring and evaluation of varieties (varieties)	50	31	40	30	20	20

³⁸ Debashis Bandyopadhyay, *Plant Variety Protection and Farmers' Rights*, 2018, https://doi.org/10.1007/978-981-10-8872-8_5.

³⁹ D. Bandyopadhyay, *Securing Our Natural Wealth* (Singapore: Springer., 2018).

⁴⁰ Du Mont and Janis, "Trends in Functionality Jurisprudence: U.S. and E.U. Design Law."

Based on the data in the table above, it can be seen that the number of applications for plant variety protection from 2019 to 2024 has consistently increased. However, the issuance of certificates, as well as monitoring and evaluation, have fluctuated during this period. Notably, despite the many plant variety protection certificates issued by the Plant Variety Protection Office, only 30 varieties remain under monitoring and evaluation. This indicates that the implementation and utilization of plant variety protection have not been fully optimized. If plant breeders are unable to exercise their rights independently, they are given the option to grant a license to another individual or legal entity to utilize these plant variety protection rights. Article 1, point 13 of Law No. 29 of 2000 on Plant Variety Protection defines a plant variety license as a permit granted by the holder of plant variety protection rights to another person or legal entity to use all or part of those rights. Plant breeders are given the exclusive right to utilize and exploit protected plant varieties, and they can also prohibit others from using or selling products from these protected varieties.

categories: ordinary licenses and compulsory licenses. An ordinary license arises from an agreement between the licensor and the licensee. In contrast, a compulsory license is granted based on a District Court ruling if there is a request for plant variety protection. A compulsory license application to the District Court can be approved if the following conditions are met ⁴¹:

1. Plant variety protection rights are not used in Indonesia or used in a form and manner that is detrimental to the interests of the community.
2. The holder of plant variety protection rights does not exercise his/her rights himself/herself after a period of 36 (thirty six) months from the date of granting plant variety protection rights.

⁴¹ Arini Yunia Pratiwi, Muhamad Amirulloh, and Anita Afriana, "WAJIB (COMPULSORY LICENSE) PERLINDUNGAN VARIETAS TANAMAN DI INDONESIA LEGAL HARMONIZATION OF COMPULSORY LICENSE PROTECTION OF PLANT VARIETY IN INDONESIA," *Jurnal Poros Hukum Padjadjaran* 2, no. 42 (2021): 284–301.

3. The applicant can prove that he/she has the technical and financial capabilities and facilities to use the plant variety protection rights himself/herself and has attempted to obtain a license based on reasonable terms and conditions but has not succeeded.

The compulsory licensing mechanism within Indonesia's Plant Variety Protection (PVP) system serves as a crucial legal instrument to ensure seed availability for national food sovereignty and security. Under Article 46 of Law Number 29 of 2000 concerning PVP, the Government is authorized to implement a compulsory license if a specific plant variety is deemed vital for public food and medicinal policies. This provision is further strengthened by Article 45, paragraph (1), letter b, which allows for the issuance of a compulsory license if the variety is not available in quantities or methods that satisfy public needs. In the context of food security, compulsory licensing acts as a "safety valve" that enables state intervention into the exclusive rights of breeders to address seed scarcities or unreasonable price monopolies. However, the effectiveness of Article 46 heavily depends on technical implementing regulations that can specifically define "public interest" parameters. This would allow the state to respond effectively to food crises while maintaining fairness for PVP holders, particularly regarding the provision of equitable compensation as stipulated in Article 50.

Conclusion

The comparative analysis conducted in this study underscores a significant divergence in the legislative philosophy and operational efficiency of Plant Variety Protection (PVP) regimes in Indonesia and India. First, the findings reveal that India has established a far more sophisticated and holistic legal framework through the Protection of Plant Varieties and Farmers' Rights (PPVFR) Act. This landmark legislation does not merely offer a defensive mechanism but proactively integrates "farmers' rights" as

a non-negotiable core component of the "public interest" doctrine. By doing so, India successfully balances the individualistic nature of intellectual property with the collective necessity of food security, effectively neutralizing potential seed monopolies. The Indonesian Law Number 29 of 2000 suffers from a persistent normative ambiguity, particularly regarding the definition and scope of "public interest." This conceptual vagueness creates a high threshold for state intervention, rendering the compulsory licensing mechanism dormant. In India, it allows for faster and more decisive interventions to ensure price stability and seed accessibility. Conversely, in Indonesia, the mechanism remains sub-optimal and largely theoretical. The absence of specific technical implementing regulations means that the state is ill-equipped to respond with the necessary agility during national food crises.

Second, the results unequivocally indicate that although compulsory licensing is formally accommodated within Indonesia's legal system as a vital instrument for safeguarding the public interest, its actual implementation remains profoundly suboptimal in advancing the national agenda of food sovereignty. Indonesia must redefine the operational triggers of "public interest" to empower the state to intervene swiftly when seed accessibility is threatened, thereby ensuring that intellectual property rights do not become an insurmountable barrier to the fundamental right to food.

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