The Concept of Indefeasible Title in Electronic Land Certificates as an Initiative to Prevent Land Mafia

Annisa Weningtyas¹, Rahayu Subekti², Purwono Sungkowo Raharjo³

¹²³Faculty of Law, Universitas Sebelas Maret

Corresponding Author: ¹annisatyass@student.uns.ac.id, ²rahayusubekti0211@staff.uns.ac.id, ³purwonomusungkowo@staff.uns.ac.id

Abstract
The study aims to analyze the indefeasible title concept on electronic land certificates for preventing land mafia. This research is normative legal research using legal and conceptual approaches. Legal materials include primary and secondary legal materials. According to the study, one of the causes of the land mafia is the land registration system’s tendency to publish harmful material, as contained in Government Regulation 24 of 1997 on Land Registration. Therefore, reforming and developing the land law system into a positive publication system is necessary. By the Regulations of the Minister of Agrarian No. 1 of 2021 on Electronic Certificates, Electronic certificates are expected to be a database of landlords to reduce land disputes and strengthen the legitimacy of land certificates as a guarantee of ownership of land rights in Indonesia. Suppose an error in the registration procedure of a positive publication causes the losses of the party that should be more entitled. In that case, the state will guarantee compensation in substance to the party whose right is proven correct using the indefeasible title concept.

Keywords: Land mafia; Indefeasible title; Electronic land certificate; Land registration
1. Introduction

The amount of land that a person controls or owns can be a good indicator of their social position. A person’s social status increases with the amount of land they own. Land can serve as a sociocultural marker of society and an indicator of a person’s social accomplishments. An essential natural resource for human existence is land. The Republic of Indonesia’s 1945 Constitution, under Article 33, Paragraph 3, declares that the earth, water, and the natural resources contained therein are under state sovereignty and should be utilized for the benefit of the populace.

Competition among other humans to acquire land was born due to the amount and size of land needing to be in balance with the community’s demands. This is consistent with the numerous advantages, uses, and constrained land supply for maintaining human life, which has led to land challenges. The land mafia is a recent widespread land issue we frequently encounter in print and online media.

Land tenure disputes are Indonesia’s main problem, according to data from the Ministry of ATR and BPN. There were 8,111 unfinished land problems in 2022–2023, of which 4,211 involved disputes, 550 involved conflicts, and 3,290 involved judicial actions. Most of these land conflicts are ownership disputes between real owners and the land mafia. Between 2018 and 2022, the Ministry of ATR and BPN handled 305 cases as targets of land mafia operations.

The number of agrarian conflicts shows that land administration in Indonesia needs to be improved to provide legal certainty over land rights. One of the causes of rural conflict is the land registration system used in Indonesia,
which is a negative publication system that tends to be positive. In a negative registration system that tends to be positive, the government does not guarantee legal security for valid certificate holders.

According to the Ministry of ATR/BPN’s Secretary General, Himawan Arief, one of the causes of the land mafia gap is Indonesia’s land registration system, which has a negative tendency toward positive publications. This registration process results in land certificates that are legally binding but not proof. Consequently, there is a gap that can be filled in the aftermath.

The land registration system in Indonesia, based on Government Regulation Number 24 of 1997 concerning Land registration, uses a negative publication land registration system with a positive tendency. This means that this land registration system uses the rights registration system (the Torrens system or registration of titles), but the publication system could be more positive. This is because the physical and juridical data contained in the land certificate is not necessarily correct. However, it must be accepted as accurate data as long as no evidentiary tool proves otherwise.

Article 19, paragraph 2 of the UUPA gives the land certificate a solid evidentiary basis. As a result, the certificate’s evidential value is not absolute; it only has validity if the physical and legal information is consistent with the land book and measuring letter and cannot be refuted in court. The consequence is that the land certificate can still be amended if there are procedural or legal issues with how it was issued.

In addition, using land registration systems with negative publications can hurt national development:

a. Property registration is low due to high processing costs and the low quality of land administration in Indonesia;

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b. There is potential for conflict, both between communities and between communities and the government, which can disrupt national security stability;

c. National economic growth is hampered, resulting in declining community welfare.

Based on this, it is likely inferred that the land registration system and unfavorable press were responsible for the initial void in the emergence of the land mafia. The land mafia is a unique form of land-related criminality that goes above and beyond regular criminal activity. In addition to harming individuals, the land mafia also targets legal entities as victims. But it can also undermine the rule of law, slow economic expansion, and discourage investment. To prevent and eliminate the land mafia in Indonesia, the government must act decisively.

To provide legal certainty and protection, changing the land registration mechanism from analog to digital is necessary. This is by the instructions of President Joko Widodo and the Ministry of ATR and BPN regarding digitizing land services to facilitate services to the community and simplify bureaucracy. By 2025, it is expected that all land in the territory of Indonesia will already have a certificate.

In line with that, the Minister of ATR/BPN of the Republic of Indonesia has stipulated Minister of ATR/BPN Regulation Number 1 of 2021 concerning Electronic Certificates. The hope is that electronic certificates can become a land agency database to reduce land disputes and strengthen the legitimacy of land certificates to guarantee land rights ownership in Indonesia.\(^\text{11}\) The presence of electronic certificates signifies a transformation in land administration. Implementing this policy is expected to eradicate the land mafia so that they can support and complement each other. Suppose there is an error in the positive publication system registration procedure that causes harm to the party who should be more entitled. In that case, the state will guarantee compensation in the form of payment to the party whose rights are proven correct by using the principle of indefeasible title.\(^\text{12}\)


Based on the background description above, the author intends to examine more deeply the eradication of the land mafia with the principle of indefeasible title in the digitalization of the land registration system in Indonesia.

2. Literature Review

Land Mafia

According to the Technical Guidelines for the Prevention and Rebellion of Land Mafia No. 01/JJUKNIS/DVII/2018, land mafia refers to individuals, groups, or legal entities that deliberately act to commit crimes and work to obstruct the proper handling of land matters.

According to Prof. Dr. Nurhasan Ismail, S.H., M.Si., Professor of Law at Gajah Mada University, the land mafia seems to be in the room. This means that they have a network that exists and violates the law, which has a detrimental impact on other people who are victims of the land mafia. This network is well-structured, neatly organized, and very systematic. They look legitimate and legal, but their actions are illegal and unlawful because their main goal is only to seek profit for themselves and economic harm for others.\(^\text{13}\)

According to Indriyanto Seno Adji, the land mafia is classified as a classic organized and professional crime, but the legal process and mediation are avoided due to restrictions on disclosure. The mafia employs methodical criminal techniques to carry out its crimes, with the most prevalent method being using false land records, filing court cases to secure land rights, and carrying out criminal conspiracies in authentic deeds or certificates involving public officials.\(^\text{14}\)

The non-integration of several sources of land administration also provides opportunities for land mafia groups to run their illegal networks by utilizing various pieces of evidence from different administrative sources. In addition, the plurality of evidence of rights also opens up opportunities for land mafia groups to enter by utilizing various evidence of existing rights.\(^\text{15}\)


The Indefeasible Title Concept

In a positive publication system, the basis of good faith is applied to protect individuals who acquire rights in good faith and through payment from persons registered as legal rightsholders in registers or land records. The person has the right to an indefeasible title if their name is listed in the registry as the owner of certain rights.\textsuperscript{16} Although the person who carries out the transfer is not the actual rightsholder, the person of good faith remains protected and is guaranteed his right to the land.

Indefeasible title guarantees the accuracy of the information about the land, both physically and legally, contained in the land book. The state is fully responsible for this information, so the legal confidence in land data is absolute. In addition, if there are procedure errors, the state also provides compensation as collateral.

Some countries, including Malaysia, Australia, Hong Kong, Canada, Austria, and Tanzania, have implemented land registration systems with positive publications. In implementing this system, these countries also use the concepts of irresponsibility and compensation to compensate for errors in land certification.\textsuperscript{17}

In a positive publication system, there are two kinds of damage guarantees: immediate indefeasible and deferred indefeasible. Immediate indefeasible is creating a land ownership system by registering land rights designed to protect innocent parties such as land buyers or tenants. In other words, the concept of immediate indefeasibility aims to preserve the party holding the right to the current land, even if the process of land ownership is mediated by fraud or carried out misleadingly. If the original owner loses his land, he will obtain a guarantee of damages from the government.\textsuperscript{18}

Meanwhile, the concept of deferred indefeasible can be illustrated through the case of three parties, namely the legal owner of the land, the second landowner who acquired the land from a fraudster, and the third owner as the

\textsuperscript{16} Boedi Harsono, 2008, Hukum Agraria Indonesia: Sejarah Pembentukan Undang-Undang Pokok Agraria, Isi dan Pelaksanaannya, Jakarta: Penerbit Djambatan.

\textsuperscript{17} Rudiyanto et al., 2016, “Kajian Persiapan Perubahan Sistem Pendaftaran Tanah Publikasi Positif di Indonesia”, 1-96, Direktor Tata Ruang dan Pertanahan, 15.

party receiving the land in good faith without knowing that the transfer of land from the original owner to the second owner through a deceiver. In this concept, land law protects the original owner and third-party owners. Protection for the original owner occurs when the second owner, who acquired the land from a fraudulent person, obtains a claim from the original proprietor. The land law will favor the actual owner, and the land ownership will return to the initial owner.\(^{19}\)

Meanwhile, protection against third owners occurs when the third owner acquires land from the second owner (without knowing that the transfer of the right to land from the original owner to the second owner was initiated by the fraudsters). Then, the third owner gets a claim from the original owner. In this situation, the land law will benefit the third owner, and the land ownership remains the property of the third owner.\(^ {20}\)

The original owner received damages from the government, but the second owner received no guarantee of damages. The loss suffered by the second owner is because he should first check the land transaction to avoid fraud, while the third owner cannot investigate the transaction.\(^ {21}\)

**Electronic Land Certificate**

According to the Regulation of the Minister of Agrarian and Space and Head of the National Agrarian Agency of the Republic of Indonesia Number 1 Year 2021 About Electronic Certificates, in Article 1 Number 8, Electronic Certificates, also known as certificates-el, are certificates issued through electronic systems in the form of electronic documents. This Electronic Certificate aims to realize digitalization and efficiency in public services and reduce landings disputes. Here are the characteristics of electronic certificates, among others:\(^ {22}\)

1. Document codes, electronic certificates using hashcodes or unique codes as identification of electronic documents generated by the system;

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\(^ {19}\) Ibid, 65.
\(^ {21}\) Ibid, 20
\(^ {22}\) Kompas.com, 4 Februari 2021, 6 Hal yang Perlu Diketahui tentang Sertifikat Tanah Elektronik, https://www.kompas.com/tren/read/2021/02/04/095700065/6-hal-yang-perlu-diketahui-tentang-sertifikat-tanah-elektronik?page=all
2. Scan a QR code, an electronic certificate equipped with a QR code that contains links or links to facilitate public access to electronic documents;

3. The identification number in the electronic certificate uses only one number, namely the Field Identification Number (NIB), as a single identity;

4. The provisions of obligations and prohibitions on the electronic certificate concerning the prohibition and obligation provisions contained concerning the aspects of rights restrictions and responsibility;

5. Signatures and certificates issued electronically using electronic signatures cannot be counterfeited;

6. The electronic certificate is an electronic document containing information about land ownership in total and can be easily accessed through the Touch My Land app and printed independently.

Electronic certificates are expected to be effective in national land management. This could minimize certificate scraping, counterfeiting, and illegal transactions carried out by the land mafia. In addition, the use of electronic certificates can also reduce the risk of loss of physical documents due to fire, rain, and theft. These electronic certificates provide various benefits for the community, including ease of access to digital data and access from counterfeiting land certificates. Thus, electronic certificates can be the basis for guaranteeing legal certainty regarding the ownership of land rights for the community.

3. Method

The research used in this study is normative legal research. This research uses qualitative legal research methods with a statute and conceptual approach. The statute approach examines and analyzes how regulations relate to the land registration publication system in electronic land certificates. In contrast, the


A conceptual approach is used to explore and analyze the theory of applying the concept of indefeasible title in the land registration publication system to prevent land mafia. The technique of collecting legal materials by conducting document studies or utilizing literature to obtain the necessary legal materials generated from various primary and secondary legal materials. Then, for research materials, the researchers used articles published in the last three years and correlated with the research objectives, described in the following table:

<table>
<thead>
<tr>
<th>Research title</th>
<th>Year</th>
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<tr>
<td>Analisis Prospek Pemberlakukan Sistem Pendaftaran Tanah Publikasi Positif dan Aspek Kepastian Hukum Pemegang Hak Atas Tanah</td>
<td>2020</td>
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<tr>
<td>Kepastian dan Perlindungan Hukum dalam Hal Pembuktian Sertipikat Elektronik Hak Atas Tanah</td>
<td>2021</td>
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<tr>
<td>Legal Status of Electronic Land Certificates in the Land Case Proof System in Indonesia</td>
<td>2021</td>
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<tr>
<td>Implementasi Sertifikat Elektronik Sebagai Jaminan Kepastian Hukum Ke- pemilikan Hak Atas Tanah Di Indonesia</td>
<td>2021</td>
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<tr>
<td>Legal Protection for Land Rights Holders Who Are Victims Of The Land Mafia</td>
<td>2021</td>
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<tr>
<td>Analisis Kedudukan Hukum Sertifikat Tanah Elektronik dalam Prespektif Kepastian Hukum (Studi di Kantor Pertanahan Kabupaten Demak)</td>
<td>2022</td>
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<tr>
<td>“Upaya Polri dalam Penanggulangan dan Pemberantasan Mafia Tanah di Provinsi Lampung”</td>
<td>2022</td>
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<td>Sistem Pendaftaran Tanah yang memberikan Perlindungan Hukum Bagi Pemegang Sertifikat Hak Atas Tanah di Indonesia</td>
<td>2022</td>
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<tr>
<td>Pengaturan dan Kepastian Hukum Penerbitan Sertifikat Elektronik dalam Sistem Pendaftaran Tanah di Indonesia</td>
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<tr>
<th>Research title</th>
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<tr>
<td>Factors Influencing Land Mafia Cases</td>
<td>2022</td>
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<tr>
<td>Land Mafia Prevention and Eradication Efforts In Land Administration Law Perspective.</td>
<td>2022</td>
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<tr>
<td>Rekonstruksi Politik Hukum Sistem Pendaftaran Tanah Sebagai Upaya Pencegahan Mafia Tanah</td>
<td>2022</td>
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<tr>
<td>Kedudukan Yuridis Penerbitan Sertifikat Tanah Ke Sistem Elektronik Sebagai Jaminan Keamanan</td>
<td>2023</td>
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<tr>
<td>Digitizing Land Certificates to Anticipate the Mafia and Realize Legal Certainty</td>
<td>2023</td>
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<tr>
<td>The Significance of Blockchain Implementation in the Issuance of Land E-Certificates: Examples from Ghana and Germany</td>
<td>2023</td>
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The research conducted by the researchers differs from existing research, such as the table above, in that it relates to the certainty, protection, and legal status of electronic certificates. In this study, the authors researched the concept of indefeasible title in electronic land certificates to prevent and eliminate the land mafia in Indonesia.

The idea is to change the land registration system from a negative publication system to a positive publication system. In addition, the legal reform of the land registration system can be offset by implementing the electronic land registry system with legal products in the form of electronic certificates so that it can break the eye of the land mafia.

4. Result and Discussion

The Effort to Eradicate Indonesia’s Land Mafia Using the Indefeasible Title Concept

Due to the high societal demand for land availability, the land mafia persists in the land industry. Land is, therefore, an essential resource for human survival. The value of land is very high economically. Land can benefit the populace economically. Land can affect a person’s position politically, socially, culturally, and legally. Legally, land is the foundation of power for jurisdiction.
The land mafia is defined as a group of people, organizations, and legal entities that purposefully conduct crimes that impede the implementation of land case handling.\textsuperscript{26} This is according to the technical standards for preventing and eradicating the land mafia. The land mafia systematically commits crimes by fabricating land documents, filing fabricated lawsuits to obtain land rights, conducting fictitious sales and purchases, and entering into malicious agreements made in an authentic deed or certificate concerning public officials.\textsuperscript{27} Based on data from the Ministry of Agrarian Affairs and Spatial Planning and the National Land Agency, land tenure disputes are the main problem in Indonesia. From 2022 to 2023, there were 8,111 unfinished land issues in Indonesia, with details of 550 conflict cases, 4,211 dispute cases, and 3,290 cases in court.\textsuperscript{28} The high number of agrarian conflicts indicates that land administration in Indonesia needs to be improved to provide legal certainty for land rights. One of the primary sources of agricultural conflict problems is the land registration system used in Indonesia, which is a negative publication system with a positive tendency.\textsuperscript{29} The legal principle that is the basis of the negative publication system is the principle of \textit{Nemo plus juris}, or a person may not perform legal acts that exceed his authority. The uncertainty of the certificate due to the possibility of a challenge or cancellation at any time is one of the drawbacks of the negative publication system with a positive tendency. In a negative publication system, the legality of the action taken establishes the legitimacy of a right and its transfer, not the registration. In other words, even though a right has been recorded in the land book and a certificate has been granted, there is a chance that the registered party will no longer control the land because the right’s valid owner will sue and win.\textsuperscript{30}

The requirements of Article 32, paragraph 2, of Government Regulation Number 24 of 1997 govern the \textit{rechtverwerking} institution that has existed

\textsuperscript{26} Petunjuk Teknis Pencegahan dan Pemberantasan Mafia Tanah No 01/ JUKNIS/ D.VII/ 2018.
\textsuperscript{27} Hukum Online, 2022, Ada Beragam Definisi dan Modus Mafia Tanah, Simak Penjelasannya!, https://www.hukumonline.com/berita/a/ada-beragam-definisi-dan-modus-mafia-tanah--simak-penjelasannya-ht61dd73256df5f/?page=all
The Concept of Indefeasible Title in Electronic Land... in Indonesia to date. The *rechtsverwerking* institution sets a five-year time restriction as the maximum for certificate challenges. However, even after the five-year window has elapsed, anyone who believes they have enough proof may still contest the integrity of the information in the deed.

As a result, the land law system has to be updated and developed into a helpful publication system. A land registration system with positive publishing makes the information in the land book and any issued letters of evidence of rights become infallible methods of proof. The positive publication land registration system offers complete legal certainty regarding land rights. Additionally, the state backs up the advertised land through this method of positive publicity. The concept of good faith applies in the positive publishing system, which protects persons in good faith who gain rights from the person whose name is recorded as the legal right holder in the register through payment. In good faith, the person gets an indefeasible title by entering his name as the valid holder in the land book.\(^{31}\) If there is a mistake in the positive publication system’s registration procedure, the state will guarantee compensating funds\(^{32}\) in the form of compensation payments to parties who are demonstrated to have the right under the concept of indefeasible title.

The term “indefeasible” is central to the positive publication land registration system. According to the Land Registration Act 2002, indefeasible title is based on three main principles:\(^{33}\)

a. The mirror principle requires that the results of land registration reflect accurately and completely the current facts about land titles, including transfers of land rights and leases. The land certificate and online system should include all land information so the public can access it.

b. The curtain principle states that a veil is used on the register to provide confidence and trust to the purchaser. In this case, the buyer does not need to investigate and dig back into the history of land ownership as recorded in the register, so there is no need for complicated and lengthy documentary evidence to prove land ownership.

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c. The insurance principle explains the provision of compensation or guarantees in the positive publication registration system. In this situation, if it is proven that the land registration is incorrect, the government must provide compensation or indemnity to the aggrieved landowner.

Based on this, preconditions or preparatory actions are required before implementing a positive publication system so that errors that result in the state having to bear the cost of compensating victims may be appropriately regulated. The likelihood of land mafia and duplicate certifications in this scenario is considered extremely low, so even if they emerge, the state’s financial burden of compensating those affected may still be successfully controlled.

Essential factors must be considered to build a successful publication system. The government must take several actions for the adoption of the new publication system in the nation to be effective, including:

a. The government must comprehend the cost and time of managing the new land registration system. Land registration is a long-term investment that requires a large budget to prepare for implementation. In addition, maintaining the new land registration system is a permanent responsibility of great concern;  

b. Land titles and property boundaries must be identifiable and firmly established. Land users must be able to identify their land titles and property boundaries to avoid lengthy disputes;

c. The conduct of quality land surveys and the number of surveyors should match the number of land parcels to be certified. The overall compilation and maintenance of the land registration system are highly dependent on the number of qualified, skilled, and professional surveyors;  

d. Through counseling and evaluation efforts, it is hoped to prevent similar problems from arising in implementing the new land publication system. All Indonesians, including the community and the government, should be familiar with and understand the new

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land registration publication system through socialization from the National Land Agency. The public needs a thorough understanding of the new land registration system, including its benefits, advantages, and associated provisions;

e. Various laws and regulations governing land registration in Indonesia must be revised following the implementation of the new land publication system. The entire community must understand the revised articles clearly and easily. Clarity in the laws and regulations will significantly support local governments in carrying out their duties. Some of the things that need to be included in the content of the new land registration legislation are implementation of the three main principles in indefeasible law, determination of the type of compensation for errors in the register, a law or government regulation is needed that regulates in more detail the National Land Registration Database Center.

The character of the legal material becomes necessary for legal change regarding positive publishing due to the mapping of success. As observed, the legal content of land registration that conforms to the positive publication system must still be developed as part of the renewal of the national legal system to give more certainty, practicality, and fairness. The growth of the national legal system can be substantial, structural, and cultural. According to Lawrence M. Friedman’s legal system theory, a legal system must have the following elements:

1. Legal structure in terms of law enforcement institutions and regulation makers.
2. Legal substance, consisting of norms and rules.
3. Legal culture contains society’s beliefs, values, thoughts, and expectations regarding law.

Legal culture decides when and how the machine should be utilized. As a result, effective collaboration and coordination in all three areas are required to break the land mafia’s chain. It is envisaged that changing the statute from

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negative to positive publishing will reduce the gap in land mafia offenses. This is the most fundamental administrative preventive and eradication strategy.

**Electronic Land Registration System with an Indefeasible Title Concept to Eliminate Land Mafia Practices**

The globe has transitioned into the digital age in modern times, where everything is digital, and technology is used for the long-term good of the populace. The digital era is characterized as a time when technology has simplified all tasks that support life to make them more useful. Most modern nations have switched to a digital system where all records are kept on publicly accessible digital platforms.³⁷ He most significant benefit of this switch to digital technology is time savings. Electronic-based land services must be implemented in the land sector to achieve the modernization of land services mandated by the Minister of Agrarian and Spatial Planning/Head of the National Land Agency's Regulation No. 1 of 2021 concerning Electronic Certificates. This regulation aims to modernize land services to enhance community public services and business ease indicators. This can be done by implementing electronic-based land services and improving the utilization of information and communication technologies.

The outcome acquired through electronic-based land services is an electronic certificate or e-certificate. In line with Article 1 Point 8 of Regulation of the Minister of ATR/BPN Number 1 of 2021, this certificate is an electronic document issued using an electronic system. This electronic certificate is expected to become a land agency database to eliminate land disputes and increase the credibility of land rights certificates to guarantee land rights ownership in Indonesia.³⁸

The electronic certificate's introduction aims to increase the value of registration property and decrease the number of land-related disputes, conflicts, and court cases to make doing business more accessible while also increasing the efficiency of land registration, legal certainty, and legal protection.³⁹

Electronic data, information, and documents will be outcomes of deploying

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The Concept of Indefeasible Title in Electronic Land ... electronic land registration (land certificates). The information is provided as information on the right holder and physical and legal information on natural and legitimate land parcels. An electronic database system will hold all materials related to land certificate services. But there is no need for the general public to be concerned about the security of this electronic land certificate registration. This is due to the efficient, secure, and moral execution of land registration made possible by digital technology.

Virgo Eresta Jaya, Director of the Center for Data and Information on Agricultural Land, Spatial Planning, and Sustainable Food (LP2B), emphasized the security of using electronic certificates. A hash code, QR code, and land identification number will be incorporated into the electronic certificate as a single identity. Security is also assured since the National Cyber and State Password Agency (BSSN) uses encryption methods such as cryptography. The integrity of the data will be ensured in the Electronic Certificate, which means that the data will always be intact, not reduced or modified, and the data has been safeguarded for confidentiality by applying BSSN encryption technology.

The compliance with Article 5 of the Minister of Agrarian and Spatial Planning/National Land Agency Number 1 of the 2021 Regulation, the government has implemented measures to enhance electronic land certificates’ security and legal certainty. Specifically, printouts of electronic documents are recognized as legitimate physical evidence under the law and as supplementary evidence under civil law regulations. Blockchain technology is therefore used to provide electronic certifications with security. Because intelligent contract technology prevents most land registration legal papers from being modified, which are necessary for completing legal activities like agreements, blockchain can limit the land mafia’s ability to carry out its operations. Thus, after the digitalization of land certificates, blockchain offers a solution to the issue of land registration. Indeed, the land mafia may have less room if land certificates are digitalized.


By implementing blockchain technology, the Indonesian government is resolving the issue of multiple certifications. Duplicate certificates may be avoided with this technique. The government started issuing electronic certificates to reinforce the land system as part of the “Making Indonesia 4.0” program based on the Regulation of the Minister of Agrarian Affairs and Spatial Planning/National Land Agency Number 1 of 2021. Peer-to-peer networks underpin blockchain technology. Because of this, it enables complete transparency for users and authorities and permits all transactions to be verified and documented on the network.

Blockchain technology is used in land registration because it has many benefits, such as data synchronization and transparency, accurate and dependable property data provided, easy access, immutable record administration, and the potential to complete the process quickly. Utilizing blockchain technology may ensure proper documentation of property ownership or building certifications.

As a result, several governments worldwide, including the United Kingdom, have embraced blockchain technology to register land titles for their citizens. A system called “Distributed Ledger Technology: Beyond Blockchain” has been developed in the United Kingdom. It is a decentralized idea to stop theft, deliberate and accidental mistakes, and corruption and improve the efficiency of numerous processes.\(^{43}\) Blockchain technology can potentially end the fraud committed by Indonesia’s land mafia,\(^{44}\) which frequently leads to land disputes. It marks the end of employing cryptographic techniques to preserve land data in a way impervious to manipulation, even in minor details. It further permits the processing, entering, and inventorying of every transaction into a networked system and eradicates scams.

The Indonesian Blockchain Association is one of the private sectors in Indonesia that has already begun putting the blockchain idea into practice. Disseminating knowledge about this technology to the public is the primary goal of this organization. Additionally, the public sector works with blockchain-based companies. One example is OnlinePajak, an application service provider supporting tax administration services for the Directorate General of Taxation. Nonetheless, the need for laws controlling the new technology is one of the

\(^{43}\) Ibid, 670.
\(^{44}\) Ibid.
issues hindering blockchain growth in Indonesia. Not to mention, there are still a lot of false beliefs about blockchain technology and its restricted availability.

Even if the use of blockchain presents several difficulties, such as infrastructure technical preparedness, transaction guarantees, and security from careless parties’ hacking efforts, this concept is nonetheless a step in the right direction toward digitalization. Moreover, using blockchain technology for land certificates impacts avoiding land mafia crime, which has historically resulted in property disputes and conflicts. Because blockchain technology’s land registration system will be encrypted and accessible only to the user or land rights owner, it can deter dishonest authorities from fabricating documentation. Because electronic land certificates use less paper and ink and expedite the signing and servicing process, they also contribute to the government’s go-green initiative and paperless office culture in the digital age, and implement digital signatures that guarantee data authentication, are easy to maintain and manage, and can be accessed anytime and anywhere.45

Electronic certificates indicate a change in land administration, in addition to efforts to implement positive publication. Adopting the new policy is intended to close the loopholes for crimes committed by land mafia groups, supporting and complementing each other. In addition, to prevent fraud by the land mafia, all land data in electronic land certificates will be meticulously reviewed to assure legitimacy and identification.46 The renewal is designed to strengthen the guarantee of legal certainty; hence, it is necessary to transition to an electronic land registration system with positive publication.

Additionally, several nations have used positive publication systems for electronic certificates as their land registration method and established indefeasible titles as a recourse for the wrong certification of property rights. Australia uses the Torrens system and is controlled by the Land Titles Act 1925. Hong Kong created title insurance to preserve property rights and changed its land registration system from a negative publishing system to a positive publication system. In Canada, the Indian Land Registry System (ILRS) is the online system used for land registration. At the same time, Tanzania and Austria

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have also implemented a positive publication system in their land registration with a positive publication land registration system that uses web portals and e-geodata technology to support online land registration. South Korea uses electronic land certificates through the Korea Land Information System to manage land data.\(^\text{47}\)

Electronic certificates are expected to be successful in national land management in preventing forgeries, duplicate certificates, and illegal land transactions by the land mafia. They will also minimize the risk of physical documents being lost, burned, stolen, or destroyed by the elements.\(^\text{48}\)

**Conclusion**

One source of the problem of agricultural conflict is the land registration system in Indonesia, which has a negative publication system with a positive trend. Therefore, it is necessary to reform and develop a new land law system that becomes a positive publication system. In the land registration system of positive publication, those listed in the land book become a tool of proof that cannot be disturbed by the claimant. If there are errors in the procedure of registration of the positive publication system, therefore, under the theory of indefeasible title, the state will guarantee the compensation fund to the party proving its right to be accurate, which has three principles: the mirror principle, the curtain principle, and the insurance principle.

Implementing electronic land certificate policies and positive publications can support and complement each other to eradicate the land mafia. The government must do several tasks for the new publication system to be successfully implemented nationwide. For example, the government must comprehend the expenses and time required to run the new land registration system, the ownership of land and the boundaries of property should be clear, conducting quality land surveys, disclosure to the public, and revision of regulations on land registrations. Several other nations have developed electronic land certificates with positive publication systems and indefeasible titles as compensation for


incorrect land rights certification, among them Australia, Canada, Hong Kong, and South Korea.

References


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