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Legal Implications of Transferring Land Certificates from Analog to Electronic form from the Perspective of the Legal System in Indonesia

Muhammad Salman Ali Reza
Faculty of Law, Universitas Islam Sultan Agung (UNISSULA) Semarang, Indonesia, E-mail: salmanalireza12@gmail.com

Abstract. *This study aims to identify and analyze the normative provisions regarding the transfer of land certificates from analog to electronic form in Indonesia and the legal implications arising from this change. The approach used is normative juridical with a statutory approach and an analytical approach. The type of data used is secondary data consisting of primary legal materials, secondary legal materials, and non-legal materials. Data collection was conducted through literature studies, while the data analysis method used prescriptive analysis. The results of the study indicate that the normative provisions for the transfer of analog land certificates to electronic ones have a hierarchical legal basis starting from the 1945 Constitution of the Republic of Indonesia, the Basic Agrarian Law, Government Regulation Number 18 of 2021, Regulation of the Minister of ATR/BPN Number 3 of 2023, and the ITE Law. The transfer of land certificates must be understood as a transfer of land document media, not a transfer of land rights, so that it does not change the subject of rights, the object of rights, or the type of rights. The legal implications include changes in media for proving rights, changes in data storage systems, the need for validation of physical and legal data, expansion of the responsibilities of the Ministry of ATR/BPN and PPAT, protection of personal data, and the need for public acceptance of electronic certificates.*

Keywords: *Electronic Certificates; Electronic Land Registration; Transfer Of Land Certificates.*

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1. Introduction

Legal certainty regarding land ownership is a fundamental requirement in a state based on the rule of law. Land not only has economic value but is also related to social rights, family status, business activities, and the protection of citizens' rights. Philosophically, the law is expected to provide a balance between justice, benefit, and legal certainty.[1]In the land sector, this certainty is realized through land registration and the issuance of certificates as proof of rights.

Indonesia's land registration system is rooted in national agrarian law. The UUPA stipulates that the government organizes land registration to ensure legal certainty, while the certificates issued as a result of registration serve as strong evidence.[2]In practice, land certificates have been known for many years in analog form, namely, physical documents held by the rights holder. This analog form is important because it serves as a symbol of certainty for the public, but it also carries weaknesses such as the risk of loss, damage, forgery, duplication, and slow data validation processes.

Advances in information technology are driving the government to reform land services. Electronic systems are considered capable of accelerating services, strengthening administrative order, facilitating data access, and reducing the risk of land certificate forgery.[3]In the land sector, these reforms are evident through electronic land registration, electronic land services, and the issuance of electronic documents during land registration activities. These changes are not only technical but also legal, as the object of the transfer is the certificate, which serves as proof of land rights. The regulation regarding electronic land registration has an important basis through Government Regulation Number 18 of 2021 which expressly states that land registration can be carried out electronically.[4]. This provision, in addition to opening up space for the implementation of electronic land registration, also recognizes electronic data and information or printed copies as valid legal evidence.[5]At the technical level, Minister of ATR/BPN Regulation Number 3 of 2023 regulates the issuance of electronic documents for land registration activities, including the management of electronic land books, electronic measurement letters, and electronic certificates. Thus, the land law system is shifting its orientation from physical documents to integrated electronic data.

[1]Satjipto Rahardjo, 2012, Legal Science, Citra Aditya Bakti, Bandung, p. 45.

[2]Rezeki Aldila Rajab, Bambang Eko Turisno, and Anggita Doramia Lumbanraja, 2020, "Land Title Certificates in Legal Certainty of Land Registration," Notarius, Vol. 13, No. 2, p. 646

[3]Nur Hidayani Alimuddin, 2021, "Implementation of Electronic Certificates as a Guarantee of Legal Certainty of Land Ownership in Indonesia," SASI, Vol. 27, No. 3, p. 342.

[4]Andi M. Reyza Yusuf, Nia Kurniati, and Yenni Yunithawati Rukmana, 2024, "Implementation of Electronic Land Registration at the National Land Agency and Land Deed Officials," Acta Diurnal, Vol. 7, No. 2, p. 273.

ISSN: 2988-6201

On the other hand, electronic land documents must also be interpreted in conjunction with the legal regime for electronic information and transactions. The ITE Law recognizes electronic information, electronic documents, and printouts as valid legal evidence as long as they comply with applicable provisions.[6]This recognition is important because electronic certificates no longer rely on the physical form of the document, but rather on data integrity, authentication, accessibility, and accountability of the electronic system. Therefore, proving land rights in electronic form requires more than just the appearance of the document; it must also assess the integrity of the data within the official land system.

However, the transfer of land certificates from analog to electronic format still raises several legal issues. First, the public needs to understand that the transfer of certificates is not a transfer of land rights. Second, the validity of electronic certificates depends heavily on the validation of physical and legal data. Third, electronic systems create new risks in the form of system disruptions, unauthorized access, data leaks, and the need for personal data protection. Fourth, Land Offices (PPAT) and land offices must adjust their work procedures so that the electronic service process continues to guarantee legal certainty for all parties.[7]Based on Hans Kelsen's Stufenbau theory, every technical norm regarding electronic certificates must obtain validity from a higher norm and must not conflict with the legal order above it.[8]Meanwhile, Lawrence M. Friedman's legal system theory views the success of a legal policy from the integration between legal structure, legal substance, and legal culture.[9]Both theories are relevant to assessing whether the transfer of analog certificates to electronic certificates has a valid normative basis and what the implications are for the Indonesian land law system.

2. Research Methods

This study uses a normative legal research method with a statutory and analytical approach. The research specification is descriptive-prescriptive because the research not only explains the applicable legal norms, but also provides arguments regarding the legal consequences and the direction of the regulations that should be. The research data is in the form of secondary data consisting of primary legal materials, secondary legal materials, and non-legal materials. Primary legal

[5]Government Regulation Number 18 of 2021 concerning Management Rights, Land Rights, Apartment Units, and Land Registration, Article 84.

[6]Law Number 1 of 2008 concerning the Second Amendment to Law Number 11 of 2008 concerning Electronic Information and Transactions 2024, Article 5.

[7]Nurul Farahzita and Fransiscus Xaverius Arsin, 2022, "The Role of Land Deed Officials in Supporting the Implementation of Digital Transformation of Land Services Related to Electronic Certificates," The Juris Journal of Legal Studies, Vol. VI, No. 1, pp. 176-177.

[8]Hans Kelsen, 1967, Pure Theory of Law, University of California Press, Berkeley, pg. 193.

[9]Lawrence M. Friedman, 2009, Legal Systems: A Social Science Perspective, translated by M. Khozim, Nusa Media, Bandung, p. 15.

ISSN: 2988-6201

materials include the 1945 Constitution of the Republic of Indonesia, UUPA, land registration regulations, electronic land document regulations, and electronic information laws. Secondary legal materials include law books, scientific journals, theses, and relevant research results. Data were collected through literature studies, then analyzed prescriptively using Hans Kelsen's Stufenbau theory and Lawrence M. Friedman's legal system theory.

3. Results and Discussion

3.1. Normative Provisions Concerning the Transfer of Land Certificates from Analog to Electronic Form in Indonesia

Normative provisions regarding the transfer of land certificates from analog to electronic form must be read in a hierarchical structure. At the constitutional level, Article 33 paragraph 3 of the 1945 Constitution of the Republic of Indonesia provides the basis that land, water, and natural resources are controlled by the state and used for the greatest prosperity of the people. In the context of land, this state control does not mean the state owns all land, but rather the state has public authority to regulate the legal relationship between legal subjects and land. This authority is the basis for the state to organize land registration and modernize land administration.

At the legal level, the primary basis for certificate transfer remains the UUPA. Article 19 of the UUPA mandates the government to conduct land registration throughout Indonesia to ensure legal certainty. This registration includes land measurement, mapping, bookkeeping, rights registration, transfer of rights, and the issuance of a certificate of title, which serves as a strong means of proof.[10]. Thus, a land certificate is a land registration product that has a proof function.

Land certificates do not stand alone in land law. Boedi Harsono explains that a certificate is a bound copy of a land book and a measurement certificate, given to the rights holder as proof of title.[11]Therefore, whether in analog or electronic form, the strength of the certificate still depends on the conformity of the physical data and legal data with the land book, measurement letter, and land registration data.[12]. Changes to the document format must not break the link between the certificate and the basic data that serves as the source of evidence.

[10]Faris Faza Ghaniyyu, Yani Pujiwati, and Betty Rubiati, 2022, "Guarantee of Legal Certainty in Converting Certificates to Electronic Certificates and Their Protection as Evidence," USM Law Review Journal, Vol. 5, No. 1, p. 173

[11]Boedi Harsono, 2008, Indonesian Agrarian Law: History of the Formation of the Basic Agrarian Law, Its Contents and Implementation, Djambatan, Jakarta, p. 500

[12]Risti Dwi Ramasari and Shella Aniscasary, 2022, "Legal Review of the Legal Force of Electronic Land Certificates Based on Regulation of the Minister of Agrarian Affairs and Spatial Planning Number 1 of 2021," Journal of Health Law and Ethics, Vol. 2, No. 1, p. 1

ISSN: 2988-6201

At the government regulatory level, Government Regulation Number 18 of 2021 serves as a crucial foundation for the implementation of electronic land registration. Article 84 of this regulation stipulates that land registration can be conducted electronically, with electronic data and information or printed copies being valid legal evidence. This provision demonstrates that land registration is no longer limited to analog systems but can be conducted electronically as long as it adheres to land law principles.

At the technical level, Regulation of the Minister of ATR/BPN Number 3 of 2023 is the primary regulation regarding the issuance of electronic documents in land registration activities. This regulation defines electronic land books as data blocks validated by electronic signatures, and electronic certificates as electronic documents issued through electronic systems. Provisions regarding media transfer are also evident in the regulation on measurement letters and land books, which can be created electronically. Therefore, the process of achieving an electronic certificate should not be understood as merely scanning physical documents, but as creating an electronic document based on verified land data.

From Stufenbau's perspective, ATR/BPN Regulation Number 3 of 2023 is valid because it is subordinate to and implements higher norms, specifically Government Regulation Number 18 of 2021 and the UUPA. Kelsen's theory asserts that a legal norm derives its validity from higher norms in a hierarchical structure.[13]This means that the technical regulations for electronic certificates are valid as long as they do not conflict with higher standards and do not exceed the authority granted. With this construction, the transition from analog to electronic certificates has formal legitimacy in the Indonesian legal system.

These normative provisions must also be read in conjunction with the ITE Law. The ITE Law recognizes electronic documents and their printouts as valid legal evidence and requires that electronic information be accessible, displayed, guaranteed for integrity, and accountable. This requirement is important because electronic certificates differ from analog certificates. Analog certificates emphasize the physicality of the document, while electronic certificates emphasize data integrity, electronic authentication, and connectivity to official systems.

The transfer of analog land certificates to electronic ones must be distinguished from the transfer of land rights. A transfer of rights occurs when land rights are transferred from one legal entity to another, for example through a sale, gift, inheritance, exchange, or other legal act. The transfer of electronic certificates does not change the rights holder, the land object, the type of rights, or the history of the rights. What changes are the evidentiary media and the administrative

[13]Hans Kelsen, Op. Cit., pg. 193.

system. This distinction is important to prevent media transfer from being equated with transfer of rights transactions, which have different legal consequences.

Because certificate transfer is merely a media transfer, the process must focus on data validation. Physical data such as location, boundaries, area, and measurement certificates must match legal data such as the name of the rights holder, type of right, encumbrance records, blocks, seizures, or dispute records. If invalid analog data is directly converted to electronic data, digitization simply transfers old issues to the new system. Therefore, data validation is a normative requirement that cannot be ignored.

Furthermore, the status of legally issued analog certificates must remain protected. The electronic certificate policy cannot be interpreted as automatically revoking the legal force of analog certificates. Analog certificates remain strong evidence as long as they are legally issued and the data they contain aligns with the land register and measurement certificate. The transition to electronic format should be understood as a modernization of evidence, not a revocation of rights or cancellation of old certificates.

Thus, the normative provisions regarding the transfer of land certificates from analog to electronic form have been structured within a hierarchical legal framework. This framework begins with state authority in the constitution, the land registration mandate in the Basic Agrarian Law (UUPA), the recognition of electronic land registration in Government Regulation No. 18 of 2021, the technical regulations for electronic land documents in Ministerial Regulation No. 3 of 2023 on the Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), and the recognition of electronic documents as evidence in the Electronic Information and Transactions (ITE) Law. This framework demonstrates that electronic certificate transfer has sufficient legal basis, as long as it is implemented through data validation, a reliable electronic system, and accountable procedures.

3.2. Legal Implications of Transferring Land Certificates from Analog to Electronic Form

The first legal implication of converting analog land certificates to electronic ones is a change in the means of proving rights. Certificates, which were originally physical documents, are now electronic. However, this change in form does not alter the substance of land rights. Ownership rights remain ownership rights, building use rights remain building use rights, use rights remain use rights, and other rights remain their respective types. Therefore, the certificate transfer only changes the means of proving rights, not the legal relationship between the rights holder and the land.

ISSN: 2988-6201

In analog systems, proof relies heavily on physical certificates, manual signatures, stamps, and paper archives. In electronic systems, proof shifts to data integrity, electronic signatures, system authentication, QR codes, and compliance with land databases. This shift means that proof can no longer be simply viewed from the document's appearance; it must be linked to the official electronic system that issued and stored the data. This change strengthens auditability but also demands system reliability.

The second implication is a change in data storage systems. In the analog system, rights holders stored physical certificates, while the land office stored land books, measurement letters, and deed documents. In the electronic system, proof of rights and supporting data are stored in the electronic land system. This change can accelerate data access, reduce the risk of losing physical documents, and facilitate data updates. However, these benefits can only be achieved if the electronic system can guarantee data availability, integrity, confidentiality, and security.

The third implication is the increased need for physical and legal data validation. Electronic certificates can only strengthen legal certainty if the transferred data is accurate. Incorrect information about area, boundaries, location, rights holder identity, type of rights, or legal records will have serious consequences if entered into the electronic system. Studies on electronic certificates also emphasize that the benefits of digitalization, such as ease of access and reduced forgery, remain dependent on the validity of land data.[14]Therefore, validation is not a simple administrative step, but rather a legal obligation to ensure the accuracy of data before issuing electronic documents.

The fourth implication is the expanded responsibilities of the Ministry of ATR/BPN and the land office. In an electronic system, land agencies are not only responsible for issuing certificates but also for managing the electronic system, maintaining data security, ensuring information updates, providing access mechanisms, and implementing recovery measures in the event of system disruptions or errors. If data errors or system failures occur that harm rights holders, the administrative and legal responsibilities of the implementing agency must be clearly traceable.

The fifth implication is the changing role of Land Deed Officials (PPAT) in the electronic services ecosystem. PPATs remain public officials who issue certain deeds regarding legal actions regarding land, but in the electronic system, PPATs are required to more carefully verify data conformity through electronic services. Research on the role of PPATs in the digital transformation of land services shows that PPATs play a role in public education, party verification, preventing identity fraud, verifying certificates' conformity with the database, and ensuring the

[14]Nur Hidayani Alimuddin, Op.Cit., p. 340

ISSN: 2988-6201

conformity of the subject of the rights with the parties in the deed.[15]. Thus, digitalization does not eliminate the role of PPAT, but rather strengthens the need for professional prudence.

The sixth implication is the protection of rights holders' personal data. Electronic certificates contain information of high legal and economic value, such as the rights holder's identity, land location, land area, type of rights, rights history, and certain legal records. The risks that arise are no longer limited to the loss or falsification of physical documents, but also data leaks, unauthorized access, unauthorized data changes, and cyberattacks. Therefore, legal protection for electronic certificate holders must encompass both land rights protection and electronic data protection.

The seventh implication is the need for synchronization between land law and information technology law. Electronic certificates are at the intersection of the UUPA, Government Regulation No. 18 of 2021, Regulation of the Minister of Agrarian Affairs and Spatial Planning/National Land Agency No. 3 of 2023, the ITE Law, and data protection regulations. Synchronization is necessary to eliminate doubts regarding the status of electronic documents, printouts, electronic signatures, evidence in court, and liability in the event of data errors. If the synchronization of norms is not strong, electronic certificates may face predictability issues in practice.

The eighth implication is a shift in society's legal culture. Until now, many people felt secure because they held physical certificates. When proof of rights changed to electronic documents, some people might feel uncertain because they no longer held paper documents as symbols of ownership. In Friedman's legal system theory, legal culture determines whether the substance and structure of law can function effectively.[16]Therefore, the success of electronic certificates depends not only on the rules and systems, but also on public trust in the security and validity of electronic documents.

The ninth implication is the potential for strengthening legal certainty. Electronic certificates can expedite verification, reduce the risk of forgery of physical documents, facilitate data verification, and strengthen administrative order. However, this potential is conditional. Procedural legal certainty can be enhanced through electronic systems, but substantive legal certainty remains dependent on the accuracy of physical and legal data. If the underlying data is incorrect, an electronic certificate does not automatically resolve the problem and can even exacerbate the impact of the error because digital data is more rapidly disseminated and used in other services.

[15]Nurul Farahzita and Fransiscus Xaverius Arsin, Op.Cit., pp. 176-177.
[16]Lawrence M. Friedman, Op.Cit., p. 15.

ISSN: 2988-6201

The tenth implication is a shift in the source of legal risk. In analog systems, the primary risks lie in the loss, damage, forgery, and duplication of physical certificates. In electronic systems, the primary risks shift to system security, database integrity, user authentication, unauthorized access, service disruption, and reliance on digital infrastructure. This shift in risk indicates that land digitization requires strict information security standards and accountable oversight mechanisms.

Based on Friedman's legal system theory, the legal implications of certificate transfer can be summarized in three dimensions. From a legal structure perspective, readiness is required from the Ministry of ATR/BPN, land offices, PPAT (Private Land Deed Officials), technological infrastructure, and implementing officials. From a legal substance perspective, clear regulations are needed regarding the status of analog certificates, validation mechanisms, the status of electronic documents, evidence, data protection, and institutional responsibility. From a legal culture perspective, public acceptance, digital literacy, and public trust in electronic systems are required.

Thus, the transition from analog to electronic land certificates should not be understood simply as document digitization. This policy has implications for the evidence system, data storage system, the responsibilities of land institutions, the role of Land Deed Officials (PPAT), personal data protection, and public legal culture. If the structure, substance, and legal culture are balanced, electronic certificates have the potential to strengthen legal certainty. Conversely, if data validation is weak, the system is insecure, and the public does not understand their position, electronic certificates can create new uncertainties.

4. Conclusion

The normative provisions regarding the transfer of land certificates from analog to electronic form in Indonesia have a hierarchical legal basis and are legally accountable. This basis stems from state authority over land in the 1945 Constitution of the Republic of Indonesia, the land registration mandate in the Basic Agrarian Law (UUPA), the regulation of electronic land registration in Government Regulation Number 18 of 2021, the technical regulations for the issuance of electronic land documents in the Regulation of the Minister of ATR/BPN Number 3 of 2023, and the recognition of electronic documents as valid legal evidence in the ITE Law. From Stufenbau's perspective, technical norms regarding electronic certificates are legitimate as long as they do not conflict with higher-level norms. Certificate transfer must be understood as a transfer of land document media, not a transfer of land rights, so that it does not change the subject of the rights, the object of the rights, the type of rights, or the legal relationship of the rights holder to the land. The legal implications of converting analog land certificates to electronic ones include changes in the media used to

ISSN: 2988-6201

prove rights, changes in data storage systems, obligations to validate physical and legal data, expanded responsibilities of the Ministry of ATR/BPN and land offices, changes in the role of Land Deed Officials (PPAT) in electronic services, personal data protection, and the need for public acceptance. Therefore, the government needs to strengthen validation standards, system security, data correction mechanisms, personal data protection, and public outreach. Land Deed Officials (PPAT) also need to apply the principle of prudence in verifying the conformity of electronic data with land documents so that electronic certificates truly strengthen legal certainty, not simply replace documents from paper to electronic data.

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ISSN: 2988-6201

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