

LEGAL CERTAINTY IN INDONESIA REGARDING THE MIGRATION OF LAND CERTIFICATES FROM ANALOG TO ELECTRONIC SYSTEMS

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ABSTRACT

The digital transformation of land administration in Indonesia through the migration from analog certificates to electronic certificates represents an effort to modernize public services. This study analyzes the legal implications of this migration, particularly regarding Ownership Rights, in the context of legal certainty and protection for right holders. Using a descriptive normative legal research method, this paper examines relevant regulations, including the Basic Agrarian Law, Government Regulations on land registration, the Electronic Information and Transactions Law, and the Regulation of the Minister of Agrarian Affairs/National Land Agency No. 3 of 2023. The analysis is based on the theory of the rule of law grand theory, legal certainty middle theory, and legal protection applied theory. The findings show that e-Certificates have the potential to improve legal certainty through efficiency, protection against physical risks, and enhanced transparency. However, challenges remain, including the validity of legacy data, cybersecurity risks, the digital divide, and the complexity of implementing a digital system under a negative publication framework. Legal protection is shifting from safeguarding physical documents to securing digital data, privacy, and system accessibility. Strengthening regulations, validating data, enhancing cybersecurity, increasing digital literacy, and developing effective dispute resolution mechanisms are essential to fully realize the benefits of e-Certificates.

Keywords: Electronic Certificate, Legal Certainty, Legal Protection, Land Registration

INTRODUCTION

The rapid development of information and communication technology has driven digital transformation across various sectors of life, including the delivery of public services by the Indonesian government. One sector that has undergone significant changes is the land sector, which plays a vital role in the economy and the social life of society. The Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), as the institution responsible for national land administration, has initiated a number of digital service programs, one of which is the conversion of land certificates from physical analog form to electronic form, known as the Electronic Certificate or *Sertipikat-el*.

The initial legal basis for the implementation of the electronic land certificate (*Sertipikat-el*) was established through Ministerial Regulation of ATR/BPN Number 1 of 2021 concerning Electronic Certificates. However, in response to the dynamics of implementation and the need for more comprehensive regulation, this regulation was later revoked and replaced by Ministerial Regulation of ATR/BPN Number 3 of 2023 concerning the Issuance of Electronic Documents in Land Registration Activities. The relatively short time span between the two regulations—from January 2021 to June 2023—reflects a process of learning and adaptation in addressing technical and legal challenges related to land digitalization. Ministerial Regulation 3/2023 has a broader scope, regulating not only electronic certificates but also the “Issuance of Electronic Documents” in various “Land Registration Activities.” This shift demonstrates an awareness of the importance of comprehensively regulating the digital ecosystem in order to achieve efficiency, transparency, and security. The policy of

digitalizing land administration is highly urgent, considering that land is one of the most vital assets and is often a source of disputes. Law Number 5 of 1960 concerning the Basic Agrarian Principles (UUPA), in Article 19, mandates the government to carry out land registration throughout Indonesia to ensure legal certainty. This objective is reaffirmed in Government Regulation Number 24 of 1997 concerning Land Registration, which states that land registration aims to provide legal certainty and legal protection for rights holders. However, in practice, numerous land-related issues persist, such as ownership disputes, overlapping certificates, and land mafia practices, all of which undermine the sense of justice and legal certainty within society.

This is where the *Sertipikat-el* policy is expected to serve as a solution. The government believes that the digitalization of land certificates can enhance data security, make forgery more difficult, accelerate service processes, increase transparency, strengthen legal certainty, and reduce classic land-related problems. To analyze this issue, a legal theory approach is applied at three levels. At the grand theory level, the Rule of Law theory (*Rechtsstaat*) is used, which affirms that Indonesia, in accordance with Article 1 paragraph (3) of the 1945 Constitution, is a state based on law. Fundamental principles of the rule of law-such as the supremacy of law, legal certainty, and the protection of human rights-serve as the foundation of all state policies, including the *Sertipikat-el* policy. This policy can be viewed as an instrument of the rule of law to achieve better land governance. This is where the *Sertipikat-el* policy is expected to provide a solution. The government believes that the digitalization of land certificates can enhance data security, make forgery more difficult, accelerate service processes, improve transparency, strengthen legal certainty, and reduce classic land-related problems. To analyze this matter, a legal theory approach is applied at three levels. At the level of grand theory, the Rule of Law (*Rechtsstaat*) theory is employed, which affirms that Indonesia, in accordance with Article 1 paragraph (3) of the 1945 Constitution, is a state based on law. The fundamental principles of the rule of law-such as the supremacy of law, legal certainty, and the protection of human rights-serve as the foundation for all state policies, including the *Sertipikat-el* policy. This policy can be seen as an instrument of the rule of law to achieve better land governance.

At the level of middle theory, the Theory of Legal Certainty is applied, which is the primary goal of law itself. This concept includes several elements such as clarity of legal norms, the ability to predict legal consequences, consistency in the application of the law, and the evidentiary strength of legal instruments such as land certificates. Land registration and the issuance of certificates aim to create legal certainty. At the level of applied theory, the Theory of Legal Protection is used. Legal protection guarantees the rights of legal subjects. In the context of land, this includes the recognition and protection of land rights, protection from claims by unauthorized third parties, and protection from arbitrary actions by state officials. The public registration system in land registration and the state's role in ensuring data security are part of this legal protection. These three theoretical frameworks are interrelated. The policy of migrating to *Sertipikat-el* reflects the actions of a rule of law state aimed at enhancing legal certainty through data digitalization, more efficient processes, and security features, while also providing better legal protection by preventing forgery, loss, and land disputes. The success of the *Sertipikat-el* implementation can be measured by how well the policy achieves the principles of the rule of law and accomplishes the goals of legal certainty and legal protection in the practice of land administration in Indonesia.

METHODS

This study uses a descriptive normative legal approach, focusing on the norms, principles, and legal doctrines related to electronic land certificates and their implications for legal certainty. The research analyzes the law in written form, in accordance with applicable regulations. The descriptive nature aims to provide a systematic and accurate overview of the migration from analog to electronic certificates, covering the legal basis, characteristics, implementation process, and its juridical impact on legal certainty and legal protection. Data is obtained through literature studies, using primary legal materials such as the 1945 Constitution, the Basic Agrarian Law (UUPA), the Information and Electronic Transactions Law (UU ITE), and related regulations, as well as secondary legal materials such as books, journals, and scholarly articles. Data analysis is carried out qualitatively using legal interpretive methods, including grammatical, systematic, and historical interpretation to identify norms and legal principles, and to link them with the theories of the rule of law, legal certainty, and legal protection.

RESULT AND DISCUSSION

The legal basis for the implementation of electronic land certificates

The implementation of electronic land certificates (Sertipikat-el) in Indonesia is based on a structured hierarchy of legislation, starting from the constitution to technical implementation regulations. The philosophical and constitutional foundation underlying this policy is Article 33, paragraph (3) of the 1945 Constitution, which states that the earth, water, and natural resources are controlled by the state for the welfare of the people. This principle is then reflected in the Basic Agrarian Law (UUPA) No. 5 of 1960, which mandates the government to conduct land registration to ensure legal certainty, as stipulated in Article 19 of the UUPA.

Further land registration is regulated in Government Regulation (PP) No. 24 of 1997, which governs the implementation of conventional land registration, covering the objectives, the registered objects, and the statement that certificates are valid legal evidence. However, this regulation has been partially amended with the issuance of PP No. 18 of 2021, which is the implementing regulation of the Job Creation Law (Law No. 6 of 2023). PP 18/2021 regulates the issuance of rights and notary deeds electronically and states that land registration can be conducted electronically. However, while it provides a legal basis, this regulation has not detailed the technical procedures for electronic land registration, only offering an initial foundation for its implementation.

The validity of electronic documents as legal evidence is reinforced by the Electronic Information and Transactions Law (UU ITE), which recognizes that electronic information and documents, as well as their printed copies, are valid legal evidence in Indonesia's legal system. This provides the legal basis for electronic land certificates (Sertipikat-el) as proof of ownership rights over land. The main technical regulations related to the implementation of Sertipikat-el are outlined in the Ministry of Agrarian Affairs and Spatial Planning/ National Land Agency Regulation No. 3 of 2023. This regulation defines key terms such as electronic documents, Sertipikat-el, and electronic systems, as well as governing the operation of a reliable and secure electronic land registration system. Permen 3/2023 also affirms that Sertipikat-el issued through this system, along with its printed copies, are recognized as valid legal evidence. This regulation also governs the procedures for issuance, data storage, the use of electronic signatures, and the revocation of the Ministry of

ATR/BPN Regulation No. 1 of 2021.

Although various regulations have been established, there is potential disharmony and a need to synchronize existing regulations. One important issue is the difference in meaning between "valid" and "strong" in the context of proving land rights. PP 24/1997 states that analog certificates are "strong" evidence, while the Electronic Information and Transactions Law (UU ITE) and Permen 3/2023 state that electronic documents are "valid" evidence. This terminological difference requires further clarification to avoid confusion. Additionally, there needs to be clarification regarding the interaction between the principle of the negative publicity system, which considers data in the initial registration not guaranteed as accurate by the state, and the Sertipikat-el, which is designed to have high data integrity. Synchronization and harmonization of regulations post-Job Creation Law are necessary to create a coherent land law system. Comparison of Characteristics between Analog and Electronic Certificates. The shift from analog certificates to electronic land certificates (Sertipikat-el) brings fundamental changes in the form, features, and characteristics of evidence of land ownership rights. A direct comparison between these two types of certificates is essential to understand the technical and administrative implications of this transformation.

Fitur	Analog Certificate	E-Certificate
Format/Shape	Paper-based physical documents.	Electronic documents (typically PDF files), which can be printed as an official copy (1 page) or printed independently (on paper).
Unique Identification	Unique serial number (combination of letters/numbers), Rights No., SU No., NIB, etc.	Using a single identity: Field Identification Number (NIB), Hashcode (unique electronic document code), QR Code for information access and verification.
Signature	Wet signature (manual) by the authorized official.	Certified Electronic Signature (TTE) (by BSrE/BSSN), accompanied by the digital stamp of the land office.
Security Features	Physical paper security (watermark, special fibers, etc.), manual recording.	Data encryption, certified electronic signature (TTE), encrypted QR Code, hashcode, Information Security Management Standards (e.g., ISO 27001:2013), role of BSrE/BSSN, user authentication (e.g., 2FA), centralized database.
Accessibility	The physical document must be stored/carried, manual verification at the Land Office.	Can be accessed electronically anytime, anywhere through the system/application (Sentuh Tanahku), instant verification via QR Code, easily accessible by third

		parties (banks, notaries, etc.).
Key Risks	Physical: loss, damage (disasters, termites, etc.), forgery of signature/content, duplicate certificates.	Digital: technical issues (server down, system errors), cyberattacks (hacking, data theft/manipulation), technology dependency (electricity, internet), issues of accessibility/digital literacy in society.
Efficiency	Administrative processes (transactions, data maintenance) tend to be slower, requiring face-to-face interaction.	Administrative processes are faster and more efficient, reducing bureaucracy, with the potential to reduce face-to-face interaction.

The Impact of Migration on Legal Certainty of Land Rights

The migration to e-Certificates has brought a significant impact on the legal certainty of land rights in Indonesia. One of the main objectives of this migration is to strengthen the legal certainty of land rights by utilizing technology to enhance the integrity and reliability of land data. Indonesia adopts a land registration system known as the negative publication system with a positive tendency, which recognizes e-Certificates as valid legal evidence. In this system, the data contained in the certificate (whether analog or electronic) is considered correct, but not absolute, and can still be challenged with stronger evidence.

Although e-Certificates utilize more advanced technology to ensure the authenticity and integrity of data through electronic signatures and data encryption, they still operate within a legal framework that recognizes the possibility of data inaccuracies. One of the major challenges in implementing e-Certificates is data validation during the media transfer process from analog certificates. If the data recorded in the analog certificate is inaccurate, such errors will be inherited by the e-Certificate, regardless of the sophistication of the technology used. In theory, the digitalization of land certificates can reduce risks such as duplicate certificates and improve data transparency and accuracy. Features such as QR codes linked to the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN) database allow for quick verification of the authenticity of e-Certificates. Nevertheless, this migration also presents new challenges, such as cybersecurity threats and the digital divide, which may disadvantage certain segments of society that are less technologically literate.

An Evaluation of Legal Protection for Holders of Land Rights

One of the main objectives of the land registration system is to provide legal protection for land rights holders. The e-Certificate system can offer a more modern form of legal protection by eliminating the risks of physical damage to certificates caused by natural disasters or theft. In addition, the use of electronic signatures and encryption technology is expected to prevent certificate forgery. However, the effectiveness of this protection does not rely solely on technology, but also on the quality of data transferred into the electronic system. The migration process must be carried out meticulously to ensure the accuracy of recorded data, as errors in validation may harm the rightful

land rights holders. Moreover, new challenges have emerged regarding the protection of landowners' personal data. Although electronic systems offer stricter access control, their vulnerability to cyber threats remains a serious issue that must be addressed. Communities that are not yet digitally prepared also face challenges in accessing e-Certificates, despite temporary measures such as the provision of physical copies at Land Offices. The sustainability and effectiveness of these solutions still need to be evaluated, considering that reliance on physical copies may diminish the full benefits of the digital system.

The Potential for Land Disputes and On-the-Ground Implementation Challenges

The migration to e-Certificates may also give rise to new types of disputes that did not previously occur under the conventional land registration system. These disputes may involve the validity of electronic signatures, unauthorized access to landowners' accounts, or discrepancies between the e-Certificate data and the actual conditions on the ground. Resolving such disputes requires adjustments within the judicial system, including the application of appropriate procedural laws for electronic-related cases. The implementation of this system also faces several practical challenges. Inadequate infrastructure in some remote areas, limited human resource capacity at Land Offices, and the need to improve the quality of existing land data are among the primary obstacles to a smooth migration process. Additionally, the high cost of implementation and the need to educate and socialize the system to the public present significant challenges to its long-term success.

Responses to the e-Certificate policy vary among stakeholders. The government, through the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), has expressed optimism about the benefits offered by e-Certificates in improving the efficiency and transparency of land services. However, among the general public, there remains uncertainty regarding data security, the complexity of using new technology, and access for those who are not familiar with digital platforms. Land Deed Officials (PPAT) and notaries also support efforts to modernize land services, but they face challenges in adapting to the new system. They require clear regulations, reliable supporting infrastructure, and well-defined legal responsibilities within the digital ecosystem.

The migration to e-Certificates holds great potential to strengthen legal certainty over land rights in Indonesia, but it also faces significant challenges. While digital technology can enhance data integrity and reduce the risk of errors, issues such as cybersecurity threats, the quality of data transferred from analog systems, and unequal access to technology must be promptly addressed. Legal protection for rights holders must also be reinforced by strengthening regulations on personal data protection and electronic systems. The emergence of new types of disputes and the practical challenges of implementation indicate that this migration requires careful attention to both technical and social factors in order to be successfully and effectively implemented on a broad scale.

CONCLUSION

The migration from analog land certificates to Electronic Certificates (e-Certificates) represents a significant digital transformation in Indonesia's land administration. This policy is based on regulations starting from the Basic Agrarian Law (UUPA) to the Ministry of ATR/BPN Regulation No. 3/2023, aligning with the principles of a rule of law committed to achieving good governance, efficiency, transparency, and providing legal certainty and protection for the public. Theoretically, e-

Certificates have great potential to enhance legal certainty through higher data accuracy (if validation is done correctly), reduction of the risk of duplicate certificates, ease of verifying authenticity, and better transparency. E-Certificates are recognized as valid legal evidence based on the ITE Law and related regulations, although its position within the negative publication system with a positive tendency still requires further clarification to avoid ambiguity with the concept of "strong" evidence that applies to analog certificates.

In terms of legal protection (Variable 2), e-Certificates offer better protection against physical risks such as loss or damage, as well as conventional forgery. The focus of protection shifts to the digital realm, encompassing data protection against cyber threats, privacy, system integrity, and ensuring fair access for all, including vulnerable groups who may have limited digital literacy. However, real-world implementation shows that despite the positive potential, the challenges faced are highly complex. Key obstacles include limited technological infrastructure, the not fully validated quality of land data, human resource readiness, digital gaps in society, and cybersecurity threats. The gradual transition process and dual system also require careful management to minimize uncertainty.

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