



## Legal Protection for the Security of Personal Data of Electronic Land Certificate Holders

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### Abstract

**Background.** The digital shift requires public trust in protecting personal data stored in electronic systems. Law Number 27 of 2022 on Personal Data Protection was enacted to protect personal data owners' rights and specify the obligations of personal data controllers responsible for ensuring data protection.

**Aim.** This study examines the legal protections for personal data security of holders of Electronic Land Certificates issued through Electronic Systems as Electronic Documents.

**Methods.** The writing approach used is normative juridical, employing procedures for collecting and analyzing primary and secondary legal data.

**Result.** The government is responsible for ensuring the security and confidentiality of the Electronic Land Certificate owner's data against breaches. The government, as a data controller, has ensured the protection of personal data for land rights owners in the execution of the electronic certificate program by adopting measures to safeguard Electronic Certificates, including the implementation of the ISO 27001:2013 standard, employing encryption techniques for data storage, utilizing electronic signatures, implementing two-factor authentication, QR Codes, and various additional protective measures. Data controllers are obligated to safeguard data against breaches. The rise of cybercrime accompanies the advancements in information technology. Criminal behavior evolves in response to societal advancements, necessitating ongoing vigilance and proactive measures to anticipate and address emerging abuses.

**Conclusions.** The research findings indicate that the Government, as a data controller, has implemented measures to protect personal data by establishing procedures to secure Electronic Certificates.

### Implication

The implementation of electronic certificates is currently being executed in phases, considering the preparedness of infrastructure, human resources, and maturity levels at each land office to ensure proper execution across all land offices in Indonesia.

**Keywords:** Electronic Certificate, Personal Data Protection, security, legal protection

## INTRODUCTION

As human life evolves and the population escalates, land demand intensifies. Land is a crucial asset in human existence and a commodity essential for achieving a more prosperous living, leading to a universal desire for ownership and control of land.

Land ownership can be verified through a letter or land certificate issued by a legally recognized institution and an authorized agency in compliance with relevant laws and regulations; therefore, all landowners must register with the appropriate institution or agency to acquire conclusive evidence of land ownership<sup>1</sup>.

Article 1, Paragraph 1 of Government Regulation Number 24, 1997, defines Land Registration as a sequence of operations systematically and continuously done by the Government. This includes the gathering, processing, documentation, presentation, and maintenance of physical and legal data in the form of maps and lists of land parcels and residential units, along with the issuance of certificates verifying rights for registered land parcels.

There exist rights and property rights pertaining to the flats, together with certain entitlements that burden them.<sup>2</sup>

- a. The aim of land registration, as stated in Article 3 of Government Regulation Number 24 of 1997 concerning Land Registration, is to provide legal certainty and protection to the rights holder of a parcel of land, flats, and other registered rights, thereby allowing them to easily verify their status as the legitimate holder of the relevant rights.
- b. Furnish information to interested parties and the Government, facilitating their access to the necessary data for conducting legal transactions related to registered land parcels and apartments.
- c. For the implementation of systematic land management administration.<sup>3</sup>

Supplementary stipulations regarding land registration are delineated in Government Regulation Number 18 of 2021, which pertains to Management Rights, Land Rights, Flat Units, and Land Registration. Land registration, as delineated by Government Regulation Number 18 of 2021, comprises a series of activities undertaken by the Government on a continuous and systematic basis, which include the collection, processing, bookkeeping, presentation, and maintenance of physical and juridical data in the form of maps and lists related to land, land space, and spatial dimensions. Underground holds established rights and property interests in the unit of the Flats, together with particular encumbrances it.<sup>4</sup>

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<sup>1</sup> Ajeng Putri Wanapertiwi, Thesis: *"Legal Certainty of Electronic-Based Land Certificates as Proof of Land Rights Ownership in Indonesia"* (Semarang: Sultan Agung Islamic University, 2023)

<sup>2</sup> Government Regulation Number 24 of 1997 concerning Land Registration, Article 1 Paragraph (1).

<sup>3</sup> Ibid, Article 3.

<sup>4</sup> Government Regulation Number 18 of 2021 concerning Management Rights, Land Rights, Flats Units and Land Registration, Article 1 Number 9.

Along with the increase in the number of land rights certificates issued, this is not proportional to the number of human resources who manage them so that there is a delay in completing work that is still manual, in addition to that the security of land rights certificates in the form of physical documents is not guaranteed because it is prone to forgery/loss/damage/destruction.<sup>5</sup>

In response to this and concerning the current digitalization initiatives aimed at modernizing land services to improve business operations and public services, it is crucial to optimize the use of information and communication technology by implementing electronic land services, with the results of land registration activities distributed as electronic documents. The government has implemented Ministerial Regulation ATR/BPN Number 1, 2021, concerning Electronic Certificates, promulgated on January 12, 2021, to enhance land services.

Article 1 of the Regulation of the Minister of ATR/BPN Number 1 of 2021 defines an Electronic Document as any electronic information that is created, transmitted, received, or stored in analog, digital, electromagnetic, optical, or similar formats, which can be perceived, displayed, and/or heard through a computer or Electronic System. This includes, but is not limited to, written content, sounds, images, maps, designs, photographs, letters, signs, numbers, access codes, symbols, or perforations that possess significance or can be comprehended by an individual with the requisite capability of understanding them.<sup>6</sup>

An electronic certificate, henceforth termed an e-certificate, is a certificate disseminated via an electronic system as an electronic document. Similar to a printed land certificate, an e-certificate serves as proof of land ownership rights in electronic format and is accessible through the Touch My Land application, an official platform from the Ministry of ATR/BPN. The public may obtain a physical version of this electronic certificate by filing an application to the local authority Land Office.<sup>7</sup>

The Regulation of the Minister of ATR/BPN Number 1 of 2021 about Electronic Certificates was subsequently revoked by the Regulation of the Minister of ATR/BPN Number 3 of 2023 pertaining to the Issuance of Electronic Documents in Land Registration Activities.

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<sup>5</sup> Socialization of Electronic Certificates for Cirebon City Land Office, May 15, 2024.

<sup>6</sup> Regulation of the Minister of ATR/BPN Number 1 of 2021 concerning Electronic Certificates, Article 1.

<sup>7</sup> Irma Devita, "Digitization of Land Certificates with Electronic Certificates" <https://irmadevita.com/2024/digitalisasi-sertifikat-tanah-dengan-sertifikat-elektronik/> (accessed on November 30, 2024, at 19.50)

An Electronic Certificate, as delineated by the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 3 of 2023 concerning the Issuance of Electronic Documents in Land Registration Activities, is a certificate produced through an electronic system, existing as an electronic document, containing Physical Data and Juridical Data inscribed in a BT-el or Land Book, and validated with an electronic signature within a Data Block.

The Electronic System created by the Ministry of Agrarian and Spatial Planning/National Land Agency, henceforth referred to as the Electronic System consists of a set of electronic devices and procedures intended to prepare, collect, process, analyze, store, display, announce, transmit, and/or disseminate electronic information related to Land Registration activities. The Data Block is a collection of alphanumeric data systematically arranged to represent a unit of Juridical Data and Physical Data pertaining to Land Registration items..<sup>8 reviews</sup>

The digital transformation implemented by the Ministry of ATR/BPN include the enhancement of digital services and the transition of personal data processing from manual to digital formats, thereby reducing land disputes and overlapping land certificates. Nonetheless, this does not ensure data security for the community as land rights holders. In 2022, Law Number 27 of 2022 regarding Personal Data safety (hereafter the PDP Law) was enacted to safeguard the rights of personal data proprietors and to delineate the responsibilities of personal data controllers, who are mandated to secure the safety of personal data. Indonesia's ranking as the second top nation for cyberattack sources indicates inadequate cyberspace management. This substantial vulnerability may result in losses across numerous connected operations to the virtual world..<sup>9 reviews</sup>

## LITERATURE

Andi Nur Shabranah, Maskun, and Muhammad Aswan (2023) authored a magazine titled "Electronic Certificates in the Context of Personal Data Protection." This study aims to analyze the framework of personal data security in electronic certificates. The research findings are derived from the PDP Law, a government-issued regulation stipulating that processing of personal data requires authorization from the Personal Data Protection Officer. As a means of safeguarding the personal data of land rights holders.

- <sup>8</sup>Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency, Article 1.
- <sup>9</sup>Wisnu Handi Prabowo, et. al., Cyber Personal Data Protection in Indonesia, Padjir, Vol.1, No.3, 2020, p. 219.

Ni Kadek Erna Dwi Juliyanti, I Made Pria Dharsana, and Ni Made Puspasutari Ujjanti (2022) authored a journal entitled "Legal Protection for Digital Land Certificate Holders Related to Personal Data Security." This study intends to analyze the regulation of land rights registration as outlined in the Regulation of the Minister of ATR/BPN Number 1 of 2021 and to evaluate the legal protection provided to land rights holders regarding the security of personal data in digital certificates.

The research results are that electronic certificates and analog certificates have the same position in Indonesia. E-certificates use electronic signatures and QR Codes guaranteed by BSSN.

## **METHODS**

This study employs a normative research methodology, utilizing document and literature review procedures to acquire legal materials. It also employs a qualitative analysis method to comprehend legal materials pertinent to the research subject, aiming to enhance comprehension and build theories.

This study predominantly employs legal documents, specifically Law Number 27, 2022 on Personal Data Protection, Regulation Number 3, 2023, issued by the Minister of Agrarian and Spatial Planning/Head of the National Land Agency regarding the Issuance of Electronic Documents in Land Registration Activities, and Regulation Number 1, 2021 by the Minister of ATR/BPN pertaining to Electronic Certificates. The theoretical basis of this work is sourced from secondary legal literature, encompassing books, journals, scholarly articles, and other online resources.

## **DISCUSSION**

The Ministry of ATR/BPN is mandated by Article 19 of Law Number 5, 1960 concerning Basic Agrarian Principles (UUPA) to conduct land registration, which states: "To ensure legal certainty, the Government shall conduct land registration throughout the territory of the Republic of Indonesia in accordance with the provisions established by Government Regulations." The Ministry of ATR/BPN is responsible for conducting land registration in Indonesia to guarantee legal certainty of land rights for the citizens. The Ministry of ATR/BPN continually upgrades the technology utilized in land administration to improve service delivery to the public and resolve issues related to the digitization of land administration..<sup>10 reviews</sup>

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<sup>10</sup> Suyus Windayana, "Electronic Certificates as a Guarantee for the Protection of Land Rights in Indonesia" <https://mediaindonesia.com/opini/718308/sertifikat-elektronik-sebagai-jaminan-perlindungan-hak-atas-land-in-Indonesia> (accessed November 30, 2024, at 13.20).

Implementing modern technology, known as digital transformation, entails changing public services from analog to digital versions. This digital transformation is consistent with the objectives and mission of the Ministry of Agrarian Affairs and Spatial Planning. The Planning/Head of the National Land Agency is to establish a world-class organization, enhance the quality of public services, and ensure data privacy and security. Per Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency Number 3, 2023, concerning the Issuance of Electronic Documents in Land Registration Activities, electronic certificates (e-certificates) are certificates produced through an electronic system as electronic documents, with both physical and juridical data documented by the electronic Land Book (BT-el).

The integration of information and communication technology in Land Registration activities is executed through a dependable and secure electronic system, which is responsible for its effective operation. Article 3, Paragraph 2, Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 3, 2023, concerning the Issuance of Electronic Documents in Land Registration Activities, mandates the use of the Electronic System for the maintenance of initial land registration data, modification of data and information, and media transfer.

The Electronic System, as specified in Article 3, paragraph (2), produces Data, Electronic Information, and/or Electronic Documents that contain valid and legitimate information concerning rights holders, Physical Data, and Juridical Data related to land parcels. Data, electronic information, and electronic documents are stored in the electronic system database. Electronic documents produced via the Electronic System are validated with Electronic Signatures in accordance with relevant laws and regulations. Electronic documents obtained and/or printed through the electronic system provide valid legal evidence. The digitization of the Land Book into BT-el would augment its protection against probable damage or loss from natural disasters, fires, floods, or illicit modifications to its contents. The forthcoming digital transformation of Land Books and Certificates will improve the precision and efficacy of information services, while positively impacting public services..<sup>11 reviews</sup>

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<sup>11</sup> Ibid. (accessed December 1, 2024, at 22.).

Differences between conventional certificates and electronic certificates include:

1. Conventional certificates are multiple-page physical documents that include both physical and legal data, whereas electronic certificates of physical and juridical data are stored in data blocks (electronic documents) and can be printed in official copies for the right holders.
2. Electronic certificates no longer use a certificate number but an electronic field identification number (NIB). This NIB-el consists of 14 digits, which are provincial codes, regency/city codes, land plot numbers, and land object type codes.
3. Data modifications in conventional certificates are specified in the Registration of Transfer of Rights, Burdens, and Other Records, whereas with electronic certificates, a new edition will be created with each data alteration. Upon the issuance of the advanced edition of the electronic certificate, the prior edition is rendered invalid.
4. Conventional certificates are authenticated with manual signatures, while electronic certificates are authenticated with electronic signatures that can only be accessed by authorized officials using multi-factor authentication certified by the Electronic Certification Center (BSrE), which can avoid signature forgery.
5. The electronic certificate states the 3R (*right, restriction, responsibility*) aspect of land rights, including the right aspect in the form of the right owned by the land right holder to use and utilize his land; the prohibition (*restriction*) aspect, which is the prohibition for land owners to abandon/damage the land and close access to the land; the responsibility aspect (*responsibility*), namely the obligations that the landowner must carry out.
6. Checking the authenticity of conventional certificates is done manually by looking directly at the physical blank while in electronic certificates checking authenticity can use Quick Response Code which can be used to access certificate information, as well as the location of the land plot through the Touchku Tanah application.
7. The original certificate-el is a digital file held in an electronic vault as an electronic document, accessible digitally via an application given by the Ministry of ATR/BPN, either the Touch-Tanahku application or the Ministry's Partner application.
8. The security of traditional certificate documents is less certain due to their susceptibility to fabrication, loss, damage, or destruction, but electronic certificates provide document security as only the rightful holder can access the electronic files. The original electronic certificate is a digital file preserved in an electronic vault as an electronic document, accessible digitally via the Touch

The Tanahku program is offered by the Ministry of ATR/BPN or the Ministry Partner application.<sup>12 reviews</sup>

Electronic land certification can also prevent and minimize the occurrence of criminal acts in the land sector because:

1. Land documents are integrated so that it is more difficult to become the object of criminal acts in the land sector.
2. The electronic system is equipped with a reliable security system.
3. Using a data block system in storing data.
4. Issued with secure documents and electronic signatures.
5. In the event of a criminal act or abuse, it can be identified digitally.

The digital transformation executed by the Ministry of ATR/BPN improves digital services by converting personal data processing from manual to electronic systems. Personal Data denotes information related to an individual that may be identified, either separately or in combination with other data, by electronic or non-electronic methods. Law Number 27 of 2022 about Personal Data Protection (PDP Law) categorizes personal data into two types: specific personal data and general personal data. Specific Personal Data denotes a classification of personal data whose processing can substantially impact the associated individuals. Generic Personal Data denotes a classification of personal data that is commonly acknowledged by a multitude of individuals.

Personal Data Protection in Electronic Systems is carried out following processes:

1. Procurement and collection;
2. Processing and analysis;
3. Storage;
4. Appearance, announcement, transmission, dissemination and opening of access
5. Annihilation

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<sup>12</sup> Socialization of Electronic Certificates for the Cirebon City Land Office, May 15, 2024.

<sup>13</sup> Law Number 27,2022 concerning Personal Data Protection, Article 1.

<sup>14</sup> Ajeng Putri Wanapertiwi, Thesis: *"Legal Certainty of Electronic-Based Land Certificates as Proof of Land Rights Ownership in Indonesia"* (Semarang: Sultan Agung Islamic University, 2023) p. 129.

The government must maintain the security and confidentiality of land rights owners' data in the implementation of the electronic certificate program. Potential privacy violations of online personal data occur in mass personal data collection activities (digital dossier), direct marketing, social media, the implementation of the e-KTP program, the implementation of the e-health program and cloud computing activities.

Especially in the era of big data, massive data collection is common, not only by the government, but also by business entities or corporations. The types of data collected are also diverse, ranging from personally identifiable information to sensitive personal information. Data controllers have the responsibility to protect data from data leaks.<sup>15 reviews</sup>

The Ministry of ATR/BPN provides security assurance for electronic certificates for holders. The guarantee of the security of the Electronic Certificate is by:

1. Implementing the ISO 27001:2013 standard for information security management systems ensures that all processes are conducted based on risk analysis and mitigation in accordance with international standards. ISO 27001:2013 is an international standard governing the Information Security Management System (ISMS), which safeguards sensitive information, including financial data, personal information, and third-party information.
2. It uses encryption methods in the storage of all data.
3. Using electronic signatures, verify and confirm identity of signatory, integrity and authenticity electronic information.
4. Using 2FA (*2 factor authentication*) to ensure only the owner of the Certificate can open the digital document.
5. Quick Response *code* can only be accessed through *the Touch My Land application* thus preventing link forgery.
6. Securing the network perimeter as the first layer of protection in the network security infrastructure.
7. Integration of population data of Population Identification Number and General Law Administration data on electronic certificate ownership data.
8. Landowner data will adjust to the personal data protection approach, namely only certain data can be accessed publicly.<sup>16 reviews</sup>

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<sup>15</sup> Muhammad Hasan Rumlus, Hanif Hartadi, Policy on Countering Personal Data Theft in Electronic Media, *Journal of Human Rights*, Vol 11, Number 2, 2020. p. 291.

<sup>16</sup> Suyus Windayana, Op.Cit. (accessed December 3, 2024, at 16.20)

The digitization implemented by the Ministry of ATR/BPN aligns with the principles of land registration outlined in Article 2 of Government Regulation 24, 1997, which asserts that land registration must adhere to principles of simplicity, security, affordability, timeliness, and transparency.

The electronic land administration system addresses these principles, facilitating public comprehension of the land administration process through its straightforward electronic framework. Notion safety is evident in the electronic system's safety framework, which incorporates multiple protective elements during the document authentication process. Moreover, based on the principle of affordability, the electronic system facilitates public access to information regarding their certificates while safeguarding personal data. Additionally, recent principles stipulate that the updating legal and physical data will enhance the current state of affairs in the field with data stored at the land office.<sup>17 reviews</sup>

Electronic certificates are presently urgent to expedite the land registration process and update existing land data, necessitating a widespread digitization effort to guarantee land rights clarity for owners in Indonesia. The public need not concern themselves with the preservation of certificates from damage or loss due to natural catastrophes or other incidents, as the original certificate exists as a digital file securely stored in an electronic vault, accessible digitally. Electronic certificates enhance the security of land data through many protective measures, thereby constraining the activities of land mafias and offering greater safeguards against fraud and document manipulation. Altered information or data cannot be presented as electronic signatures safeguard electronic papers.

The implementation of electronic certificates is currently being executed in phases, considering the preparedness of infrastructure, human resources, and maturity levels at each land office to ensure proper execution across all land offices in Indonesia.<sup>18 reviews</sup>

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<sup>17</sup> Suyus Windayana, Op. Cit. (accessed December 3, 2024, at 8:40 p.m.)

<sup>18</sup> Suyus Windayana, Op. Cit. (accessed December 3, 2024, at 9:35 p.m.)

## CONCLUSION

Electronic certificates are currently imperative to expedite the land registration procedure and update existing land data; thus, this digitization must be executed on a large scale to guarantee land rights certainty for owners in Indonesia. The government, as a data controller, has ensured the security of personal data for land rights owners in the execution of the electronic certificate program by adopting measures to safeguard Electronic Certificates, including the implementation of the ISO 27001:2013 standard, employing encryption techniques for data storage, utilizing electronic signatures, implementing two-factor authentication, QR Codes, and various additional protective measures. Data controllers are obligated to safeguard data against breaches. The advancements in information technology are accompanied by the rise of cybercrime. Criminal behavior continually evolves in response to societal advancements, necessitating ongoing vigilance and proactive measures to anticipate and address emerging abuses.

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