

# Electronic title certificate as legal evidence: the land registration system and the quest for legal certainty in Indonesia

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## Introduction

Legal uncertainty among good faith buyers of land or real estate, especially investors, has long been a major problem and dilemma among jurists and practitioners in Indonesia because title certificates are not considered absolute legal proof. According to Regulation no. 24 of 1997 concerning Land Registration, a title can be nullified if other parties prove that they are the owner within five years after the issuance of the title certificate. Claimants who do not possess land certificates as evidence often prevail in litigation against buyers or owners of the land who possess valid land certificates in their name (Leks, 2016). In several court decisions, buyers are considered careless in verifying the status of the land being sold or whether the land is still involved in a dispute. Even buyers who engage in transactions through a notary public (PPAT) or public auction are not always seen as acting in good faith when there is data falsification in the purchase (Nurtanto 2019). To improve the land registration system and to provide legally binding evidence of land ownership, on 12 January 2021, the Indonesian government issued Regulation of the Minister of Agrarian Affairs/Head of the National Land Agency No. 1 of 2021 concerning Electronic Certificates.

The objective of the ministerial regulation is to implement electronic-based land services, and in doing so, improve public services and the ease of doing business. The electronic title certificate is considered to be essential to prevent duplicate land certificates, preventing the practice of collusion and corruption that afflicts Indonesian land registration services after the New Order regime (1966–1998). The ministerial regulation was one of the subsequent regulations and strategic steps derived by the Indonesian government from Law Number 11 of 2020 concerning Job Creation. On 30 December 2022, the Indonesian government passed a new Government Regulation in Lieu of Law No. 2 of 2022 on Job Creation. This revoked Law No. 11 of 2020 concerning Job Creation. The Job Creation Law had been declared conditionally unconstitutional by Constitutional Court Decision No. 91/PUU-XVIII/2020, which was decided on 25 November 2021. The law and regulation aimed to facilitate the increase of economic growth by simplifying licensing and using digital technology.

This paper analyses the legal significance of electronic title certificates and their effect on the reform of the land registration system in Indonesia. We argue that this development has the potential to improve the land registration system and the dispute mechanism to enhance legal certainty in the Indonesian land tenure system. There are several critical agrarian studies that challenge the present narrative of legal certainty regarding title to land. These studies underline the legal ambiguity of land law (Kuyucu, 2014; von Benda-Beckmann, 2018), the chaos of institutional discretion (Buitelaar and Sorel, 2010; Kunz and others, 2016), the incompatibility between property law and local culture (Bromley, 2009; Sjaastad and Cousins, 2009) and the negative effects of state-imposed land formalization (McCarthy and others, 2018; Silva-

Castaneda and Trussart, 2016), mainly from the perspective of political economy and critical legal studies. In this regard, legal certainty tends to be understood as a fanciful idea that is prone to be applied to justify the imprisonment of native people who are accused of transgressing public land being used for commercial purposes (Gellert, 2015). Gellert (2015) argues that, in the Indonesian land tenure system, legal certainty is an unrealistic concept. The concept of legal certainty can be manipulated and exploited to protect the land ownership of those in power and disproportionately criminalize indigenous people who reside around lands used for commercial purposes. By framing indigenous land defenders as lawbreakers, those in power can delegitimize their claims and undermine their resistance. However, we contend that the strengthening of the legal framework of legal certainty and the system of land registration is inevitable and remains an unfinished project.

Fitzpatrick, Thorburn, and Hamilton-Hart gave more nuanced accounts of new land management relationships and patterns after the 1998 political reformation (*Reformasi*) in Indonesia (Thorburn, 2004; Fitzpatrick, 2006; Hamilton-Hart, 2017), although these authors tend to romanticize the separation between indigenous law and modern law. In a different direction, Otto and Mulyani laid out the significance of land governance and legal development in developing countries, such as Indonesia, South Africa, and Peru (Otto, 2009; Mulyani, 2013).

While critical works that criticized and undermined the normative aspects of legal certainty and formalization of land ownership in Indonesia has been saturated, we argue that the strengthening of the formal legal framework and land registration system is inevitable and remains an unfinished project. The legal basis of the Indonesian system of land tenure and the land registration system is Basic Agrarian Law No. 5/1960 (BAL). The issuance of the BAL was a substantial moment in the development of the land tenure system and land registration in Indonesia. The provision of article 19(1) underlines the functional role of the government to guarantee legal certainty by land registration:

‘The Government implements the land registration throughout the whole territory of the Republic of Indonesia to guarantee legal certainty in accordance with provisions that are stipulated by a Government Regulation.’

This provision is instructive because legal certainty cannot be separated from a unified law since it stipulates that the law must be fixed and foreseeable in terms of its legal ramifications so that legal system can work effectively (Luhmann, 1988; Luhmann and others, 2013). In Indonesia, the legal system is based on a civil law tradition that places significant importance on a unified law as a standard for ensuring legal certainty throughout the country. The provision reflects the commitment to establishing a unified and predictable legal framework for land-related matters in Indonesia. To create a uniform and consistent set of guidelines for controlling land ownership and related rights across the entire territory, which in some places is subject to different customary laws, Indonesia has enacted a single legislation on land registration.

This paper examines the current land registration system in Indonesia, exploring the coexistence of positive and negative systems. We then consider the historical development of the land tenure system in Indonesia, tracing its evolution from the colonial occupation period to the post-independence era. We then shift our focus to the problems inherent in the present land registration system, highlighting the need for reform. The article proceeds to discuss the plans for the implementation of electronic certificates, as introduced by Regulation No. 1 of 2021 on Electronic Certificate issued by the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency. We examine the potential advantages and disadvantages of the electronic certificate system and its implications for enhancing legal certainty in the Indonesian land tenure system. Furthermore, we explore the existing challenges that have hindered the

full implementation of the electronic certificate system, providing insights into the factors that have delayed its adoption.

### **Land registration system in Indonesia: Between positive system and negative system**

From the Indonesian perspective, based on the provision of article 1(1) of Regulation Number 24 of 1997, land registration is defined as:

‘[A] series of activities carried out by the government continuously and regularly, including the collection, processing, bookkeeping, and presentation and maintenance of physical data and juridical data, in the form of maps and lists of land parcels and units of flats, including the issuance of certificates of proof of rights for parcels of land that already have rights and ownership rights to the apartment units as well as certain rights that encumber them.’

The administrative duties include measurement and mapping of land, registration of land rights, and the transfer of these rights to other parties, and providing proof of rights. There is an expectation of legal protection and legal certainty through the issuance of certificates as instruments or as evidence for those in ownership of land. Legal protection and guarantees of legal certainty in the land sector are mentioned in the general explanation of Regulation no. 24 of 1997, namely:

‘In dealing with concrete cases, it is also necessary to carry out land registration which makes it possible for holders of land rights to easily prove their rights to the land they control, and for interested parties, such as prospective buyers and potential creditors, to obtain the necessary information regarding the land which is the object of legal action to be carried out, as well as for the Government to implement land policies.’

One form of guarantee of legal certainty in the land sector is the existence of proof of ownership of land rights, usually called a certificate. This is also in line with the content of the Indonesian constitution, namely article 28 D(1) of the 1945 Constitution of the Republic of Indonesia which has affirmed that ‘Every person shall have the right of recognition, guarantees, protection and certainty before a just law, and of equal treatment before the law.’ Fair legal protection and certainty in relation to land rights certificates cannot be separated from the position of land rights certificates as instruments, or legal evidence for the subject of the holder of land rights, or as the owner of the object in the form of land. Legal protection should be provided by a certificate issued through the land registration process as provided for in article 19 of the BAL.

To understand the nature of Indonesian land governance and the place of title certificates in the legal system, it is crucial to discuss the binary operation of the land registration system, namely the positive and negative systems. The positive land registration system and the negative system could be differentiated based on the constitutive effect of the record and the authority of the registrar.

According to the constitutive effect of the record, the positive system signifies how ownership is determined by the records in the registration system and how the documents published by the register prove title (title registration). On the other hand, the negative system indicates that documents related to transferring or modifying land rights are considered legally valid only for the purpose of updating the register (deeds registration) (Dekker, 2017). When a deed is registered, the registrar sometimes produces title certificates,<sup>1</sup> as in South Africa. Whether it is a deed or a title certificate, national law determines the

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<sup>1</sup> The word ‘sometimes’ is used in the context to acknowledge that not all jurisdictions or situations follow the same approach. The use of title certificates or deeds is influenced by factors such as historical practices, legal systems, and the level of trust and

true legal value of these documents—to what extent the information contained in the registration is supported by a state guarantee (Dekker, 2017).

Regarding the registrar's authority, Dekker (2017) notes that in a positive system, the registrar actively uses their power and takes a proactive role, but in a negative system, their job is more constrained and centred on adhering to established norms and regulations. In the positive system, the registrar is given extensive judicial authority,<sup>2</sup> giving them the ability to actively participate in and make decisions about the registration process. Based on the documents supplied by the registrants, they can confirm and establish ownership. In contrast, the registrar's position is typically more passive in the negative system. Their capacity to alter the information in the documents submitted for registration is constrained. Instead, it is their primary duty to make sure that registration criteria are followed and to adhere to stringent rules when it comes to refusing registration, such as when data that is essential for recording is missing or obviously erroneous.

The Indonesian system of land registration is generally classified as a modified Torrens system that is a part of the positive land registration system in which the right-holder obtains an official document (Zevenbergen, 2002), the title, and one of the branch offices of the land registry agency records its copy. The title certificate is constituted by a title plan or survey letter and a copy of the entry in the land book. The ideal of a Torrens type of land registration is often referred to in Australia where the state guarantees that the registered parcels reflected the actual legal position. Because it does not require searching through a chain of historic documents to secure the title, it can reduce the cost of transferring ownership and speed up the process of such transfers (Dekker, 2017). However, in Indonesia, the title certificate does not indicate an indefeasible title because the evidence of ownership could be annulled if the document has been challenged by others within a five-year period,<sup>3</sup> as provided by article 32(2) of Regulation no. 24 of 1997 concerning Land Registration:

‘In the event that a certificate of land has been issued in the name of the person or legal entity that obtained the land in good faith and actually controls it, then the other party who feels that he has rights to the land can no longer demand the exercise of that right, if within 5 (five) years after the issuance of the certificate, do not file a written objection to the certificate holder and the relevant Land Office or file a lawsuit to the Court regarding the control of the land or the issuance of the certificate.’

This feature makes the nature of the Indonesian land registration system not only positive but also negative because the registered data might not reflect the correct legal situation; the content land certificate is considered a true record until it can be proven otherwise in legal proceedings. The complicated nature of the Indonesian land registration system should be situated based on the legal protocol laid out by the BAL. According to the provision of article 19(2) of the BAL, land registration

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confidence placed in different forms of documentation. The choice to utilize title certificates, deeds, or both, and the extent of their legal significance, is determined by the laws and regulations enacted at the national level, as well as the existing legal framework that governs land ownership and registration in each respective country.

<sup>2</sup> Dekker (2017) explained the judicial nature of registrar's function indicates that she has a degree of discretion and the registrar is not simply an administrative officer. The registrar has the authority to reject deeds and can demand evidence to support any required actions (the power of the judge became vested in the function of the Registrar).

<sup>3</sup> In Indonesia, if a land title certificate is nullified by a court, it means that the ownership of the land associated with that certificate is also cancelled or invalidated. The annulment of the title certificate essentially results in the cancellation of the corresponding land ownership rights. This means that the person who held the invalidated title certificate would no longer be recognized as the legal owner of the land. The court's decision would lead to a revision of the land ownership records and the issuance of a new title certificate in the name of the rightful owner, as determined by the court.

includes the issuance of valid proof of rights documents as a 'strong' evidence instrument (*alat pembuktian yang kuat*). The provision is in line with article 32(1) of Regulation no. 24 of 1997, which states:

'Certificate is a letter of proof of rights that applies as a strong means of proof regarding the physical data and juridical data contained in it, as long as the physical data and juridical data are in accordance with the data contained in the measurement and book of land rights in question.'

The term 'strong' signifies the character of the legal evidence and the system itself. It means that the title certificates are not conclusive because if another party can demonstrate ownership within five years of issuing the title certificate, it can be revoked. Yet, the document purports to prove land rights. This indicates that the land registration system of the Indonesian land registration is not a positive system in terms of the absolute nature of the title validity, but it is not a pure negative system as well since the title certificate functions as legal proof and the registry does not independently reflect the legal condition of ownership. To reduce the paradox Boedi Harsono considers the Indonesian registration system is 'a negative system that contains positive elements' (Harsono, 2005).

### Land tenure system in Indonesia

The land tenure system is closely connected with the land registration system. The official registry it required is to record legally recognized interests, in terms of ownership and use of land. Land tenure encompasses legal, contractual, or customary agreements (written or unwritten form) and its development in which the land registration (legal registration or legal cadastre) should adapt for facilitating land rights (Zevenbergen, 2002).

### The position during colonial occupation

The enactment of the Basic Agrarian Law (BAL) in 1960 was intended to put an end to the opposition between western law and customary law regarding land ownership that prevailed in Indonesia during the Dutch colonial era. Before 1960, there was legal dualism between Dutch colonial law, *Burgelijk Wetboek* (BW), and *Adat* (customary) law in Indonesia. The land registration held by the colonial government only documented the lands owned by Europeans because the land registration of native-owned lands required considerable expense that the colonial administration was not prepared to pay for (Van der Eng, 2016).

The land law dualism differentiated the legal space between 'western land' (owned by Europeans, the Oriental group, other foreigners, and privileged Indonesians) and 'Indonesian land' (subjected to native people under *Adat* rights) (Fitzpatrick, 1997). The strict distinction of the dualistic legal system was drawn by the Dutch colonists from the sixteenth to the eighteenth centuries at a period when the colonial interest was focused on controlling the commodity trade in the fortified ports without the territorial expansion beyond European settlements. Native populations were permitted to self-govern their land, providing it did not contradict colonial law (such as slavery law) (Leaf, 1993). During the colonial time, *Adat* law was recognized as an autonomous legal system existing in various Indonesian regions, and several religious, cultural, and royal rulers (such as Sultans in Lingga, Surakarta, and Yogyakarta) assigned land registration to their local administrators based on each customary law (Sumarja, 2010; Van Klinken, 2007).

The territorial expansion of the Dutch colonial government influenced land law dualism. During the nineteenth century, the Dutch colonial government expanded their territories and managed to increase their production by issuing the policy of cultivation system (*cultuurstelsel*) in which Indonesian tenant farmers were forced to increase export crops and provide a portion of their production to the colonial rulers (Leaf, 1993). As a result of the public response in the Netherlands to the inhumane effects of the policy, the Agrarian Law (*Wet Agraria*) of 1870 and the Dutch royal decree of the law were passed. As a

consequence, the native farmers' rights were upgraded from merely being tenants on their own properties to holding inheritable and exchangeable land rights (Leaf, 1993).

Rather than romanticizing *Adat* (indigenous) land as distinct legal genera isolated from western land, it should be situated historically as a modern legal category constructed by the western legal system by the end of the Dutch colonial period. This emphasis is crucial because the romanticization of *Adat* (indigenous) lands as historically stagnant and isolated tenure systems frequently occur in academic presuppositions and political activism in Indonesia (Li, 2021). During the second half of the nineteenth and early twentieth centuries, there were two layers of land rights that represented western legal claims and Indonesian claims to the land. Leaf argued that Dutch and native land rights should not be seen as distinct in the actual parcels of land, but rather as holding the same type of ownership as the colonial state lands (*domein*) and private lands held by Europeans and other landlords authorized by the colonial government (*eigendom*) (Leaf, 1993). *Domein* land encompassed traditional ownership rights (*hak milik Adat*) with an agricultural products tax (*pajak hasil bumi*) and a yearly tax for parcels of land close to or in urban areas (*Verponding*). Meanwhile, *eigendom* land was the domain of commercial use rights (*hak tanah kongsi*) and exploitation rights (*hak tanah usaha*) on lands held by Europeans and other landlords (Leaf, 1993). Hence, native land rights can be understood as Indonesian claims to lands with a complex interplay between different layers of legal rights, encompassing both *domein* lands held by the Dutch state and *eigendom* lands held by private individuals. In the late Dutch period, the concept of land law dualism in Indonesia should be viewed differently. Rather than solely distinguishing between an indigenous legal system and a Dutch colonial legal system, it is more relevant to understand the different layers of legal rights to land and consider which social groups were granted access to those rights.

### **The position after the occupier left and the country gained independence**

The colonial construction of the Indonesian claims to the land influenced land tenure in the post-independence period. There were two kinds of land rights that were derived from the Indonesian claims to the land that were based on the *Wet Agraria* of 1870. At the time, *Domein* lands and exploitation rights (*hak tanah usaha*) were considered colloquially 'girik rights' under traditional ownership rights which are similar to freehold ownership and 'complete, perpetual, and freely alienable between individuals' (Leaf, 1993). The other land rights are colloquially recognized as 'garapan rights' which are quasi-legal rights (with tax payment) that encompassed the exploitation rights and commercial use rights to the *eigendom* lands which were expropriated as Indonesian state lands (*tanah negara*) based on Law No. 1 of 1958 (Leaf, 1993).

In 1960, BAL laid out a new system of land registration governed by the National Land Agency (*Badan Pertanahan Nasional*) that characterized land rights into registered rights and unregistered rights. Under the system, *girik* rights and *garapan* rights are situated as unregistered, transitional rights that could gradually be registered within the land registration system, and as a result title certificates could be issued. While registered and *garapan* rights are mostly in the centre of the city due to the historical context of Dutch economic interest in *eigendom* land, *girik* lands were concentrated on the periphery, the areas where the former *domein* lands of the colonial government took place (Leaf, 1993). The absence of legal certainty in proving land rights due to the dualism of agrarian law caused by the politics of the colonial government was the main cause of the BAL's unification project. Article 19(2) of the BAL emphasizes that the function of land registration is to obtain strong evidence with implications for the validity of legal actions regarding land, namely title certificates, which contain copies of the property register or land book (*buku tanah*) and survey letter register (*surat ukur*):

'The registration as referred to in section (1) of this article includes:

- a. surveying, mapping, and recording of land in a book;

- b. registration of land rights and of transfers of the rights;
- c. granting of documentary instruments of evidence of right, which serve as strong instruments of evidence.'

Despite BAL being passed into law to solve the divisive character and uncertainty of legal dualism, Leaf criticized the new system that BAL offered because it reproduced a new form of dualism, i.e., administrative dualism (registered rights and unregistered rights) (Leaf, 1993). However, it is our contention that legal and administrative dualism is necessary for the operation of the legal system and the way it can evaluate itself. To establish legal certainty, which asserts that the legislation must be explicit, specific, unambiguous, and foreseeable in terms of its legal ramifications, the administrative dualism between registered rights and unregistered rights is also essential. By keeping the binary code intact, the legal system ensured the way it can evaluate itself, including whether any customary law that contradicts the parameters of justice and legal certainty set by the law. Thorburn (2004) pointed out that new land management practices based on the BAL have been established by local governments, communities, and enterprises in various parts of the country. Some of these approaches may be exploitative, unfair, and short sighted, while others have the potential to promote harmony and a more equitable and efficient distribution of land and resources. After the 1998 political reformation, allowing indigenous communities to register their land in accordance with their own preferences is one suggestion made to resolve conflicts between those groups and the interests of the state and large scale corporate controlled business activities. To do this, plots belonging to an individual, a family, or a clan may be registered with specific guidelines and limitations established by the indigenous groups. The entire indigenous territory can also be registered as a single parcel that is owned and run by the corporate indigenous community (the council). As with non-Indigenous parcels, another alternative is to divide the territory into various private plots (Thorburn, 2004).

After the promulgation of Law No. 5 of 1960 on Basic Agrarian Law, a cadastre was established for rural land. In areas liable to land tax up until that point, the village-based land tax records served as a stand-in for the cadastral registry. This system was not faultless in the nineteenth century, and there have been calls to address concerns to promote equity and fairness in the estimation of land tax liabilities. After 1960, a rural cadastre was gradually implemented; in the meantime, property tax registration has been used as a stand-in for the rural cadastre. This is a significant progress since only metropolitan regions had a formal cadastre that could identify, measure, register, and certify land titles prior to 1961 (Van der Eng, 2016).

### **The problems of the present system**

Title certificates in Indonesia provide strong evidence of ownership, but they do not guarantee an irrevocable title, as their validity can be challenged within five years. This lack of certainty has been a significant concern for buyers, especially investors, because title certificates are not accepted as conclusive legal proof of title. Besides, there have been several challenges in the development of the Indonesian land registration system. The rapid expansion of recently developed agricultural areas, the high cost of land title certificates, the challenges of balancing individual land ownership with traditional laws, and the continuing use of property tax registers as a cadastre substitute all contributed to the delay in expanding coverage of land registration (Van der Eng, 2016). Only 20 per cent of land plots have cadastre registrations as of 1992, largely in metropolitan areas. Since 1994, a World Bank-sponsored effort has increased coverage, reaching 32 per cent in 2013 (Van der Eng, 2016). For the right holder, the land registration processes seem drawn out and expensive, at least in comparison to the anticipated benefits. Weaknesses and rampant corruption within the relevant organizations make this situation worse. As a result, property owners may be required to spend significantly more than the stated fees (Zevenbergen, 2002).

*Adat*, Indonesia's traditional system of land tenure, met the needs of many generations but did not offer security or official legal relationships that were favourable to development. To the detriment of local populations, the post-independence administration has attempted to both preserve control over the nation's natural resources while also modernizing the existing system to better aid its development. The agrarian reforms that were enacted resulted in a parallel legal system and a tension between traditional rights and contemporary, western-influenced objectives and goals of the state (Gold and Zuckerman, 2014).

### The plans for the e-certificate

An innovation in land registration is under consideration. A significant change that is taking Indonesian land registration in a positive direction is the recently developed digital land titling registration system. The main agrarian law of Indonesia's 50th anniversary was commemorated in 2020 with a focus on digital transformation. This subject serves as a reminder of the necessity of completely implementing digital services to raise the calibre of land registration goods that are affordable, simple to use, effective, and dependable (Kusmiarto and others, 2021). Currently, all land service procedures are prepared for digital transformation by the Ministry of Agrarian and Spatial Planning/National Land Agency (ATR/BPN), a government organization that handles land services in Indonesia. Four different electronic-based land services have been introduced and made available nationwide by the Ministry of ATR/BPN: Electronic Mortgages, Land Certificate Check, Land Value Zone Information, and Land Registration Information Letter (Kusmiarto and others, 2021).

Additionally, in accordance with President Instruction No. 2/2018, the central government established *Pendaftaran Tanah Sistematis Lengkap* (PTSL), a comprehensive systematic land registration for all land parcels employing fixed boundary approaches with terrestrial and photogrammetry surveys. The annual capacity for land mapping and certification was roughly 1.5 million parcels until PTSL was introduced in 2017. The land registration effort has significantly increased since 2017 as a result. Five million land parcels were covered by PTSL in 2017; seven million pieces were covered in 2018; nine million land parcels are expected to be finished in 2019. By 2025, all of the remaining parcels—more than 50 million—should have been registered (Aditya and others, 2020). The government continues to enhance the system and documentation of land ownership in accordance with the spirit of legal reform, which aims to increase economic growth by reforming licensing procedures and increasing the use of information and communication technologies across a variety of industries. The government's strategic move is to ratify Law Number 11 of 2020 concerning Job Creation, which would represent a new legislative accomplishment. The government must amend many implementing regulations that are no longer in compliance with the rules outlined in the Job Creation Law as a legal result of the law's passage. Regulation Number 18 of 2021 concerning Management Rights, Land Rights, Flat Units, and Land Registration has been issued in this instance, based on article 147 of the Job Creation Law:

'Evidence of land rights, ownership rights to apartment units, management rights and mortgage rights, including deed of transfer of land rights and other documents related to land can be in electronic form.'

The legal foundation for the government's decision to digitize land title certificates is article 147 of the Job Creation Law. Meanwhile, article 84 PP No. 18 of 2021 confirms that:

- 1) Organization and implementation of Land Registration can be done electronically.
- 2) The results of the organization and implementation of electronic land registration are in the form of data, electronic information, and/or electronic documents.
- 3) Electronic data and information and/or printouts are valid legal evidence.



- 4) Electronic data and information and/or printouts are an extension of valid evidence in accordance with the procedural law in force in Indonesia.
- 5) The implementation of electronic land registration will be carried out in stages by taking into account the readiness of the electronic system built by the Ministry.

In accordance with the Job Creation Law and Government Regulation Number 18 of 2021, Regulation of the Minister of Agrarian Affairs/Head of the National Land Agency Number 1 of 2021 concerning Electronic Certificates was issued on January 12, 2021, in order to take steps to facilitate the implementation of the e-certificate policy. The aim of the Ministerial Regulation includes modernizing land services by raising indicators of business accessibility and community services, as well as by increasing the use of information and communication technology in the form of electronic-based land services. The existence of an electronic certificate of land rights is one example of electronic-based land service. The digital certificate could improve the system of proving ownership of land rights in Indonesia, which is currently a negative publication system that contains positive elements towards a positive publication system.

### **The advantages and disadvantages of the e-certificate system**

The Indonesian government's strategy on electronic land certificates is an effort to use advancements in digital information technology to reduce the bureaucracy involved in obtaining land certificates. Additionally, the electronic land certificate service system will, it is assumed, prevent land certificate fraud as well as collaboration and corruption in the processing of land certificates (the problem of multiple certificates). According to the Directorate General for Determination of Rights and Land Registration of the Ministry of ATR/BPN (2021), the application of land e-certificates can increase the efficiency and transparency of land registration and management of land records in line with modernization and the orientation of developing economic ecosystems towards the industrial revolution 4.0. The land registration service system will reduce the percentage of residents visiting the land office by up to 80 per cent. The public's perception that land services in Indonesia are managed in a traditional and complicated way will, it is envisaged, slowly disappear. It is also projected that the modernization of the land registration will increase the value of registered property to improve Indonesia's 'Ease of Doing Business' rating. In addition, land e-certificates are crucial in anticipating natural disasters such as floods, landslides, and earthquakes which often cause printed land certificates to be lost or damaged (Direktorat Jenderal Penetapan Hak dan Pendaftaran Tanah, 2021).

### **The example of Australia**

To make it easier to submit documents electronically and have them immediately registered, land registries across Australia, where the Torrens system of title by registration was initially established, have changed their paper registration procedures. There are three primary tiers of Certificate of Title (CT) use in Australia (InfoTrack, 2022). The first level of CT usage is found in Tasmania, where only paper CTs are used. Upon registration, these titles are issued and required for settlement. These titles are issued upon registration and are necessary for settlement. Second, CTs are utilized both on paper and electronically in Victoria, the Northern Territory, and Western Australia. In Victoria, most transactions are settled via an Electronic Lodgement Network Operator (ELNO), with paper CTs being converted to electronic CTs and then being destroyed. In Western Australia and the Northern Territory, the registers hold all original CTs, with duplicates being issued for settlement needs. Third, CTs have been eliminated in New South Wales, the Australian Capital Territory, Queensland, and South Australia. Electronic systems have taken the place of paper CTs in these states and territories, and all remaining paper CTs have been destroyed. In Queensland, the issuance of paper certificates of title has been discontinued, and existing certificates are cancelled when they are next lodged for any transaction (Christensen, 2019). Instead, ownership, interests, and encumbrances in the land are now evidenced by the details recorded in the land register (Cradduck,

2019). This is accompanied by a strict identity verification process to ensure that the individual claiming ownership of the land is indeed the same person mentioned on the title.

### **Advantages and disadvantages**

The digital land registry provides useful advantages such as reducing costs, time, and storage requirements for land registration (Craddock, 2019). Geographic accessibility is increased, and much of the manual labour is eliminated (Sandberg, 2010). However, issues with privacy and security have been raised, particularly in relation to the possibility of opportunistic fraud. Unauthorized access to the online system poses a risk, including the risk of cyberattacks, the possibility of data breaches, misappropriation of identity, and the risk of illegal real estate sales, which can allow thieves to steal registered owners of their interests (Thomas, Griggs, and Low, 2014; Craddock, 2019). The dangers of fraud and forgery are reduced using electronic signatures and other identifying methods, such as pin-tokens or biometric devices (Sandberg, 2010; however, compare the risks set out in Mason and Seng, 2021). By employing effective cybersecurity measures, appropriate encryption and authentication protocols, and pertinent legal and institutional frameworks for the use of electronic land registration systems, the electronic system can have the capacity to identify and alert administrators to common fraud patterns (Thomas, Griggs, and Low, 2014).

However, it is crucial to recognize that the use of digital signatures carries risks. Certification authorities have been found to issue certificates to impostors, jeopardizing website security and revealing vulnerabilities in the certificate creation process (Mason, 2016). Moreover, there are challenges associated with obtaining up-to-date and valid certificate revocation lists, involving authentication, expiration, sequencing, availability, and identification. Additional risks include the fraudulent substitution of public keys, theft of keys via phishing or hacking, inadequate security measures in certificate storage systems, side-channel attacks exploiting timing measurements and hardware performance variations, outdated or unidentified certificate revocation lists, and theft of certification authorities' private keys (Mason, 2021).

### **The present problems and why the e-certificate system has yet to be implemented**

The electronic certificate policy has both benefits and drawbacks. Additional regulations, such as Regulation Number 24 of 1997 concerning Land Registration; Regulation Number 40 of 1996 regarding Business Use Rights; Building Use Rights, and Use Rights, as well as the BAL, are inconsistent with the issuance of electronic certificates. The issue with the regulation is not that it is in electronic form, but rather that the government has not yet finished the first and most important steps, namely the provision of a national, systematic, and simultaneous land registration (Riana, 2021). Several groups also believe that the community does not yet require electronic certificates to prove ownership of land rights and that not all Indonesians have access to or understand the Internet. If the electronic certificate is merely utilized as a complementary or data backup for the land certificate book, the issuing of electronic certificates is considered as being feasible.

From a different perspective, the government's initiative to increase legal certainty about the ownership of land rights by implementing a policy of issuing electronic certificates will arguably benefit Indonesia's land administration in the long run. Of course, the legal validity of an e-certificate serving as proof of land ownership must be examined. This is because printed certificates, which have been utilized by legal subjects or holders of land rights, will eventually be replaced by electronic certificates. The community will not want to modify the method for establishing ownership of land rights if the legal force of the e-certificate is weaker than that of printed certificates. On the other hand, there is obviously no reason for the public to object to the implementation of the e-certificate if it has the same legal force as the printed certificate or even better.

Formally, e-certificates are now legal due to regulation (Job Creation Law and Government Regulation No. 18 of 2021). However, several groups believe that the Job Creation Law was created with legal flaws. One of them is the Indonesian Center for Environmental Law (ICEL), which believes that the Job Creation Law breached at least two of the provisions in Law No. 12 of 2011 about the Formation of Legislation. The two guiding principles are the concepts of implementation and openness. Regarding the openness principle, this concept mandates that the planning process leading up to the promulgation of a law or regulation be transparent and open to allow for the greatest possible chance for input from all societal levels throughout the creation of laws and regulations. Unfortunately, access to the academic paper and the Job Creation Bill will only be permitted once the Presidential Letter has been delivered to the DPR. At this point, the law has finished the drafting process, and with the filing of the Presidential Letter, it will move on to the discussion phase. Additionally, the community lacks access to the drafting process, making it impossible for them to offer their opinions verbally or in writing (ICEL, 2020).

Regulation of the Minister of Agrarian Affairs Number 1 of 2021 concerning Electronic Certificates formally cannot lose its legal legitimacy or legality. The regulation was not cancelled or revoked at the time this article was written. The application of electronic land certificates has been delayed, as agreed upon by Commission II of the DPR RI and the Ministry of Agrarian Affairs and Spatial Planning. Several faction members in the DPR-RI requested the postponing of the application of electronic land certificates. The Ministerial Regulation's provision regarding e-certificates was said to have various flaws, and the government's policies had not undergone adequate planning, both of which contributed to the delay (Fadli, 2021). However, the regulation does not conflict with the above rules, namely PP No. 18 of 2021 and the Job Creation Law.

## Conclusion

Enhancing the formal legal framework and the land registration system is essential. It remains an incomplete undertaking. From a systems-theoretical standpoint, we have indicated the increasing function of electronic title certificates in to link the legal system and land administration system. Rather than merely a matter of administrative development, Regulation of the Minister of Agrarian Affairs Number 1 of 2021 concerning Electronic Certificates represents a transition of the reformation of systems of land governance and land tenure security in Indonesia. We contend that the use of digital land titling as evidence in legal proceedings could enhance the legal certainty of the Indonesian land tenure system by improving the land registration process and the dispute resolution process. The 'negative publication method with positive aspects' that Indonesia now uses to prove ownership of land rights could be changed into a positive publication system with the use of digital certificates.

The legal validity of an e-certificate as proof of land ownership is, arguably, superior to that of current printed certificates and proof of land ownership obtained before the Basic Agrarian Law was enacted (during the dualism of agrarian law). It is also in line with the Indonesian government's efforts to improve the system and evidence of land ownership and ease of doing business and increase investment and economic growth. However, due to a number of procedural restrictions, the implementation of e-certificates is delayed. Another factor is that many people reject or question the legitimacy and security of digitally stored land administration data.

The Indonesian government can ensure a smoother transition while defending the rights and interests of the populace by putting several measures into place. The establishment of a national, systematic, and simultaneous land registration system should be completed by the government. Before fully converting to electronic certificates, this step is essential. It will make sure that land rights are recorded consistently and accurately and make an easier implementation of electronic certificates possible. Additionally, the government may decide to use electronic certificates as supplemental or backup information for the

current land certificate book rather than completely replacing traditional land certificates. This strategy enables a smooth transition and gives citizens a certain amount of comfort and familiarity. Access to pertinent information can also encourage more engagement by relevant participants. To foster a more inclusive and representative approach, the government should strive to incorporate members of various societal levels, such as community representatives, in conversations and decision-making processes.

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