

Concepts and Challenges in Digitalizing the Land Management System in Indonesia

Andrieta Isabella Edwina Putri¹ and Naurah Dwirengganis Riata Putri²

Andrieta.isabella11@ui.ac.id ; naurahdwi@student.uir.ac.id

¹ Universitas Indonesia

² Universitas Islam Riau

Abstract

The concept and challenges of digitalizing the land management system in Indonesia are crucial due to the importance of land as a fundamental factor in Indonesian society. A suitable land management system is necessary to accommodate the evolving times, providing certainty and legal protection for its rights holders. This article aims to discuss the concept of modernization in land data management, including the initiation of electronic signatures, electronic Mortgage Rights (HT-el), and the policy of Electronic Land Certificates, which are scheduled to be implemented soon. The discussion will also address the challenges and difficulties in the implementation of digitalization in the field of land related to it. Through qualitative analysis, the research findings reveal that electronic signatures have begun to be applied in several institutions in Indonesia, including in land governance under the Ministry of Agrarian and Spatial Planning/National Land Agency. The HT-el system is also operational, although there are still some challenges in its implementation. However, there are issues related to the transition to Electronic Land Certificates, including concerns about the security of land rights certificate data and the regulation mandating the withdrawal of all physical land rights certificates to be stored in land offices. The implication of this research is that the digitalization of the land management system aims to optimize land services for rights holders and related third parties. However, there are still obstacles, both in terms of infrastructure and practicalities, that need to be addressed to achieve comprehensive digital transformation of the land management system in Indonesia. This article has not been previously published in whole or in part in the form of a journal, working paper, or other published format.

Keywords: Land Management; Digitalization; Electronic Signatures; Electronic Mortgage; Electronic Land Certificate.

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Published in Notaire. Published by Universitas Airlangga, Magister Kenotariatan.



Introduction

The recent development of technology seems to have brought a breath of fresh air which provides a number of impacts and conveniences in various sectors of the world. The use of information and communication technology on the one hand contributes to the improvement of human welfare and civilization,¹ and therefore provides many benefits

¹ Adami Chazawi & Ardi Ferina, *Tindak Pidana Informasi & Transaksi Elektronik* (Media Nusa Creative 2019)[2].

to the digitalization that can be felt by the wider community in Indonesia, especially in the land management sector through the concept of digitalization. Land management

“The entire land, water and space, including the natural resources contained within the territory of the Republic of is a blessing from the God Almighty. These land, water and space owned by the nation of Indonesia and deemed as the national wealth”.² Land is one of the crucial resources for survival that can be seen in various aspects of the life of the Indonesian people. The word “land” is referred to as the surface of the earth based on the perspective of Article 4 of Law Number 5 of 1960 regarding Basic Agrarian Principles (UUPA). The definition of land is furthermore explained in Government Regulation No. 18 of 2021 that is currently published, stating that “Land is the surface of the earth both in the form of land and water-covered, including the space above and within the earth, within certain limits that its use and utilization are directly related to the use and utilization of the surface of the earth”.³

UUPA further discusses the variation of land titles that could be granted to the citizen of Indonesia. The aforementioned titles listed in Article 16 paragraph 1 are including but not limited to Right of Ownership, Right to Cultivate, Right to Build, Right to Use, Leasehold Rights, Right to Clear a Land, and Right to Collect Products.⁴

As the economy continues to grow, so do the needs and wants of the people. Currently, various sectors in the world are developing very rapidly in line with the technological innovation. Current technological developments lead to an easier and faster access to various sectors, which can help and facilitate all the rising needs of the society, including the needs for a more efficient land management system which will be the main focus in this paper. This article aims to discuss the concept of a more sophisticated land data management system, with the initiation of Electronic Signatures, Electronic Land Mortgage Rights (HT-el), and the impending Electronic Land Certificate

² Law Number 5 Year 1960 concerning Basic Regulations on Agrarian Principles (The Republic of Indonesia State Gazette Year 1960 Number 104, Annotation 2043).

³ Government Regulation Number 18 Year 2021 concerning Right-to-manage, Land Titles, Multistory Housing Units, And Land Registration (The Republic of Indonesia State Gazette Year 2021 Number 329, Annotation 6630).

⁴ Law Number 5 Year 1960 concerning Basic Regulations on Agrarian Principles (The Republic of Indonesia State Gazette Year 1960 Number 104, Annotation 2043).

Policy that is planned to be implemented in the near future, followed by the numerous obstacles and problems happening during the transition.

Electronic Signature is a form of a signature that appears in an electronic document that is essentially a non-paperless document.⁵ In practice, pursuant to Article 4 paragraph 1 of the Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia Number 3 of 2019 regarding the Application of Electronic Signatures, Electronic signatures can be carried out after the signatory has their own designated Electronic Certificate. The Electronic Certificate referred to here is one that provides evidence of the authenticity of the signatory that has been registered by the government.

In addition, digitalization in land management in Indonesia can be seen through the enactment of a service system in Electronic Land Mortgage (known as “HT-el”). Article 15 paragraph 1 in the Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia Number 5 of 2020 regarding Electronically Integrated Land Mortgage Rights Services mentions that there are three forms of documents that would be issued as the products of the Electronic Land Mortgage system, one of which is in the form of an Electronic Land Mortgage Certificate.

Along with several digitalization of the land management system that have been successfully implemented by the government, this paper would also discuss the obstacles, and the services that are planned to be implemented in the foreseeable future, i.e the Electronic Land Certificate, and at last, a comprehensive digital land management system. Electronic Certificates, hereinafter referred as an “e-Certificates”, as a means and identity of electronic devices are intended to show the authentication electronically, considering that the world is increasingly moving towards an electronic/paperless-based world. It is crucial that the regulations governing e-certificates have to meet the standards that allow people to trust the value and the legal force of the non-tangible certificate. This is considered an important step of Indonesia’s efforts to provide a more modernized services in the civil sector.

⁵ Dini Sukma Listyana, Ismi Ambar Wati, & Lisnawati, ‘*Kekuatan Pembuktian Tanda Tangan Elektronik Sebagai Alat Bukti yang Sah Dalam Perspektif Hukum Acara Indonesia dan Belanda*’ (2014) 147 *Jurnal Verstek*.

A number of costs and benefits to the implementation of a digital land management system in Indonesia is the background of the writing of this paper. However, Several previous researches have conducted analyses related to the challenges in the digitalization of Indonesia's land registration system, such as: First, Iqbal Anshori, Elita Rahmi, and Syamsir⁶ conducted research on the Polemics of Applying Electronic Signatures in Making Elektronik Deeds (Polemik Penerapan Tanda Tangan Elektronik Dalam Pembuatan Akta Elektronik), stating that the lack of further clarification regarding the notary's authority in certifying electronic transactions is fundamentally inconsistent with the provisions of Article 16 of Law No. 2 of 2014 on the Amendments to Law No. 30 of 2004 on Notary Profession. Second, Kurnia Rheza Randy Adineoro,⁷ through his research entitled 'tantangan implementasi sertipikat tanah elektronik di Kementrian Agraria dan Tata Ruang/Badan Pertanahan Nasional Republik Indonesia (Challenges in Implementing Electronic of the Republic of Indonesia), he argues that the implementation of Electronic Land Certificates faces numerous challenges, such as the social-cultural conditions of the surrounding communities, as well as fundamental aspects like the availability of supporting facilities and infrastructure.

Third, Susilo Widiyantoro, I.G Nyoman Guntur, Nur Rahmanto, dan Dwi Whyuningrum,⁸ through the research on the challenges towards the implementation of electronic land certificates in Magelang originating from external land office sources, sourced from local governments, certificate owners, and internet service providers. Fourth, Fahmi Charish Mustofa⁹ explaining his opinion regarding the challenges facing the implementation of the Land Information System (SIP) at the National Land Agency (BPN), he stated that the constraints lie in the reliability of the system, which depends

⁶ Iqbal Anshori, Elita Rahmi, & Syamsir, 'Polemik Penerapan Tanda Tangan Elektronik Dalam Pembuatan Akta Otentik' (2022) 4 Recital Review.

⁷ Kurnia Rheza Randy Adinegoro, 'Tantangan Implementasi Sertipikat Tanah Elektronik di Kementrian Agraria dan Tata Ruang/Badan Pertanahan Nasional Republik Indonesia' (2023) 4 Jurnal Ilmu Kenotariatan.

⁸ Susilo Widiyantoro, I.G Nyoman Guntur, Nur Rahmanto, & Dwi Wahyuningrum, 'Tantangan Menuju Penerapan Sertipikaat Elektronik di Kota dan Kabupaten Magelang' (2022) 10 PUBLIKAUMA:Jurnal Ilmu Administrasi Publik UMA.

⁹ Fahmi Charish Mustofa, 'Evaluasi Pengembangan Sistem Informasi Pertanahan di Badan Pertanahan (Evaluation of Land Information System Development In The National Land Agency)' (2020) 6 BHUMI: Jurnal Agraria dan Pertanahan.

on the quality of the internet network, and the instability of electricity supply in some land offices in remote areas. Fifth, in her research titled 'Implementasi Pelayanan Hak Tanggungan Elektronik Bagi Kreditor dan Pejabat Pembuat Akta Tanah' (The implementation of Electronic Mortgage (HT-el) services for Creditors and Land Deed Officials), Pandam Nurwulan,¹⁰ states that nearly all various problems and obstacles encountered in the implementation of Electronic Mortgage services, particularly in the IT systems provided by the government. Sixth, Sarah Exaudia, Wahyuni, and Akur Nurasa, argue that disturbances to the HT-el system have not yet covered debtors with different guarantors, errors in the ranking data of Mortgage Right, and the cancellation of files due to inappropriate requirements are several challenging factors in the implementation of integrated electronic mortgage rights.¹¹

The research carried out by several authors, as described above, is intended to demonstrate the originality of this study. Thus, this research will be more specialized on the concepts and challenges in digitizing the land processing system in Indonesia, so as to answer the question "Is Indonesia ready for digital land management system?"

Method Research

This paper, which will explore the concept and challenges of implementing digitalization in the land management system in Indonesia, is based on the normative qualitative research using the literature study method. Soerjono Soekanto defines the method as a scientific activity based on certain methods, systematics, and thoughts that aims to study one or several specific legal symptoms by analyzing them. Furthermore, there is also a deepening of reality and related facts in finding solutions or solving problems that would arise from the legal symptoms that are the object of the research.¹² With the intention of planning and starting a research project, various literatures are used to provide background for this study and are utilized as a way to help researchers

¹⁰ Pandam Nurwulan, 'Implementasi Pelayanan Hak Tanggungan Elektronik Bagi Kreditor dan Pejabat Pembuat Akta Tanah' (2021) 28 JH Ius Quia Iustum.

¹¹ Sarah Exaudia, Wahyuni, & Akur Nurasa, 'Implementasi Pelayanan Hak Tanggungan Terintegrasi Secara Elektronik di Kantor Pertanahan Kota Batam' (2021) 1 MARCAPADA: Jurnal Kebijakan Pertanahan.

¹² Soerjono Soekanto & Sri Mamudji, *Penelitian Hukum Normatif Suatu Tinjauan Singkat* (Rajawali Pers 2009).

recognize the specific phenomenon being studied.¹³

The approaches that are used in the writing of this paper are the statutory approach and micro-comparative approach. The statutory approach will be applied in analyzing primary legal materials that touch the realm of positive law (the order of the Indonesian legal system), especially with regards to the land management system in Indonesia. In addition, the comparative approach that will be used in this research is a micro comparison of law, where the object of comparison is not law as a whole in different legal systems but only of the object that is the focus of this paper.

The Concept of Digitalization of System in Indonesia

Indonesia is an agrarian country where land ownership has a vital importance for the lives of citizens, especially for factors of production. Land has such a crucial role for Indonesian citizens, as the ownership of land could assist in determining the welfare of citizens.¹⁴ Consequently, land management system in Indonesia is considered a complex process and involves many aspects, including legal aspects, public policies, and government and community practices in utilizing and managing land as a very important natural resource.¹⁵ It is very fundamental thus a change in the aforementioned system would impact numerous parties related to land matters.

The Indonesian government has an important role in regulating land management. There are numerous law and regulations related to land management, i.e. the fundamental Law No. 5 of 1960 on Basic Agrarian Principles, Government Regulation No. 40 of 1996 on Land Ownership Rights, Government Regulation No. 24 of 1997 on Land Registration, Government Regulation No.18 of 2021 on Right to Manage, Land Rights, Right of Ownership over Stacked Units, and Land Registration, and Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia No. 3 of 1997 revised with Regulation of the Minister of Agrarian Affairs

¹³ Yati Afianti, 'Penggunaan Literatur Dalam Penelitian Kualitatif' (2014) 35 Jurnal Keperawatan.

¹⁴ Rahmat Ramadhani, 'Legal Protection for Land Rights Holders Who Are Victims of The Land Mafia', (2021) 90 IJRS: International Journal Reglement & Society.

¹⁵ Sumaryanto, Syahyuti, Saptana & Bambang Irawan, 'Masalah Pertanahan di Indonesia dan Implikasinya Terhadap Tindak Lanjut Pembaruan Agraria' (2016) 14 Forum Penelitian Agro Ekonomi.

and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia No. 7 of 2019 revised with Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia No. 16 of 2021 on Implementation Regulation of the Government Regulation of Land Registration.

The concept of digitalization of the land management system in Indonesia, with all the benefits and challenges associated with this concept, is a process of transforming the land administration and management system from a manual process to a digital-based one. It is an initiative to transform the current manual land system into a more efficient, effective, transparent and integrated system.¹⁶ The concept of digitalization of the land system is an effort to update and accelerate the collection, processing, and management of land data by utilizing digital technology. Therefore, this land system is expected to improve the quality of land data and facilitate access for the community to information about the land they own.¹⁷

One of the main advantages in digitalizing the land system is to improve the accuracy of land data collection. In the conventional system, land data collection is done manually and require a considerable long amount of time. Land data is frequently dispersed across multiple institutions or agencies, resulting in difficulty in obtaining them comprehensively. In a digital system, land data can be accessed directly by all relevant agencies quickly and easily through an electronic system. In addition, the data recorded in the digital system are also supposedly more accurate and can be updated real-time. The concept of digitalizing the land system also facilitates access for the owners in obtaining information about the land they own. In the conventional system, people often find it difficult to find information about their land ownership, such as land certificates or other proof of ownership. In the digital system, information about land ownership can be accessed online, straightforward and quick.¹⁸ In addition, digitalizing the land

¹⁶ Gandi Assidiqih & Indri Fogar Susilowati, 'Tinjauan Yuridis Sertifikat Tanah Elektronik Sebagai Alat Bukti Kepemilikan Tanah di Indonesia', (2021) 67 *Lex Novum: Jurnal Hukum Universitas Negeri Surabaya*

¹⁷ Mira Novana Ardani, 'Penyelenggaraan Tertib Administrasi Bidang Pertanahan untuk Menunjang Pelaksanaan Kewenangan', (2019) 485 *Administrative Law and Governance Journal*.

¹⁸ Gandi Assidiqih & Indri Fogar Susilowati, 'Tinjauan Yuridis Sertifikat Tanah Elektronik Sebagai Alat Bukti Kepemilikan Tanah di Indonesia' (2021) 64 *Lex Novum: Jurnal Hukum Universitas Negeri Surabaya*.

system could also simplify the process of transaction of a land. In the conventional system, the process of purchasing a land often needs a considerably an inordinate long time as there are many prerequisite steps that have to be done manually. In the digital system, the requirements that the parties have to deliver, i.e. the checking of the land certificate that needs to be done through the regional office of the National Land Agency could be completed electronically, quickly without difficulty. This, in theory, can speed up the land sale and purchase transaction process and reduce the administrative costs required. However, the digitalization the land system also has challenges that needed to be overcome. These challenges would also be discussed thoroughly in the fifth part of this paper.

Successful Implementation of Digitalization of Land Management System in Indonesia

The successfully executed digitalization of the land management system is critical for improving efficiency and transparency in land data management. Digitalization in land management system can be done through several programs, such as the utilization of information and communication technology or the geographic information systems. Operating an advanced system of information and communication technology can assist with numerous issues such as accelerating the process of land registration, land measurement and land transactions, while geographic information systems can help land management by mapping areas that are not legally registered thus helping the government to conjure the suitable decisions in land management.¹⁹

In Indonesia, successful digitalization in land management system can be seen in how electronic signature has been widely implemented, and in the utilization of information and communication technology to provide the National Land Information System. Furthermore, the land mortgage system has also been digitalized in assisting related parties to be more efficient with their affairs. The following are examples of successful digitalization implementation in Indonesia's land management system:

¹⁹ Candya Upavata Kutey Karta Negara, et.al, 'Urgensi Sistem Pengamanan Pada Sertifikat Tanah Digital' (2021) 844 Jurnal Hukum Lex Generalis.

A. Electronic Signature

An Electronic Signature is a data consisting related electronic information that is used as a verification and authentication tool.²⁰ The regulation regarding electronic signatures had primarily been published in Law Number 11 of 2008 regarding Electronic Information and Transaction and afterwards revised through Law No. 19 of 2016.

The recognition of the Electronic Signatures are also mentioned in government regulations and in several state agency regulations i.e. Article 1 Paragraph 22 of Government Regulation Number 71 of 2019 regarding the Implementation of the System and Electronic Transaction and Article 16 paragraph 1 (a) sub paragraph 9 of Bank Indonesia Regulation Number 19/10/PBI regarding the Implementation of Anti-Money Laundering and Financing of Terrorism for Payment System Service Providers Other Than Banks and Non-Bank Foreign Exchange Business Activity Providers.

Regarding the land management system specifically, The Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia has also unequivocally acknowledged the legal force of the electronic signature through its regulation No. 3 of 2019 regarding the Application of Electronic Signatures and No. 1 of 2022 regarding Electronic Certificates.

Aside from Indonesia, other countries have also implemented electronic signatures as part of their technological development, such as Singapore that has recognized the existence of electronic signatures since 2010, which are regulated under Singapore's Electronic Transactions Act 2010. According to Singapore's Electronic Transaction Act 2010, Electronic Signature has fulfilled some criteria as legally binding as the conventional form.²¹ Singapore's electronic signature security procedures are unequivocally described in Part III, Secure Electronic Records and Signatures, in their aforementioned Electronic Transactions Act 2010.

The proliferation of agencies in Indonesia dedicated to providing electronic

²⁰ Law Number 19 Year 2016 concerning The Amendment of Law No. 11 Year 2008 on Electronic information and Transactions (The Republic of Indonesia State Gazette Year 2016 Number 251, Annotation 5952).

²¹ Electronic Transactions Act 2010 revised edition 2011 (The Statutes of The Republic of Singapore Chapter 88).

signature services is compelling evidence of the advance and widespread acceptance of electronic signatures within society. Presently, there exist one state agency and nine private agencies authorized to offer certificate and electronic signature services. The state agency is National Cyber and Crypto Agency (*Balai Sertifikasi Elektronik Badan Siber dan Sandi Negara*), while the private agencies are namely PT. Privy Identitas Digital, PT. Solusi Net Internusa, Perusahaan Umum Percetakan Uang Republik Indonesia, PT. Indonesia Digital Identity (Vida), PT. Djelas Tanda Tangan Bersama, PT. Tilaka Nusa Teknologi, dan PT. Digital Tandatangan Asli, PT Solusi Identitas Global Net, PT. Vipas Inovasi Teknologi.²²

Endorsed by numerous regulations that guarantee the force and the bind of electronic signatures, it is expected that in the near future the use of electronic signatures would be getting more acknowledgment from the public and encouraged to be utilized not only for state affairs, but also for civil affairs and transactions.

B. National Land Information System/*Sistem Informasi Pertanahan (SIP)*

National Land Information System (hereinafter referred as “SIP”) is an information system exercised to monitor and to manage comprehensive land data in Indonesia. SIP was developed by the National Land Agency (BPN) and is the sole database for land information in Indonesia. The system allows users to view and manage information on land ownership, land rights status, land transactions, and other geospatial data.

The utilization of SIP would effortlessly allow users to search and to obtain information on land ownership, land rights status, and land transactions. The information can be easily accessed through the website and/or application. Furthermore, SIP is claimed to be able to reduce errors in land data management as the system ensures that the data inputted into the system is accurate and integrated. There is an increase in transparency and efficiency in land data management as the data stored in the SIPN system could be accessed by all entitled parties.²³

In the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of

²² Kementerian Komunikasi dan Informatika: Penyelenggara Sertifikasi Elektronik, List PSrE (Layanan PSRe:TTE, 2021) < <https://tte.kominfo.go.id/listpsrenew> > accessed 24 March 2023.

²³ Candya Upavata Kutey Karta Negara, et.al, 'Urgensi Sistem Pengamanan Pada Sertifikat Tanah Digital' (2021) 843 Jurnal Hukum Lex Generalis.

the National Land Agency of the Republic of Indonesia No.5 of 2017, it is stated that there are 9 (nine) services that will be provided to the public digitally through their website, including but not limited to land certificate checking, statement letter regarding land registration, both textual and spatial data information, and land coordinate information. It is consequently regulated in the Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia No. 16 of 2021 that it is mandatory for a Land Deed Official, before drafting a deed related to a land right transfer or a land mortgage, to in advance confirm that the physical and legal data in the land certificate matches the data contained in the National Land Information System/*Sistem Informasi Pertanahan* (SIP).

All the steps prior to the certificate checking, such as delivering the required documents, receiving confirmation about the availability of the data, collecting the billing code, payment for the service, up until the delivery of the information requested are conducted electronically through a website and/or and application.²⁴

In recent developments, numerous regional offices of the National Land Agency have embarked on the digitalization of their extensive datasets. For instance, Bandung National Land Agency has achieved a commendable 72.48% digitization rate, Pekanbaru National Land Agency follows with 52.14%, Ambon with 49.75%, Jakarta Utara with an impressive 79.31%, and Surabaya I lead the pack with an exemplary 88.77% of their data already fully digitized.²⁵ Hence, the modest commencement of digitalization in some local offices merely the initial phase. The National Land Agency faces a formidable journey ahead to achieve complete and comprehensive digitalization our land management system.

C. Electronically Integrated Mortgage Electronic System (HT-el)

The Electronically Integrated Land Mortgage Rights Electronic System, or “HT-el” is introduced through Article 1 paragraph 7 of the Regulation of the Minister of

²⁴ Pusat Penelitian dan Pengembangan Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional, ‘*Administrasi Pertanahan dan Tata Ruang di Indonesia Menuju Modern, Digital, dan Terpercaya*’, (2019) 26 Forum Ilmiah Administrasi Pertanahan dan Tata Ruang di Indonesia Menuju Modern, Digital, dan Terpercaya.

²⁵ Pusat Penelitian dan Pengembangan Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional, ‘*Administrasi Pertanahan dan Tata Ruang di Indonesia Menuju Modern, Digital, dan Terpercaya*’, (2019) 29 Forum Ilmiah Administrasi Pertanahan dan Tata Ruang di Indonesia Menuju Modern, Digital, dan Terpercaya.

Agrarian and Spatial Planning and Head of the National Land Agency of the Republic of Indonesia Number 5 of 2020 regarding Electronically Integrated Land Mortgage Rights Services. It defines HT-el as a series of process regarding land mortgage services aims to maintain land registration data that is conducted through an integrated electronic system. The system, which has been implemented since 2019, provides benefits, one of which is that it is rapid and practical when compared to Conventional Land Mortgage Rights management.²⁶ In compliance with Article 16 paragraph 1 of the Regulations of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency No. 5/2020, HT-el offers the following service categories, such as: a.) Registration of Mortgage Rights; b.) Transfer of Mortgage Rights; c.) Change of Creditor Name; d.) Abolition of Mortgage Rights; e.) Data correction.

The implementation of HT-el begins with verifying and validating user accounts such as creditors and the Land Deed Officials as partners of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency then proceed with the HT-el registration process until the issuance of HT-el certificates where all processes must meet the procedures and requirements in accordance of the Regulations of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency which are carried out electronically.²⁷

According to Article 15 paragraph 1 of the Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia Number 5 of 2020 concerning Electronically Integrated Mortgage Rights Services, the results of HT-el will essentially produce Electronic Documents, which include: HT-el Certificate, Record of Land Mortgage in the Land Book, and Record of Mortgage on the land certificate.²⁸

In addition, the legal force of the HT-el certificate is stated to be as forceful as the conventional land mortgage certificate. It is stipulated in Article 1 paragraph 16

²⁶ Damar Safari & Mujiati, 'Efektivitas Layanan Hak Tanggungan Terintegrasi Secara Elektronik di Kantor Pertanahan Kabupaten Klaten' (2022) 34 Jurnal Tunas Agraria.

²⁷ Nur Azizah, et.al, 'Pendaftaran Hak Tanggungan Secara Elektronik' (2022) 86-87 Notary Law Journal.

²⁸ Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia Number 5 of 2020 concerning Electronically Integrated Mortgage Rights Services, (The Republic of Indonesia Statute Book Year 2020, Annotation 349).

Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia Number 5 of 2020 that defined the HT-el certificate to be a proof of a land mortgage in a form of an electronic document. Identical to the conventional land mortgage certificate, the HT-el certificate also contains the ultimate phrase, "For the Sake of Justice Upon the God Almighty" that elucidates the HT-el certificate possess the same executorial power as a conventional one. This executorial power is as forceful as the power that a court verdict holds, meaning that in the event of default, the creditor could receive repayment of the loan through auctioning the land without having to acquire permit from the court beforehand.

Despite the fact that the implementation of HT-el has begun nationwide, this system has not been perfect as some glitches are still found here and there, such as how the system requires some times for the current altered data to be updated in the system. Many times, it is found how a change is executed to a land certificate and yet it is still not immediately registered in the system, resulting in a confusion as the set of data found online are different with the updated, current version of manual data. Another example of the glitch is how a land certificate has been validated manually in the regional office of National Land Agency prior to a transaction, however during the online checking, the system showed that there had been no prior validation. This sometimes leads to a hassle as the parties need to repeatedly proceed to the regional office to overcome the issue.

Nonetheless, the initiation of HT-el portrays the boldness of Indonesia to begin the comprehensive digitalization system in many sectors, including in land management system. It is only expected that overtime, the socialization of the system would be conducted without exception throughout the country resulting in an improved understanding of the parties related to the system, and the infrastructure would also be enhanced to ensure a smooth and effective conduct of HT-el and also all the impending digital land management system.

Obstacles to the Digitalization of Land Management System in Indonesia

Although the digitalization of the land management system offers numerous advantages and the potential enhancement of efficiency and effectiveness in Indonesia's

land management, various obstacles must be addressed to be overcome for a thoroughly successful implementation. These hurdles include:

A. The Limitation of the Human Resources

Numerous employees in government institutions in Indonesia, particularly those involved in land management system, are found not yet proficient in the use of the related information technology, thus interfering with the fluency of digital systems in land management. The socialization regarding the program that aims to provide land related information electronically are not thoroughly carried out by the Ministry to all the regional offices of the National Land Agency. Numerous regional offices are found to be not yet exposed by this agenda, and claim that most of the socialization are still conducted for the head-level and are not yet carried out to the middle-management and the daily executors.²⁹

To overcome this issue, it is necessary to conduct integrated education and training of human resources in the field of information and communication technology. Pragmatically, the training should be in-house, held at the local government level and specifically in the local office of National Land Agency in order to obtain a comprehensive understanding and literacy among the local government employees needed to work with this system. This in-house training can involve experts in the region and in other regions, as well as cooperation with existing universities, and carried out by each regional government pursuant to its own needs in relation to the implementation of the land system digitalization, to ensure that the public service by the government can adhere to the paradigm of good governance. This aims to conduct a well-carried public service, and are a barometer of the transparency and accountability of the state institutions.³⁰

The most important message to convey in the training is that the success of these digitalization program does not depend on technology but on the ability of those who

²⁹ Pusat Penelitian dan Pengembangan Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional, '*Administrasi Pertanahan dan Tata Ruang di Indonesia Menuju Modern, Digital, dan Terpercaya*', (2019)
³⁰ Forum Ilmiah Administrasi Pertanahan dan Tata Ruang di Indonesia Menuju Modern, Digital, dan Terpercaya.

³⁰ Suwardi & AriefDwi Atmoko, '*Pembaruan Hukum Agraria di Indonesia*' (2019) Hukum Bisnis: Universitas Narota Surabaya.

manage it. It is necessary to create a model for managing the digitalization of the land system, both for the central government and regional government levels. Furthermore, it is essential to emphasize the part of the government that handles the digital affairs in the existing organizational structure in departments, ministries, and non-departmental government agencies, so that there could be no confusion in the management in implementing the digitalization of the land system in the government.

Aside from the internal problems by the operator, it is also found that there is a lack of public understanding of this system. Therefore, there is a significant need for continuous efforts to increase public understanding and participation, as well as the development of technology and systems to optimize the land management system in Indonesia.³¹

B. Data Security in Indonesia

Personal data is a specific set of information about someone that has its own value, and would be considered vulnerable if it is misused for interests that are not in line with the purpose of the data.³² Issues related to personal data security are still in debate as some parties question the strength of the enforcement of its security. The government has issued regulations related to Personal Data recently with the enactment of Law Number 27 of 2022 on Protection of Private Data on 17 October 2022. Prior to the enactment of the explicit provisions on personal data protection delineated in Law no. 27 of 2022, the regulatory framework governing personal data protection in Indonesia relied on Minister of Communication and Informatics Regulation of the Republic of Indonesia Number 20 of 2016 Regarding Protection of Personal Data in Electronics Systems, which was perceived as insufficient to serve as a robust legal framework amidst the phenomenon of personal data breaches in the Indonesian marketplace.³³ Furthermore, the protection of personal data had been indirectly addressed in a

³¹ Ana Silviana, 'Urgensi Sertipikat Tanah Elektronik Dalam Sistem Hukum Pendaftaran Tanah di Indonesia' (2021) 57 *Administrative Law and Governance*.

³² Kukuh Tejomurti, et.al, 'Legal Protection for Urban Transportation User's Personal Data Disclosure in the Age of Digital Technology' (2018) 501 *PJIH: Padjadjaran Jurnal Ilmu Hukum*.

³³ Albert Lodewyk Sentosa Siahaan, *Urgensi Perlindungan Data Pribadi Di Platform Marketplace Terhadap Kemajuan Teknologi (Urgency of Personal Data Protection on Marketplace Platforms Against Technological Advances)* (2022) 218 *Majalah Hukum Nasional*.

myriad of legislative instruments. Noteworthy among these are: Article 1 number 28 & Article 40 of Law No.7 of 1992 concerning banking, as amended by Law No.10 of 1998 amendments to Law No.7 of 1992 concerning banking; Article 14 paragraph (2) & Article paragraph (1) of Law No. 39 of 1999 concerning Human Right; Article 57 paragraph (1) and Article 57 paragraph (2) of Law No. 39 of 2009 concerning health; Article 1 number 22, Article 85 paragraph (1), and Article 8 paragraph 1 Letter e of Law No. 24 of 2013 concerning Population Administration: Article 2 letter d, Article 31, and Article 49 of Financial Services Authority Regulation Number 1/POJK.07/2013 concerning Consumer Protection in the Financial Services Sector; Article 20 of Law No. 19 of 2016 amending Law No.11 of 2008; as well as Article 1 number 8 & Article 14 of Government Regulation Number 71 of 2019 concerning the Implementation of Electronics Systems and Transactions.³⁴

In its drafting, Law No. 22 of 2022 draws upon the General Data Protection Regulation (GDPR) of European Union. This regulation is expected to hold equivalent force to the GDPR in safeguarding the utilization of personal data pertaining to Indonesia citizens.³⁵ The GDPR was formally adopted by the European Union in April 2016, replacing the EU Directive as of May 25, 2018.³⁶ As the strongest privacy and security law in the world,³⁷ The General Data Protection Regulation (GDPR) is a regulation that serves as an umbrella for countries that are members of the European Union in protecting everything related to data. There are substantial amounts of the contents of Law No. 27 of 2022 that are similar to the articles of the GDPR. This seems to confirm that GDPR has indeed become a reference and catalyst for many countries to modernize privacy rules and personal data protection, such as Brazil, India, Chile, South Korea, Kenya,

³⁴ Lidya Suryani Widayati, et.al, *Politik Hukum Perlindungan Data Pribadi* (Yayasan Pustaka Obor 2020).[22].

³⁵ Pratiwi Agustini, *UU PDP Akan Permudah Pertukaran Data Dengan Negara Lain*, (Kementrian Komunikasi dan Informatika, 2020) < <https://aptika.kominfo.go.id/2020/11/uu-pdp-akan-permudah-pertukaran-data-dengan-negara-lain/> > accessed 24 March 2023.

³⁶ Sherly Haristya, et.al, *Studi Pendahuluan: Perbandingan Rancangan Undang-Undang Perlindungan Data Pribadi dengan Konvensi Eropa 108+ dan GDPR*, (Yayasan Tifa, 2020).[9].

³⁷ European Council: Council of the European Union, *The General Data Protection Regulation*, (The General Data Protection Regulation, 2022) < <https://www.consilium.europa.eu/en/policies/data-protection/data-protection-regulation/> > accessed 24 March 2023.

Taiwan, and Indonesia.³⁸ Furthermore, in the field of data protection, the EU established Data Protection Authorities (DPA) as Supervisory Authorities. Article 51 paragraph 1 of the GDPR also moreover requires countries that are part of the European Union to establish a supervisory body in the field of data protection.

Regarding the implementation Law No. 27 of 2022, fundamentally, the Indonesian government had come up with the idea of establishing an independent data protection commission or institution for a few years now. Unfortunately, up until now, one year after the law has been enacted, further news about the formation of this commission has not been heard. In reality, electronic data is very vulnerable to being altered, intercepted, falsified, and sent to various parts of the world in a matter of second.³⁹ Hence, it is not surprising that many people have concerns and doubts with trusting all of their important data to the government.⁴⁰ The government needs to foremost build up the trust by ensuring the security of the land digital system to prevent data theft or damage by irresponsible parties.

On the other hand, we are also still lack of national public literacy and understanding regarding the necessity to protect their personal data. This is confirmed by the Center for Digital Society (CfDS), Faculty of Social and Politic Universitas Gadjah Mada through a survey related to public perceptions of personal data protection, deducing from data collected from 2041 survey respondents aged 13-80 spread across 34 provinces in Indonesia, it is concluded that around 98.9% of the respondents admitted that they knew about the definition of personal data, yet unfortunately only 18.4% (441 out of 2041 respondents) of respondents were able to identify the types of their personal data that they need to protect. This survey stated that 78.7% of respondents have high concerns about data misuse by companies, governments, and third parties – yet the understanding on what to do in order to protect their data are still substantially lacking. The survey concluded that there are still significant gaps in the community's knowledge about personal data.

³⁸ Riza Roilda Mufti, 'A Policy Brief EU General Data Protection (GDPR)' (2021) 3 Research Series: Embassy of Republic of Indonesia in Brussels.

³⁹ Rosmidah, et.al, 'Sosialisasi E-Sertifikat Tanah Dalam Rangka Mewujudkan Kepastian' (2021) 67 Jurnal Karya Abdi.

⁴⁰ Rosmidah, et.al, 'Sosialisasi E-Sertifikat Tanah Dalam Rangka Mewujudkan Kepastian' (2021) 62 Jurnal Karya Abdi.

To conclude, the problem concerning data security revolves around facts that there is insufficient guarantee from the government regarding the security of the all the data and documents uploaded to the online portal and also the lack of awareness from the public itself. The government needs to immediately proceed with the execution of the Law No. 27 of 2022, establishing the data protection committee and other infrastructure needed to enhance public trust related to trusting their data to the government. Subsequently, it is also urgent for the public to receive more socialization concerning the importance of data security, to improve their understanding and comprehend all the benefits and consequences of the upcoming thoroughly digitalized system.

The Upcoming Digital Land Management System in Indonesia

A. Electronic Certificate

On 2022, the government definitively passed a Regulation of the Minister of Agrarian and Spatial Planning / Head of the National Land Agency of the Republic of Indonesia Number 1 of 2021 regarding Electronic Certificates. Before having its own act, the recognition of this Electronic Certificate has been mentioned in several regulations.

Electronic Certificates are a non-tangible certificate that includes Electronic Signature and identifies the legal status of the parties in the related transactions and are issued by Electronic Certification Providers. Regulations of The Minister of Agrarian Affairs and Spatial Planning/National Land Agency No 1/2021 regarding Electronic Land Certificate aims to exhaustively convert all conventional land certificates into an electronic certificate. It is claimed by the Minister of Agrarian Affairs and Spatial Planning/National Land Agency that electronic certificates have supposedly theoretical advantages that simplify and speed up the land administrative process.

Although regulations have been issued, the implementation of electronic certificates in the land sector has caused a number of polemics even before this electronic certificate was officially enacted and implemented. One that has sparked considerable public debate is Article 16 paragraph 3 of the Regulations of the Ministry of Agrarian Affairs and Spatial Planning / National Land Agency No. 1/2021 on the withdrawal of original / conventional certificates in order to obtain electronic certificates. There

are some debates revolving around this article, of how it is found that the trust that numerous people have towards the digital system is not yet sufficient for them not to personally handing over the sacrosanct land ownership proof in their possession and rely completely on the system. This is also following up the issue of data security issue in Indonesia, or to be precise, the lack thereof. Therefore, a system capable of ensuring the security of electronic land certificates' data is highly imperative to mitigate against hacking or piracy, thus ensuring the efficacy of their implementation.⁴¹

Thus, we believe that the postponement of the implementation of this land electronic certificate would provide an extra period for the government to be able to prepare and to mitigate for the potential issue that would arise with the implementation of this system. The socialization of land digitalization is an urgency for the government to increase the understanding of the Indonesian people thoroughly along with gradual implementation so that all the benefits of digitalization in land management are expected to run effectively when the time comes.

B. A Comprehensive Digital Land Management System

In the near future after successfully executing the electronic land certificate, the government has prepared to comprehensively transform all services regarding land matters towards a total digitalized services, including but not limited to all land rights transfer conducted by Land Deed Official (Land Purchase, Land Exchange, Land Grant, Land Mortgage, Issuance of Right to Build on Right of Ownership, Issuance of Right to Manage on Right of Ownership), Land Data Maintenance (Trough auction, inheritance, court order, change of names, time extension of a land titles, the extinction of land title or right of ownership over stacked units), land title conversion (converting Right to Build to Right of Ownership or Right to Use, or vice versa), and physical land data alteration (splitting one land into two or more, or merging two or more land into one).⁴² These would be the final step in actualizing an effective, transparent, and accurate digitalized

⁴¹ Candya Upavata Kutey Karta Negara, et.al, '*Urgensi Sistem Pengamanan Pada Sertifikat Tanah Digital*' (2021) 838 Jurnal Hukum Lex Generalis.

⁴² Direktorat Jenderal Penetapan Hak dan Pendaftaran Tanah Kementerian ATR/BPN, Sertipikat Elektronik Menuju Pelayanan Pertanahan Modern Berstandar Dunia, (Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional, 2021) <<https://ppid.kamparkab.go.id/public/dokumen/2021/02/6d2a83cfe4f546e402919cd76077e589.pdf>> accessed 23 March 2023.

land management system in Indonesia that hopefully could happen in the near future, soon before long.

Conclusion

The concept of digitalization in the land management system in Indonesia represents a significant step forward in improving the efficiency, transparency, and accessibility of land-related services. With the importance of land ownership in Indonesia's society, a modernized land management system is crucial for ensuring legal certainty and protection for landholders. The Indonesian government plays a vital role in regulating land management through various laws and regulations. Successful implementation of digitalization in the land management system has been evident in Indonesia, particularly in the adoption of electronic signatures, the National Land Information System (SIP), and the Electronically Integrated Mortgage Rights Electronic System (HT-el). These initiatives have improved efficiency and transparency in land data management and transactions.

However, there are obstacles to overcome, such as limitations in human resources, data security concerns, and the need for public awareness and understanding of digital systems. Addressing these challenges is essential for the successful digitalization of the land management system. Looking ahead, the implementation of electronic certificates and the comprehensive digitalization of all land-related services represent the future of land management in Indonesia. These advancements aim to simplify processes, improve data accuracy, and enhance public access to land information. Overall, the digitalization of the land management system in Indonesia holds great potential to transform and modernize the country's land administration and management practices.

Bibliography

Books

Adami Chazawi, & Ardi Ferdian, *Tindak Pidana Informasi & Transaksi Elektronik* (Media Nusa Creative 2019).

Lidya Suryanti Widayati, et.al, *Politik Hukum Perlindungan Data Pribadi* (Yayasan Pustaka

Obor 2020).

Soerjono Soekanto, & Sri Mamudji, *Penelitian Hukum Normatif Suatu Tinjauan Singkat*, (PT. Raja Grafindo Persada 2009).

Journals

Ana Silviana, (2021). Urgensi Sertipikat Tanah Elektronik Dalam Sistem Hukum Pendaftaran Tanah Di Indonesia. *Administrative Law and Governance Journal* 4, no. 1, 51-68.

Assidiqih, G., & Susilowati, I 'Tinjauan Yuridis Sertifikat Tanah Elektronik Sebagai Alat Bukti Kepemilikan Tanah di Indonesia (2021) *Jurnal Hukum Universitas Negeri Surabaya*.

Candya Upavata Kutey Karta Negara, Ni Wayan Widya Pratiwi, & Prisca Dwi Maylinda, 'Urgensi Sistem Pengamanan Pada Sertifikat Tanah Digital' (2021). *Jurnal Hukum Lex Generalis*.

Damar Sagari, & Mujiati, Efektivitas Layanan Hak Tanggungan Terintergrasi secara Elektronik di Kantor Pertanahan Kabupaten Klaten (2022) *Jurnal Tunas Agraria*.

Dini Sukmawati Listyana, Ismi Ambar Wati, Lisnawati, Kekuatan Pembuktian Tanda Tangan Elektronik Sebagai Alat Bukti yang Sah Dalam Perspektif Hukum Acara di Indonesia dan Belanda (2014) *Jurnal Verstek*.

M.N Ardani, 'Penyelenggaraan Tertib Administrasi Bidang Pertanahan Untuk Menunjang Pelaksanaan Kewenangan, Tugas Dan Fungsi Badan Pertanahan Nasional' (2019) *Administrative Law and Governance Journal*.

Nur Azizah, Abdul Halim Barkatullah, & Noor Hafidah, (2021). 'Pendaftaran Hak Tanggungan Secara Elektronik' (2022) *NoLaJ*.

Irfan Baharudin, Sawitri Subiyanto, & Fauzi Janu Amarroh, 'Analisis Hasil Digitalisasi Surat Ukur Pada Sistem Geo Kkp Di Kantor Pertanahan Kota Semarang (Studi Kasus : Kel. Karangroto Dan Kel. Genuksari, Kec. Genuk)' (2017) *Jurnal Geodesi Undip*.

Sri Hariningsih, Sekelumit Mengenai Undang-Undang Nomor 11 Tahun 2008 Tentang Informasi dan Transaksi Elektronik' (2008) *Jurnal Legislasi Indonesia*.

Rahmat Ramadhani, 'Legal Protection for Land Rights Holders Who Are Victims of the Land Mafia' (2021) *IJRS: International Journal Reglement & Society*.

Rosmidah, Elizabeth Siregar, & Dony Yusra Pebrianto (2021).

'Sosialisasi E-Sertifikat Tanah Dalam Rangka Mewujudkan Kepastian' (2021) Jurnal Karya Abdi.

Jerome Bryanto Pasandaran, Cornelius Tangkere, & Devy K.G Sondakh, *Kajian Hukum Terhadap Hak Pengelolaan Dalam Hukum Pertanahan Indonesia* (2021) Lex Administratum.

Rolib Sitorus, & Cathryn Aurora Chiudy, 'The Effectiveness of Use of Electronic Signatures in Managing Banking' (2022) Legal Brief.

Siahaan, A. 'Urgensi Perlindungan Data Pribadi Di Platform Marketplace Terhadap Kemajuan Teknologi (Urgency of Personal Data Protection on Marketplace Platforms Against Technological Advances)' (2022) Majalah Hukum Nasional.

Sumaryanto, Syahyuti, Saptana, & Bambang Irawan, 'Masalah Pertanahan Di Indonesia Dan Implikasinya Terhadap Tindak Lanjut Pembaruan Agraria' (2016) Forum Penelitian Agro Ekonomi.

Suwardi, & Arief Atmoko, 'Pebaharuan Hukum Agraria di Indonesia' (2019) Hukum Bisnis: Universitas Narota Narotama Surabaya.

Y. Afiyanti, 'Penggunaan Literatur Dalam Penelitian Kualitatif' (2014) Jurnal Keperawatan Indonesia'.

Yakin Bakhtiar Siregar, *Digitalisasi Arsip Untuk Efisiensi Penyimpanan dan Aksesibilitas* (2019) Jurnal Administrasi dan Kesekretarian.

Kukuh Tejomurti, Hernawan Hadi, Moch Najib Imanullah, & Rachma Indriyani, 'Legal Protection for Urban Online Transportation User's Personal Data Disclosure in The Age of Digital Technology' (2018) PJIH: Padjadjaran Jurnal Ilmu Hukum.

Others

Direktorat Jenderal Penetapan Hak dan Pendaftaran Tanah Kementerian ATR/BPN. *Sertipikat Elektronik Menuju Pelayanan Pertanahan Modern Berstandar Dunia. Sosialisasi Peraturan Menteri Agraria dan Tata Ruang/Badan Pertanahan Nasional No. 1 Tahun 2021 tentang Sertipikat Elektronik*(2021).

Mufti, R., *A Policy Brief EU General Data Protection Regulation (GDPR). Research Series: Embassy of Republic of Indonesia in Brussels* (2021).

Pusat Penelitian dan Pusat Penelitian dan Pengembangan Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional, *Administrasi Pertanahan dan Tata Ruang*

di Indonesia Menuju Modern, Digital, dan Terpercaya. *Forum Ilmiah "Admistrasi Pertanahan dan Tata Ruang di Indonesia Menuju Modern, Digital, dan Terpercaya"*. (Pusat Peneletian dan Pusat Penelitian dan Pengembangan Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional 2019).

Website

Aji. (2021). *Survei CfDS UGM: Masih Sedikit Masyarakat yang Paham Data Pribadi*. Retrieved from Universitas Gadjah Mada: <https://www.ugm.ac.id/id/berita/22036-survei-cfds-ugm-masih-sedikit-masyarakat-yang-paham-data-pribadi>.

Direktorat Jenderal Aplikasi Informatika. (2021). *List PSrE*. Retrieved from Penyelenggara Srtifikasi Elektronik: <https://tte.kominfo.go.id/listpsrenew>.

Direktorat Jenderal Penetapan Hak dan Pendaftaran Tanah Kementerian ATR/BPN, Sertipikat Elektronik Menuju Pelayanan Pertanahan Modern Berstandar Dunia, (Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional, 2021): <https://ppid.kamparkab.go.id/public/dokumen/2021/02/6d2a83cfe4f546e402919cd76077e589.pdf>.

Union, E. C. *'The general data protection regulation*. Retrieved from European Council: Council of European Union' (2022): <https://www.consilium.europa.eu/en/policies/data-protection/data-protection-regulation/>.

Pratiwi Agustini, UU PDP Akan Permudah Pertukaran Data Dengan Negara Lain, (Kementrian Komunikasi dan Informatika, 2020: <https://aptika.kominfo.go.id/2020/11/uu-pdp-akan-permudah-pertukaran-data-dengan-negara-lain/>.

Union, E. C. (2022, September 1). *The general data protection regulation*. Retrieved from European Council: Council of European Union: <https://www.consilium.europa.eu/en/policies/data-protection/data-protection-regulation/>.

Regulations

Government Regulation Number 18 Year 2021 concerning Right-to-manage, Land Titles, Multistory Housing Units, And Land Registration (The Republic of Indonesia State Gazette Year 2021 Number 329, Annotation 6630).

Law Number 5 of 1960 concerning Basic Agrarian Principles. (Indonesian State Gazette Year 1960 (Number 104, Additional of Indonesian State Gazette Number 2043).

Law Number 19 of 2016 concerning the amendment of Law Number 11 of 2008 on Information and Electronic Transaction (Number 251, Additional of Indonesian State Gazette Number 5952).

Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia Number 5 of 2020 concerning Electronically Integrated Mortgage Rights Services, (The Republic of Indonesia Statute Book Year 2020, Annotation 349).

The Statutes of the Republic of Singapore Electronic Transaction Act 2010, repealed and re-enacted with amendments the Electronic Transactions Act (Chapter 88, 1999 Revised Edition).

How to cite: Andrieta Isabella Edwina Putri and Naurah Dwirengganis Riata Putri, 'Concepts and Challenges in Digitalizing the Land Management System in Indonesia' (2024) 7 Notaire.