



## The relationship between land information systems and land management and land administration in Indonesia

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### Abstract

The law gives the community the right to register their land, not only providing guarantees and legal certainty. Land registration later converted in the form of a certificate as authentic evidence of ownership that has economic value in people's lives. That's because the certificate is part of the securities. The certificate is a form of granting land rights. The granting of land rights is the granting of rights to land that are controlled directly by the state to a person or several people who are together or a legal entity. This study uses a qualitative research method with a literature approach. The results of the study state that the lack of transparency in terms of land tenure and ownership is caused by the limited data and information on land tenure and ownership, as well as the lack of transparency of information available in the community. This is one of the causes of land disputes. Therefore, there is a need for a land information system with land management and land administration to further facilitate public public services and speed up processes and procedures in government institutions, as well as better maintain and guarantee legal certainty of land ownership status. In order to cover the land database as a whole in Indonesia, BPN-RI should have implemented information technology. The information technology must be managed in a national land information system.

**Keywords:** land information system, land management, land administration

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### Introduction

The concept of good governance is a major issue today in the management of public administration to provide better services to the community, so there is a need for a new paradigm in determining the values of public services oriented to service satisfaction. Changes were made to encourage increased government performance. This situation requires the government to create an organization that focuses on excellent service, service standards, and measurement of management performance. In order to meet the needs of the community related to services, the government must carry out a transformation process towards e-government.

The development of agrarian law today, especially regarding the issue of certainty of rights and the subject of land rights, has received serious attention. This can be seen, among other things, in Article 19 of the LoGA which states that to ensure certainty of rights and legal certainty regarding land, the government holds land registration. The land registration includes measurement, mapping, registration of land rights, the transfer of these rights to other parties, as well as the issuance of certificates of proof of rights which are strong evidence. Law Number 5 of 1960 concerning Basic Agrarian Regulations which became known as UUPA in article 19 paragraph (1) stated that to ensure legal certainty by the government, land registration was held throughout the territory of the Republic of Indonesia according to the provisions regulated by government regulations. Land registration is an obligation for the government and land rights holders.

The implementation of the agrarian sector can be seen as the administration of government related to public organizations that require good governance. The concept of good governance is a major issue today in the management of public administration to provide better services to the community. The amount of costs incurred by the government to finance employees, service operations and the lack of law enforcement against violations of established rules encourage the need for a new paradigm in determining the values of public services that are oriented to service satisfaction.

Management information system is a collection of human and capital resources within an organization that is responsible for collecting and managing data to produce useful information for all levels of management in planning control activities (Jogiyanto, 2005) <sup>[5]</sup>.

Before the National Land Information and Management System (SIMTANAS) at the Land Office was developed, every Regency or City Land Office tried to improve the quality of its services to the community by using the information technology they had. Land services have been carried out through various activities using computers, ranging from data processing to the final product in the form of land certificates, but the implementation is still local in each office. With the implementation of the National Land Information and Management System (SIMTANAS), the implementation of land services at the Land Office has been carried out based on national standards.

From the current manual service, the government utilizes the Information and Management System to manage land resources as a whole through the National Land Management Information System. In Article 1 letter b of Presidential Decree Number 34 of 2003 concerning National Land Policy, the National Land Agency (BPN) has the task of implementing and developing SIMTANAS. One of them includes preparing the application of textual and spatial data in land registration services and compiling a database of land tenure and ownership linked to e-government, e-commerce, and e-payment. Utilization of information technology in an electronic system is the widespread use of computer systems that include hardware, software, communication networks, and electronic data. This system is an integrated system between humans and machines which includes hardware, software, standard procedures, human resources, and information substance which includes input, process, output, storage and communication functions (Keppres No.34/2003).

The aspect of land administration in regulating land rights is about land registration. According to the provisions of Government Regulation Number 24 of 1997, it is stated that those related to the administrative aspect are juridical data, while the technical aspects are physical data. Juridical data means information regarding the legal status of the registered land parcels and flats, the holders of their rights and the rights of other parties as well as other burdens that burden them.

The unaccountability of land administration results in the emergence of various problems regarding proof of ownership of land rights, such as the issue of multiple certificates. The unaccountability of land administration has an impact on the lack of transparency of land administration, so that people who need information about a plot of land cannot get it. The absence of accountability and transparency in land administration also has an impact on the problem of proof of ownership of land rights, including land rights, which in turn leads to the emergence of land disputes in the community (Arisaputra; Abdullah; Bakar, 2017) <sup>[3]</sup>.

Law Number 14 of 2008 concerning Openness of Public Information states that information is a basic need for everyone for personal development and social environment and is an important part of national security. The government must not be passive but must be responsive to the community in all aspects, including services in the land sector. The principle of responsiveness emphasizes that every institution and its processes must be directed at efforts to serve various interested parties. It is feared that the government's passive attitude or the government's lack of responsiveness in services including in government administration will lead to land services that are unable to meet the needs of the community.

## Methods

This study uses a normative juridical approach. In normative juridical research, library materials are used as the main material, namely primary legal materials consisting of basic norms or rules, basic provisions or regulations, and statutory regulations (Soekanto; Mamudji, 1994) [13]. To understand the problems in research, qualitative data processing methods are used (Soekanto, 1986) [14]. This study aims to provide an overview of the conditions in practice related to information systems and land administration and analyze existing problems, in addition to linking it with legal theory and applicable laws and regulations.

## Results and Discussion

### 1. Land Information and Management System (SIMTANAS) in Indonesia

An information system is a combination of a set of elements brought together with a view to identifying the information needed and ensuring that the information systems strategy is aligned with the business strategy. Information systems have a very important role in organizations, namely to support the organization's business strategy to gain competitive advantage. All aspects of life such as education, banking, transportation, taxation, energy management, disaster mitigation, regional management and development, and others really need the availability of precise and accurate data and information as the basis for making decisions. Likewise, in terms of managing agrarian resources, of course, decision making must always be based on the right data and information (Wahyuni, 2017) <sup>[18]</sup>. The land information system of a country is influenced by the prevailing cadastral system. In 1995 the FIG issued a statement regarding the relationship between the cadastral system, the land administration system, and the land information system (Tuladhar, 2002) <sup>[15]</sup>.

Institutional changes to prepare for a paradigm shift in national land management began with a series of researches on the existing condition of land administration in 1997. One of the recommendations of these researches states that the state should also link land use regulations in the management of land administration so that the land database is not only dominated by data on land tenure and ownership, but is also capable of recording use and utilization data, including its regulation.

The legal basis for the National Land Information and Management System (SIMTANAS) is based on the following laws and regulations:

- a. Law Number 11 of 2008 concerning Information and Electronic Transactions. This law provides many legal breakthroughs related to the use of electronic data, electronic transaction procedures and data security and legality through electronic signatures (digital signatures).
- b. Government Regulation Number 24 of 1997 concerning Land Registration. This regulation contains several articles relating to digital data management, namely Article 35 paragraph (5) of Government Regulation Number 24 of 1997 which states that gradually land registration data is stored and presented using electronic equipment and microfilm and paragraph (6) which states that The recorded document produced by

- electronic means or microfilm as referred to in paragraph (5) has the power of proof after being signed and affixed with an official seal by the Head of the Land Office concerned.
- c. Presidential Regulation 10 of 2006 concerning the National Land Agency Article 3 Letter r data and information management in the land sector which was followed up with the establishment of the Land Data and Information Center (PUSDATIN). According to article 411, PUSDATIN has the task of carrying out the collection, processing, presentation of land data and information as well as building and developing a national land information system (SIMTANAS) based on policies determined by the Head. With this function, PUSDATIN carries out the task of building a BPN information 'storefront', preparing and developing integrated information technology for all activity units in the National Land Agency and providing data and information services for internal and external purposes.
  - d. Presidential Decree Number 34 of 2003 concerning National Policy in the Land Sector in Paragraph 1 letter b, assigns the National Land Agency to build and develop a National Land Information and Management System (SIMTANAS) number 2 regarding the preparation of textual and spatial data applications in land registration services and preparation of a database of land tenure and ownership, which is linked to e-government, e-commerce and e-payment. This provision is used as the basis for the National Land Agency in preparing electronic systems for the widespread use of computer systems which include hardware, software, and communication networks.
  - e. Regulation of the Minister of State for Agrarian Affairs/Head of the National Land Agency number 3 of 1997 concerning Provisions for Implementation of Government Regulation number 24 of 1997 concerning Land Registration explains the storage media and procedures for storing land data and documents. Information regarding media and methods for storing data and documents electronically is explained in Article 184 paragraph (1) that documents and land registration data can be stored in digital form, imaging system or micro film, paragraph (2) that data can be stored in digital graphic form namely measuring drawings, measuring letters and registration maps. While the checklists can be stored as textual digital data, paragraph (3) that documents used as evidence of land registration can be stored in the form of micro-film or imaging systems, for example girik, kikitir and others. Information regarding the procedures for storing land data and documents is explained in article 186 paragraph (1) that data and document storage media in the form of digital, imaging systems or micro films must be stored at the land office in a special place in accordance with standard procedures for storing the relevant media. Paragraph (2) that in the event that data and documents have been made with microfilm or imaging system, the original data can be stored in another place.
  - f. Decree of the Head of the National Land Agency number 1 of 2005 concerning Standard Operational Procedures for Regulation and Services which was then supplemented by Regulation of the Head of BPN number 1 of 2010 concerning Standards of Land Services and Regulations. This decision is the operational basis and services of the National Land Agency to the public in the use of Information and Communication Technology. This decision is one of the operational foundations in order to operate the Electronic System reliably and safely and responsibly. In the future, consideration should be given to land service standards with ISO standards in all land offices in stages, both in terms of the number and types of land services and in terms of the number of offices. The ISO referred to is ISO 9001:2008, which is a recognized international standard for quality management system certification/quality which establishes requirements and recommendations for the design and assessment of a quality management system.

## 2. Land Administration In Indonesia

The importance of land for life must be used in accordance with the functions and benefits of the land in question. There is an obligation for holders of land rights, whether individuals, legal entities, or groups of people together to always protect and maintain the land they own. This obligation is also included in the provisions contained in Law Number 5 of 1960 concerning the Basic Agrarian Law (Ardani, 2019) <sup>[2]</sup>.

Agrarian Reform is intended to reorganize the structure of control, ownership, use, and utilization of land in a more equitable manner through Asset Management and accompanied by Access Management for the prosperity of the Indonesian people. One of the goals of Agrarian Reform is the handling of agrarian disputes and conflicts. One source of agrarian conflicts is the land administration system at the kelurahan/village level (Amanita; Septiansyah, 2020) <sup>[1]</sup>.

According to Oppen Heimer, administrative law is a composite provisions that bind high and low agencies if the agency uses the authority that has been given by constitutional law. Meanwhile, according to Logemann, administrative law is a set of norms that examine special legal relationships that are held to enable administrative officials to carry out their special duties. The field of government administration law is very broad, has many aspects and variations. It can be concluded, government administrative law is the law that regulates the power of the government (executive) in exercising authority in its position, duties, and functions as state administrators including decision-making and/or actions (Setiawan; Hadiatmodjo; Ropii, 2017) <sup>[12]</sup>.

The existence of an integrated land information system is expected to facilitate decision makers, policy makers, business actors, communities, and other stakeholders in optimal utilization and use of land. Land registration as quoted from Boedi Harsono is a series of activities carried out by the state or government which are continuously and regularly in the form of collecting certain information or data regarding certain lands in a certain area,

managing, storing and presenting them for the benefit of the people, in the context of provide guarantees of legal certainty in the land sector, including evidence and maintenance (Harsono, 2005) <sup>[4]</sup>.

In relation to land administration in land registration, the principle of publicity is known (Santoso, 2010) [11]. This principle states that everyone may obtain information about the registered land. This information concerns the principles, namely: (Morico, 2007) <sup>[8]</sup>

1. Transparency. This is a situation where everyone has the right to know every process of making and making decisions within the government that has a direct or indirect impact on the community, must include and involve or provide opportunities for the community to openly express their aspirations.
2. Openness. It is a mental attitude to open oneself to the public's right to obtain correct, honest and non-discriminatory information about the administration of government while still paying attention to the protection of personal rights, groups and state secrets and this openness supports the implementation of a transparent government, which is willing to provide correct information, and open to input or requests from others.

The UUPA regulates land registration which aims to provide legal certainty guarantees. Land registration is an obligation for the government and land rights holders. In Article 19 of the LoGA it is stated that:

- a. In order to guarantee legal certainty by the Government, land registration is held throughout the territory of the Republic of Indonesia according to the provisions stipulated in a Government Regulation.
- b. The registration in paragraph 1 of this article includes: 1). Measurement, mapping and bookkeeping of land; 2). Registration of land rights and the transfer of these rights; and 3). Provision of letters of proof of rights, which serve as a strong means of proof.
- c. Land registration is carried out keeping in mind the state and community conditions, the need for socio-economic traffic and the possibility of its implementation, according to the consideration of the Minister of Agrarian Affairs.
- d. The Government Regulation regulates the costs associated with the registration as referred to in paragraph 1 above, provided that people who cannot afford are exempted from paying these fees.

In Article 2 of Government Regulation Number 24 of 1997 it is stated that land registration is carried out based on the following principles:

1. Simple principle. This principle is intended so that the basic provisions and procedures can be easily understood by interested parties, especially land rights holders.
2. Safe principle. This principle is intended to show that land registration needs to be carried out carefully and carefully so that the results can provide legal certainty in accordance with the purpose of the land registration itself.
3. Affordable principle. This principle is intended to be affordable for those in need, especially by taking into account the needs and abilities of the weak economic group. The services provided in the context of carrying out land registration must be affordable by those who need it.
4. Cutting-edge principles. This principle means adequate completeness in its implementation and continuity in data maintenance. Available data must show the current state. For this reason, the obligation to register and record changes that occur in the future is followed. This principle requires the maintenance of land registration data continuously and continuously, so that the data stored in the Land Office is always in accordance with the real conditions in the field.
5. Open principle. This principle is intended so that the public can know or obtain information regarding correct physical data and juridical data at any time at the Regency/City Land Office.

The UUPA stipulates that the registered land rights are only property rights regulated in Article 23, Cultivation Rights are regulated in Article 32, and Building Use Rights are regulated in Article 38, and use rights are regulated in Article 41. While Building Lease Rights are not required to be registered. The object of land registration according to Article 9 paragraph (1) of Government Regulation Number 24 of 1997 is as follows: (Salle, 2011) <sup>[10]</sup>

- a. Plots of land owned with property rights, business use rights, building use rights, and use rights (UUPA and PP No. 40 of 1996);
- b. Land with Management Rights (Regulation of the State Minister of Agrarian Affairs Number 9 of 1999);
- c. Waqf Land (PP No. 28 of 1977);
- d. Ownership of Flat Units (Law Number 16 of 1985 and Government Regulation Number 4 of 1988);
- e. Mortgage Rights (Law No. 4 of 1996);
- f. State land (PP Number 8 of 1953), specifically for state land, registration is carried out by keeping it in the land register without issuing a certificate.

The implementation of land registration for the first time can be carried out in 2 (two) ways, namely systematic land registration and sporadic land registration. Systematic land registration is intended to be a land registration activity for the first time on the initiative of the government, which is carried out simultaneously and includes all land registration objects that have not been registered in the territory or part of the territory of a village/kelurahan (Salle, 2011) <sup>[10]</sup>. Meanwhile, sporadic land registration is a land registration activity for the first time which is carried out at the request of interested parties regarding one or several objects of land registration in the territory or part of the territory of a village/kelurahan individually or in bulk (Salle, 2011) <sup>[10]</sup>.

### Conclusion

From the discussion above, several conclusions can be drawn, including: The land information system of a country is influenced by the prevailing cadastral system. Therefore, in several studies it is recommended that the state also link land use regulations in the management of land administration, so that the land database is not only dominated by land tenure and ownership data, but is also capable of recording use and utilization data, including its regulation. Land registration in the land administration is known as the Publicity Principle which states that everyone may obtain information about the registered land. This information concerns the principles of transparency and openness.

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