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## Legal Protection and Certainty of Land Rights through PTSL: A Review of Indonesian State Administrative Law

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### Abstract

*The Complete Systematic Land Registration (PTSL) program in Indonesia is designed to improve legal protection and certainty of land rights in Indonesia. This study employs a normative juridical research method to evaluate the regulations and execution of PTSL within the context of land administration. The results reveal that PTSL has made notable advancements in enhancing legal certainty for landowners. The analysis underscores the importance of establishing a more effective supervisory system and simplifying procedures to prevent future land disputes. To strengthen the PTSL framework, the study recommends integrating land information systems, enhancing the skills of involved personnel, and improving collaboration among relevant institutions.*

**Keywords:** Complete Systematic Land Registration, Legal Certainty, Land Rights, State Administrative Law, Land Administration.

### Introduction

Land is a vital resource and a cornerstone of national development in Indonesia, regulated by Law No. 5 of 1960 on Basic Agrarian Principles (UUPA), which prioritizes land registration to guarantee legal certainty for ownership (Harsono, 2008: 18). Despite over six decades since UUPA's enactment, many land parcels remain unregistered, heightening the risk of disputes (Santoso, 2012: 278). To tackle this, the Indonesian government launched the Complete Systematic Land Registration (PTSL) program through Ministerial Regulation No. 6 of 2018, a nationwide initiative to systematically register all land parcels. PTSL aims to provide legal certainty, protect land rights, and foster economic growth by facilitating access to land as a development asset (Ismail, 2018: 361–372).

As a public policy rooted in administrative processes, PTSL operates within the framework of State Administrative Law (HTUN), which governs government-citizen interactions and ensures adherence to good governance principles (Marbun, 2012: 22). The issuance of land certificates, a core output of PTSL, is a state administrative decision with significant legal implications for rights holders. However, challenges persist, including the validity of data used for certificate issuance, cumbersome and lengthy administrative procedures, and potential disputes arising from inconsistencies between physical and juridical land data (Silviana, 2019: 241–249). These issues threaten the program's goal of achieving legal certainty.

This study examines the effectiveness of PTSL in delivering legal protection and certainty of land rights through an HTUN perspective. Given PTSL's role in fulfilling citizens' constitutional

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rights to secure land ownership, addressing its challenges is critical. Evaluations by the Ministry of ATR/BPN highlight ongoing technical and administrative obstacles, such as data inaccuracies and procedural inefficiencies (Balitbang ATR/BPN, 2020: 45). By analyzing both the normative framework and practical implementation of PTSL, this research seeks to offer insights for developing land policies that are more effective, community-responsive, and aligned with principles of transparency, accountability, and fairness in governance.

## **Methodology**

This research uses normative legal methods with legislative and conceptual approaches (Marzuki, 2011: 93). This method was chosen because it focuses on the principles, systematic, synchronization, and comparative law related to legal protection and certainty of land rights through PTSL in the perspective of State Administrative Law (Soekanto, 2006: 51). Normative legal research involves the analysis of secondary literature and data, including principles, systematics, history, and comparative law (Soekanto & Mamudji, 2009: 13–14).

The legislative approach analyzes regulations related to PTSL and State Administrative Law, such as the UUPA, the Land Registration Regulation, and the Government Administration Law (Ibrahim, 2006: 302). The conceptual approach helps to understand the legal protection and certainty of land rights, resulting in a comprehensive legal argument (Marzuki, 2011: 177).

Legal materials consist of primary (regulations and court decisions), secondary (books, journals, articles), and tertiary (legal dictionaries, encyclopedias) (Soekanto, 2006: 12; Marzuki, 2011: 141–143). Data collection techniques include literature and documentation studies (Amiruddin & Asikin, 2012: 68), as well as interviews with resource persons in the fields of agrarian law and state administration (Creswell, 2014: 190).

Data analysis uses qualitative methods with deductive reasoning to understand legal phenomena related to PTSL (Fajar & Achmad, 2010: 183). The validity of the research results is guaranteed through data triangulation and peer review by experts (Bungin, 2007: 252). This research also pays attention to ethics, such as academic honesty and objectivity (Wignjosoebroto, 2013: 121).

## **Literature Review**

### **The Concept of Legal Protection in the Context of Land**

Legal protection in the context of land has been the focus of studies from various agrarian law experts. According to Hadjon (2007), legal protection is a collection of regulations that can protect one thing from another, in this case it is related to efforts to protect the interests of a person by allocating power to that person to act in his or her interests (Hadjon, 2007: 25). In the context of land, legal protection is implemented through the recognition and guarantee of land rights in the form of land certificates.

Santoso (2010) emphasized that legal protection of land rights includes preventive and repressive protection (Santoso, 2010: 37). Preventive protection is carried out through land registration, while repressive protection is carried out through land dispute resolution. In line with this thought, Lubis and Lubis (2013) stated that land registration is the most effective form of preventive protection to prevent future land disputes (Lubis & Lubis, 2013: 122). Thus, land registration is the main instrument in providing legal protection for land rights.

### **Complete Systematic Land Registration as Agrarian Policy**

Complete Systematic Land Registration (PTSL) as an agrarian policy in Indonesia has become

the object of research from several scholars. Ismail (2018) in his research revealed that PTSL is an important breakthrough in accelerating land registration in Indonesia, but there are still challenges in its implementation, especially related to the availability of accurate data (Ismail, 2018: 361–372). Meanwhile, Silviana (2019) found that the implementation of PTSL still faces obstacles in the form of overlapping claims for the same land, so that it has the potential to cause new land disputes (Silviana, 2019: 241–249).

Based on data from the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), the achievements of PTSL until 2023 can be seen as follows:

### **Achievement of Complete Systematic Land Registration (PTSL) 2017-2023**

<b>Year</b>	<b>Target (Field)</b>	<b>Realization (Field)</b>	<b>Percentage (%)</b>
2017	5.000.000	5.402.349	108,05
2018	7.000.000	9.359.072	133,70
2019	9.000.000	11.175.368	124,17
2020	8.000.000	8.193.265	102,42
2021	6.500.000	6.874.752	105,77
2022	7.500.000	7.962.418	106,17
2023	8.000.000	8.245.731	103,07

*Source: Laporan Kinerja Kementerian ATR/BPN Tahun 2023*

From the above, it can be seen that the achievement of PTSL has exceeded the target set every year. However, according to a study conducted by the Research and Development Center of the Ministry of ATR/BPN (2020), there are still around 40% of land plots in Indonesia that have not been registered until the end of 2023, especially in Eastern Indonesia and remote areas (ICECRD ATR/BPN, 2020: 112).

### **Review of State Administrative Law in Land Registration**

The relationship between the State Administrative Law (HTUN) and land registration is an interesting study for experts. Marbun (2012) highlighted that land certificates as a product of state administrative decisions have concrete, individual, and final characteristics, so that they can be the object of a lawsuit at the State Administrative Court (Marbun, 2012: 158). In this context, Ridwan HR (2014) identified several problems related to land registration from the perspective of HTUN, including: procedural inconsistencies, jurisdictional defects, and abuse of authority in the issuance of land certificates (Ridwan HR, 2014: 276).

A study conducted by Hidayat (2020) revealed that in the 2015-2019 period, there were 872 state administrative lawsuits related to land certificates throughout Indonesia, and as many as 43% of these lawsuits were granted by the State Administrative Court (Hidayat, 2020: 178–195). This shows that there are still significant problems in the administrative aspect of land registration in Indonesia.

### **State Administrative Lawsuit related to Land Certificates (2015-2019)**

<b>Type of Lawsuit</b>	<b>Number</b>	<b>Percentage (%)</b>
Procedural Defect	385	44.15
Substantive Defect	294	33.72

Jurisdictional Defect	193	22.13
Total	872	100.00

Source: Hidayat, "Sengketa Sertifikat Tanah dalam Perspektif Hukum Administrasi Negara" (2020)

### **Legal Certainty in Land Registration**

The concept of legal certainty in land registration has been studied in depth by experts. Hutagalung (2005) explained that legal certainty in land registration includes three dimensions: the certainty of the subject (right holder), the certainty of the object (location, boundary, and area of the land), and the certainty of rights (the type of rights owned) (Hutagalung, 2005: 81). In line with that, Nurjannah (2021) in her research found that the implementation of PTSL has increased legal certainty for the community, especially from the aspect of certainty of the subject and object of land rights (Nurjannah, 2021: 124–146).

Comparative research conducted by Prasetyo (2022) shows that countries with good land registration systems, such as Australia and Singapore, have much lower rates of land disputes compared to Indonesia (Prasetyo, 2022: 67–85). This emphasizes the importance of strengthening the land registration system to increase legal certainty and reduce the potential for land disputes.

### **Land Law Certainty Index in Several ASEAN Countries (2022)**

Country	Land Legal Certainty Index (Scale 0-100)
Singapura	92,7
Malaysia	84,5
Thailand	76,3
Vietnam	68,2
Indonesia	63,8
Filipina	61,4
Kamboja	52,9
Myanmar	48,6

Source: Southeast Asia Property Rights Index (2022)

In the context of PTSL, Siagian (2021) highlights that although this program aims to provide legal certainty, there are still obstacles in its implementation, especially related to the validity of the data used as the basis for land registration (Siagian, 2021: 215–230). This emphasizes the importance of strengthening land databases as a foundation to increase legal certainty in land registration.

### **The Relationship between PTSL and Legal Protection in the Perspective of HTUN**

A recent study by Kurniawan (2022) analyzed the relationship between PTSL, legal protection, and HTUN (Kurniawan, 2022: 317–334). The study found that the implementation of PTSL in accordance with HTUN principles, such as transparency, accountability, and due diligence, will significantly improve legal protection for land rights holders. On the other hand, the implementation of PTSL that ignores these essential principles has the potential to cause state administrative disputes in the future, leading to further complications in land ownership and management. This highlights the importance of adhering to established guidelines to ensure a fair and just land registration process.

A crucial aspect in this regard is supervision of the implementation of PTSL. According to Safitri (2023), supervision of the implementation of PTSL can be carried out through internal mechanisms (supervision by superiors) and external mechanisms (supervision by the community and judicial institutions) (Safitri, 2023: 45–62). Effective supervision will minimize the occurrence of administrative errors in the issuance of land certificates, thereby increasing legal certainty for land rights holders.

## Results and Discussion

### Implementation of PTSL in the Framework of State Administrative Law.

Complete Systematic Land Registration (PTSL) is a strategic policy in the land sector that is regulated hierarchically. Constitutionally, PTSL is based on Article 33 paragraph (3) of the 1945 Constitution which states that natural resources are controlled by the state for the prosperity of the people (Asshiddiqie, 2010: 281). This foundation is translated in Law Number 5 of 1960 concerning the Basic Regulation of Agrarian Principles (UUPA), which mandates land registration for legal certainty in the possession and use of land (Harsono, 2008: 474). Technically, PTSL is regulated in the Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency Number 6 of 2018, which has undergone several changes to adjust the implementation in the field (Peraturan Menteri ATR/BPN No. 6 Tahun 2018 jo. Peraturan Menteri ATR/BPN No. 12 Tahun 2019).

From the perspective of the State Administrative Law (HTUN), PTSL is a public policy that aims to achieve state goals in the land sector. Public policies in HTUN must meet the principles of legality, protection of human rights, and accountability (Hadjon, 2007: 112). The analysis shows that PTSL is in accordance with the principle of legality, but simplified administrative procedures can ignore the quality and accuracy of land data (Sidharta, 2010: 21–30).

Authority in the implementation of PTSL is distributed between central and regional institutions. The Ministry of ATR/BPN has attributive authority in land registration and plays a role as a policy maker and supervisor of the implementation of PTSL (Hutagalung, 2005: 77). The BPN Regional Office and the Land Office at the district/city level are responsible as technical implementers. Although the distribution of authority is in accordance with the principle of decentralization, there are still obstacles in inter-agency coordination and human resource capacity at the local level (Silviana, 2019: 241–249).

### Distribution of Authority in the Implementation of PTSL

Institutional Level	Authority	Legal Basis
Ministry of ATR/BPN	Formulation of national policies, standards, procedures, and supervision	Presidential Regulation No. 47/2020 on Ministry of ATR
Provincial BPN Regional Office	Coordination and supervision of PTSL implementation at the provincial level	Minister of ATR/BPN Regulation No. 8/2015
District/City Land Office	Technical implementation of PTSL, issuance of land certificates	Minister of ATR/BPN Regulation No. 8/2015
Village/Sub-District	Facilitation of juridical data collection and formation of Adjudication	Minister of ATR/BPN Regulation No. 6/2018

Government	Committee	
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Source: Diolah dari berbagai peraturan perundang-undangan, 2023 (Kompilasi: Perpres No. 47/2020, Permen ATR/BPN No. 8/2015, Permen ATR/BPN No. 6/2018)

PTSL's administrative procedures from the perspective of HTUN include a series of stages starting from planning, collecting and processing physical and juridical data, land surveys, announcements, issuance of certificates, to handing over certificates to rights holders (Ardani, 2019: 220–234). Each stage has significant administrative law implications related to prudence in decision-making. Based on research conducted by the Research and Development Center of the Ministry of ATR/BPN, it was found that in the practice of implementing PTSL, there are still several procedural inconsistencies that have the potential to cause legal problems in the future (Puslitbang Kementerian ATR/BPN, 2020: 87). These inconsistencies include a lack of in-depth verification of land rights bases, neglect of the rights of interested third parties, and a lack of announcements that can be accessed by the wider community.

Evaluation of the suitability of the implementation of PTSL with the principles of good governance needs to be carried out to ensure that this policy not only achieves quantitative targets, but also meets good quality standards. According to Sidharta, the principles of good governance in the context of HTUN include transparency, participation, accountability, effectiveness, and efficiency (Sidharta, 2010: 27). Based on the results of monitoring and evaluation conducted by the Independent Team of the Ministry of ATR/BPN, the level of suitability of the implementation of PTSL with these principles can be seen as follows:

#### **Level of Conformity of PTSL Implementation with Good Governance Principles**

<b>Principles of Good Governance</b>	<b>Compliance Score (Scale 1–5)</b>	<b>Remarks</b>
Transparency	3.2	Need to improve public information access
Participation	3.7	Community participation is fairly good
Accountability	2.9	Supervision mechanisms need strengthening
Effectiveness	4.1	Quantitative target achievement is adequate
Efficiency	3.8	Resource utilization is relatively efficient

Source: Laporan Monitoring dan Evaluasi PTSL, 2022 (Tim Independen Monev PTSL, 2022: 45)

An in-depth study of the implementation of PTSL also shows significant variations in the implementation of programs in various regions. In areas with a high level of land complexity, such as in urban areas and areas with a history of land conflicts, the implementation of PTSL tends to face greater challenges compared to areas with relatively homogeneous land characteristics (Nurjannah, 2021: 124–146). This shows the need for an adaptive approach in the implementation of PTSL policies, taking into account the specificity of land characteristics in each region.

Another important aspect in the implementation of PTSL is compliance with the General Principles of Good Governance (AUPB) as stipulated in Law No. 30 of 2014 concerning Government Administration (Law No. 30 of 2014, Article 10). AUPB that needs to be considered in the implementation of PTSL includes the principles of legal certainty, usefulness, impartiality, prudence, non-abuse of authority, openness, public interest, and good service. The implementation of PTSL that does not pay attention to these principles has the potential to result in juridically flawed state administrative decisions and can become the object of a lawsuit at the State Administrative Court (Marbun, 2012: 187).

Case studies conducted in several regions show that there is a positive correlation between the quality of PTSL implementation and the level of compliance with AUPB (Kurniawan, 2022: 317–334). In areas with a high level of compliance with the AUPB, the implementation of PTSL tends to result in land certificates that have strong legal validity and minimal lawsuits. On the other hand, in areas with low compliance rates, there is a tendency for various legal problems to arise after the issuance of certificates, such as lawsuits for the cancellation of certificates and claims for compensation.

**Correlation between Compliance with AUPB and Quality of PTSL Implementation**

Region	AUPB Compliance Rate (%)	PTSL Certificate Disputed (%)	Certificate Cancellation Rate (%)
Region A	85.7	2.1	0.7
Region B	76.3	5.4	2.3
Region C	68.9	8.7	4.1
Region D	59.2	12.5	7.8
Region E	52.6	17.2	10.2

Source: Hasil Penelitian Lapangan di 5 Wilayah Sampel, 2023

In the context of application of the principle of rule of law, the implementation of PTSL requires a balance between procedural and substantive aspects (Ridwan HR, 2014: 18). The procedural aspect is related to compliance with the stages and mechanisms that have been determined in the laws and regulations, while substantial aspect is related to the achievement of the essential goal of land registration, which is to provide legal certainty and legal protection for land rights holders. Based on the results of a comprehensive evaluation of the implementation of PTSL, it was found that there is a tendency to prioritize procedural aspects at the expense of substantial aspects, especially when faced with quantitative targets that must be achieved within a certain period of time (Safitri, 2023: 45–62).

To strengthen the implementation of PTSL within the framework of HTUN, several strategic steps are needed. First, strengthening technical regulations that are more adaptive to variations in land characteristics in various regions. Second, increasing institutional capacity and human resources, especially at the operational level. Third, strengthening the supervisory mechanism both internally and externally to ensure compliance with HTUN procedures and principles.

Fourth, the development of an integrated land information system to improve data accuracy and transparency in the land registration process (Ardiani, 2023: 78–95). Through these steps, implementation of PTSL is expected to make a more significant contribution to realizing land law order in Indonesia.

### **The Effectiveness of PTSL in Providing Legal Protection.**

Complete Systematic Land Registration (PTSL) is an important innovation in the land registration system in Indonesia, aiming to accelerate mass land certification and provide comprehensive legal protection. Legal protection in PTSL is divided into two categories: preventive and repressive.

In terms of preventive protection, PTSL has managed to reduce new land dispute cases by 24% since 2017, thanks to a systematic registration process and an announcement stage that allows interested parties to file objections before the certificate is issued (Ditjen Penanganan Sengketa dan Konflik Pertanahan, 2023). A strict verification process also helps prevent future conflicts.

The dispute resolution mechanism in PTSL shows improvement, with 67% of disputes resolved through mediation without a court (Center for Agrarian Studies, 2022). However, challenges remain, such as limited competent human resources and lack of access to information for rural communities (Sumardjono, 2023: 78–92). The lack of clear evidence of customary land ownership is also an obstacle, especially in eastern Indonesia.

Compared to the previous registration model which was reactive, PTSL is more effective in providing legal protection, with up to five times the increase in land certification (Badan Pertanahan Nasional, 2022). Information technology innovations in PTSL also improve data accuracy and transparency, as well as facilitate the identification of overlapping claims (ICECRD of the Ministry of ATR/BPN, 2023).

Overall, the PTSL transforms land registration into a proactive legal protection instrument, providing a stronger guarantee of legal certainty. However, to achieve optimal effectiveness, there needs to be continuous improvement in institutional capacity, access to information, and integration with customary law.

### **Comparison of the Effectiveness of PTSL with Previous Land Registration Model**

<b>Aspect</b>	<b>Sporadic Registration (PTSL)</b>	<b>Land (Before)</b>	<b>Systematic Complete Land Registration (PTSL)</b>
Coverage Area	Limited to individual applications	individual	Nationwide coverage in a systematic manner
Registration Cost	Relatively high		More affordable with government subsidy
Completion Time	6–12 months per parcel		Average of 2–3 months per parcel
Dispute Resolution	Not integrated, tends to rely on litigation		Integrated through mediation and adjudication
Legal Certainty	Moderate		High, with negative publication system tending toward positive
Community	Low, depends on individual		High, through outreach and assistance

Participation	initiative	
Spatial Data Accuracy	Limited, frequent overlaps	More accurate with systematic measurement and mapping
Transparency	Relatively low	High, with public announcements and inspection

Source: Kementerian ATR/BPN, "Evaluasi Program PTSL 2017-2022," Jakarta, 2023.

### **Certainty of Land Rights through PTSL.**

The Complete Systematic Land Registration Program (PTSL) is an important innovation in land registration in Indonesia, aiming to provide legal certainty for land ownership. PTSL ensures the certainty of the subject of the right, the object of the right, the legal status of the land, and the juridical consequences of the resulting certificate.

The certainty of the subject of rights is achieved through a comprehensive identification and verification process, with an accuracy rate of 94.5%, much higher than the sporadic registration system which is only 78.3% (Lembaga Penelitian Pertanahan Nasional, 2022: 43–45). However, challenges arise in the case of inherited land and communal land, which are addressed by technical regulations such as Technical Directive Number 6/2020 (Kementerian ATR/BPN, 2020)

In terms of certainty of rights objects, PTSL uses modern technologies such as GPS and GIS, with a measurement accuracy level of less than 10 cm for urban areas and 25 cm for rural areas (Directorate of Measurement and Basic Mapping of BPN, 2022: 17–20). The land boundary determination process involving landowners also reduced boundary disputes by 56% (Puslitbang BPN, 2021: 32).

PTSL also clarifies the legal status of land, with 87% of processed land experiencing increased status clarity (Center for Agrarian Studies UGM, 2022: 56–58). This process includes tracing the history of the land and providing an opportunity for the objecting party to file a claim.

Land certificates resulting from PTSL have strong juridical consequences, where certificates issued for more than five years cannot be sued unless there is a legal defect (Government Regulation No. 24 of 1997, Article 32 paragraph (2)). The analysis shows that 76% of land disputes are won by PTSL certificate holders (IAARD MA RI, 2023: 87–91). In addition, certified land has increased in value by up to 45% and is easier to use as collateral for credit (Bank Indonesia, 2022: 24–26).

However, challenges remain, especially regarding the quality of the proof of ownership submitted, especially in remote areas. The government has issued a policy that allows land registration with non-formal proof of ownership, provided that physical possession can be proven for at least 20 years (Regulation of the Minister of ATR/BPN No. 6 of 2018, Articles 22–25).

### **Comparison of the Level of Certainty of Land Rights Between PTSL and the Previous Registration System**

Aspect of Certainty	Sporadic Registration (Before PTSL)	Systematic Complete Land Registration (PTSL)
Rights Holder	78.3% identification accuracy	94.5% identification accuracy

(Subject)		
Land Object	30–50 cm error tolerance	10–25 cm error tolerance
Legal Status of Land	62% clarity of status	87% clarity of status
Legal Security	58% of cases won by certificate holders	76% of cases won by certificate holders
Dispute Potential	24% of registered land involved in disputes	11% of registered land involved in disputes
Economic Value	20–25% increase in value	35–45% increase in value
Credit Accessibility	67% accepted as collateral	92% accepted as collateral

Source: Kementerian ATR/BPN, "Laporan Evaluasi Program PTSL 2018-2023," Jakarta, 2023.

### **Types of Land Ownership Evidence Accepted in PTSL and Their Level of Validity**

<b>Type of Ownership Evidence</b>	<b>Level of Validity</b>	<b>Additional Requirements</b>
Land Ownership Certificate	Very High (100%)	None required
Deed of Sale and Purchase	High (95%)	Verification by Land Deed Official (PPAT)
Letter C/Girik/Petuk D	Moderate (80%)	Proof of Land and Building Tax (PBB) payment for 10 years
Certificate of Inheritance	Moderate (75%)	Endorsement from village and sub-district authorities
Proof of PBB Payment	Low (60%)	Physical possession for at least 20 years
Testimony from Local Residents	Very Low (40%)	Minimum of 2 witnesses and physical possession for 20 years

Source: Direktorat Pendaftaran Tanah, "Pedoman Pelaksanaan PTSL 2022," Kementerian ATR/BPN, Jakarta, 2022.

### **State Administrative Disputes related to PTSL Result Certificates.**

The Complete Systematic Land Registration Program (PTSL) in Indonesia aims to accelerate land registration and provide legal certainty. However, the PTSL result certificate, as a decision of the State Administration official, has the potential to face a lawsuit at the State Administrative Court (PTUN). To understand the dynamics of TUN disputes in the context of PTSL, it is necessary to study the typology of disputes, court decisions, causal factors, and implications for legal certainty.

The typology of TUN disputes related to PTSL certificates includes five main categories: (1) issuance procedures (38.2%), (2) subject matter of rights (24.5%), (3) object of rights (18.7%), (4) basis of rights (12.3%), and (5) use of authority (6.3%) (Ditjen Peradilan TUN MA RI, 2023: 45–50). An analysis of 350 PTUN decisions from 2018-2023 showed that 64.3% of lawsuits

were rejected, 27.5% were granted, and 8.2% were unacceptable (Puslitbang Hukum dan Peradilan MA RI, 2023: 32–35). Courts often emphasize the importance of the principle of prudence and propriety in the issuance of certificates, with judgments granting lawsuits affirming the need for in-depth verification.

Factors causing TUN disputes in PTSL include: (1) time constraints that sacrifice the quality of verification, (2) lack of human resources, (3) complexity of land status, (4) inconsistency of physical and juridical data, and (5) unclear previous land administration (Puslitbang ATR/BPN, 2022: 67–75).

TUN disputes can create legal uncertainty for rights holders, with an average economic impact of IDR 127 million per rightholder due to certificate cancellation (PSHAN FH UI, 2023: 55–58). However, the testing mechanism through the PTUN also strengthens legal certainty by ensuring that the certificate is in accordance with the provisions. Although challenges in the execution of the PTUN decision and uncertainty during the trial process remain, the PTSL shows a relatively reasonable level of disputes compared to similar programs in other countries, such as Thailand which has a dispute rate of 7.5% (World Bank, 2022: 78–82).

### Typology of TUN Lawsuits related to PTSL Certificates (2018-2023)

Lawsuit Typology	Percentage	Dominant Case Example
Issuance Procedure	38.2%	Neglect of announcement stage and objection resolution
Subject of Rights	24.5%	Misidentification of owner and inheritance disputes
Object of Rights	18.7%	Overlapping plots and size discrepancies
Basis of Rights	12.3%	Invalidity of ownership evidence used
Use of Authority	6.3%	Abuse of authority and conflict of interest

Source: Direktorat Jenderal Peradilan Tata Usaha Negara, "Analisis Putusan Sengketa Pertanahan di PTUN 2018-2023," Mahkamah Agung RI, Jakarta, 2023.

### Comparison of PTUN Decision Results related to Land Certificates (PTSL vs Sporadic)

Decision Outcome	PTSL Certificate	Sporadic Certificate
Lawsuit Rejected	64.3%	52.7%
Lawsuit Granted	27.5%	38.5%
Lawsuit Inadmissible	8.2%	8.8%
Plaintiff Success Rate	27.5%	38.5%
Average Trial Duration	7.3 months	9.1 months
Appeal Rate	42.3%	58.9%
Cassation Rate	23.5%	36.2%

Source: Badan Penelitian dan Pengembangan Mahkamah Agung RI, "Evaluasi Putusan Perkara Pertanahan 2020-2023," Jakarta, 2023.

### **Administrative Supervision in the Implementation of PTSL.**

Administrative supervision in the Complete Systematic Land Registration (PTSL) is essential to ensure the validity and reliability of land certificates. An effective monitoring system includes internal and external dimensions, transparent cancellation procedures, and continuous efforts to improve the quality of PTSL results, with the aim of fulfilling the principles of good governance in land administration.

The internal supervision mechanism of PTSL has a multi-level structure. At the operational level, the adjudication team verifies the applicant's documents, with 12.5% of files returned for repair in 2022 (Itjen ATR/BPN, 2023: 34–36). The Land Office has a Quality Control Team to ensure the suitability of physical and juridical data, while the Inspectorate General conducts regular audits. The report shows that 23% of the 167 Land Offices audited have significant weaknesses in the verification of rights (Ibid., 42–45).

External oversight involves the participation of the community and judicial institutions. The public can file objections for 14 working days after the announcement of the data, with an average of 7.3% of land plots receiving objections (Directorate General of Agrarian Legal Relations, 2023: 17–20). Research shows that formal objections reduce disputes by 42% (PSA UGM, 2022: 87–92). Judicial institutions also play a role in correcting the issuance of legally defective certificates, with 64% of lawsuits related to procedural violations (Ditjen Peradilan TUN MA RI, 2023: 54–56).

The procedure for canceling a PTSL certificate can be done administratively or judicially. Of the 4,678 administrative cancellation requests, only 23.5% were granted (Dit. Problem Management & Land Management, 2023: 28–30). In contrast, 32.4% of the 780 PTUN decisions ordered the cancellation of the certificate (MA RI, 2023: 112–115), showing a difference in the standard of proof between the two mechanisms.

Strengthening the supervision system is very urgent, considering PTSL's ambitious targets. Problems such as limited human resources and lack of coordination between institutions have been identified. The KPK noted that one auditor must oversee an average of 15,000 files per year (Ditlitbang KPK, 2022: 76–78). Innovative solutions such as the application of blockchain technology and artificial intelligence can help improve the surveillance system (PITKA ATR/BPN, 2023: 45–50).

Overall, administrative oversight in PTSL is a crucial component for the legitimacy and reliability of certificates. The ideal supervision model must be preventive to minimize errors from the start, so that PTSL can achieve quantitative targets and ensure the quality of certificates that provide legal certainty for the community.

### **Comparison of the Effectiveness of Monitoring Mechanisms in PTSL**

<b>Oversight Mechanism</b>	<b>Findings (2021-2022)</b>	<b>Follow-Up Completed</b>	<b>Success Rate</b>	<b>System Improvement Impact</b>
Internal Audit (Inspectorate General)	1,247 findings	876 findings	70.2%	SOP Improvement (43%), Administrative Sanctions (32%), Regulation Refinement (25%)
Community	4,682	3,124	66.7%	Physical Data Correction

Oversight	objections	objections		(56%), Legal Data Correction (38%), Process Cancellation (6%)
Administrative Court Rulings	780 rulings	587 rulings	75.3%	Certificate Cancellation (32%), Procedure Improvement (48%), Policy Changes (20%)
Ombudsman Oversight	312 reports	253 reports	81.1%	Systemic Recommendations (67%), Administrative Sanctions (18%), Mediation (15%)
Quality Control Team	5,876 returned files	5,231 files	89.0%	Data Correction (72%), Registration Rejection (15%), Further Investigation (13%)

Source: Kompilasi Data dari Laporan Tahunan Kementerian ATR/BPN dan Lembaga Terkait, 2023.

### Main Causes of PTSL Certificate Cancellation through Administrative Mechanisms (2020-2022)

Cause of Cancellation	Percentage	Case Example
Procedural Flaw	43.7%	Neglecting the announcement stage, not providing opportunity for objections
Authority Flaw	21.2%	Issuance by unauthorized officials, invalid delegation of authority
Substantive Flaw	18.5%	Misidentification of rights holder, incorrect application of law
Physical Data Error	10.3%	Discrepancies in land size and boundaries with field conditions
Document Forgery	6.3%	Use of falsified basis of rights, manipulation of land history

Source: Direktorat Penanganan Masalah dan Pengendalian Pertanahan, Kementerian ATR/BPN, 2023.

### Integration of Land Information Systems in PTSL.

Land information systems are pivotal to the success of Indonesia's PTSL Program, transforming land registration from a paper-based to a digital paradigm. These systems enhance efficiency, transparency, and data security, bolstering legal certainty and reducing land disputes. The computerization of the Land Office (KKP), initiated in 2002, has evolved into tools like the KKP PTSL Application, GeoKKP, and Touch My Land, improving process efficiency by 68%, cutting registration time from 240 to 60 days, and boosting spatial data accuracy to 96.5% (Balitbang ATR/BPN, 2022: 56–59; Dit. Pengukuran & Pemetaan, 2023: 28–30). Digitization of over 75 million documents via the e-archive program has streamlined verification and minimized document loss (Ditjen Infrastruktur Keagrariaan, 2022: 34–38).

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These systems have reduced new disputes by 32% in PTSL areas, with GeoKKP detecting overlapping claims early, as seen in Bogor Regency, where 453 potential overlaps were identified, saving Rp13.6 billion in litigation costs (Dit. Penanganan Sengketa & Konflik Pertanahan, 2023: 45–47; Kantah Kab. Bogor, 2022). However, integrating formal BPN data with customary systems remains challenging, exacerbating the digital divide.

Data security, governed by Law No. 19 of 2016, employs encryption and audit trails, yet faces cybersecurity risks, with 27 monthly cyberattack attempts in 2022 (BSSN, 2023: 87–90; UU No. 19 Tahun 2016, Pasal 26–32). A 2021 Surabaya case highlighted vulnerabilities to digital forgery, prompting blockchain-based verification to enhance protection (Puslit Kejahatan Siber UI, 2022: 43–47).

Future plans aim for a One Land Map of Indonesia by 2024, integrating BPN with 14 ministries to reduce overlapping permits (Kementerian ATR/BPN, 2020: 76–82). Innovations like AI and machine learning predict disputes with 78.5% accuracy, while the Touch of Tanahku 2.0 app boosts public access (Dit. Inovasi & Teknologi, 2023: 34–38). The Land Digital Village program targets 5,000 remote villages by 2025 to bridge infrastructure gaps (Ditjen Infrastruktur Keagrariaan, 2021: 23–26).

In summary, land information systems have revolutionized PTSL, enhancing efficiency and reducing disputes. Challenges like data security and digital disparities persist, but strategic development can solidify a robust land administration framework.

**The Impact of Information System Implementation in PTSL (2018-2023)**

Aspect	Before Information System Implementation	After Information System Implementation	Percentage Change
Registration Time	240 days per parcel	60 days per parcel	-75%
Spatial Data Accuracy	82.3%	96.5%	+14.2%
Measurement Error Rate	4.7 meters	0.3 meters	-93.6%
New Disputes (annual)	12,467 cases	8,477 cases	-32%
Duplicate Certificates	3.4% of total certificates	0.7% of total certificates	-79.4%
Operational Cost	IDR 2.1 million per parcel	IDR 980 thousand per parcel	-53.3%
Process Transparency (Perception Index)	63/100	84/100	+21 points
Applicant Satisfaction	72%	88%	+16%

Source: Direktorat Jenderal Infrastruktur Keagrariaan, "Laporan Evaluasi Sistem Informasi Pertanahan 2018-2023," Kementerian ATR/BPN, Jakarta, 2023.

## Comparison of Land Information Systems in Supporting PTSL in Indonesia

Application	Main Function	Users	Integration Level	Advantages	Challenges
KKP PTSL	Registration and processing of PTSL documents	Internal (BPN)	High (integrated with 8 other apps)	Fast processing, automatic tracking	Requires intensive training for operators
GeoKKP	Digital surveying and mapping	Internal (BPN)	High (integrated with BIG and KLHK)	Early overlap detection, high accuracy	Expensive hardware requirements
Sentuh Tanahku	Land information and services access for public	External (Public)	Medium (limited API)	User-friendly, mobile accessible	Internet connectivity in remote areas
e-Arsip Pertanahan	Digital document storage and management	Internal (BPN)	Medium (semi-open system)	Quick search, reduces physical damage risk	Time-consuming digitization of old archives
SAKTI (Integrated Control System)	Monitoring and evaluation of PTSL	Internal (BPN and Ministries)	High (integrated dashboard)	Real-time analysis, anomaly detection	Complexity of evaluation parameters
Land Value Information System	Land value data management	Internal (BPN) and limited External	Medium (integrated with MoF)	Transparency of land value, basis for BPHTB calculation	Land value updates not in real-time
Land Office Computerization (LOC)	Backend management	Internal (BPN)	High (main system)	Comprehensive, secure	Legacy system, needs modernization
Dispute Resolution App	Recording and tracking dispute resolution	Internal (BPN)	Low (standalone)	Comprehensive dispute database	Limited integration with the judiciary system

Source: Pusat Penelitian dan Pengembangan, "Pemetaan Sistem Informasi Pertanahan Indonesia," Kementerian ATR/BPN, Jakarta, 2022.

### **Recommendations for Strengthening PTSL from the Perspective of HTUN**

The Complete Systematic Land Registration (PTSL) program, aimed at ensuring legal certainty of land rights, requires comprehensive enhancements to maximize its effectiveness from a State Administrative Law (HTUN) perspective.

Regulatory improvements should focus on harmonizing vertical and horizontal regulations to address inconsistencies between the Basic Agrarian Law, Government Regulation on Land Registration, and ATR/BPN Ministerial Regulations (Soekanto, 2012: 17). A codified PTSL regulation and a robust legal framework for electronic systems, validating digital documents and signatures, are essential.

Strengthening institutional and human resource capacity is critical. Limited personnel and competencies hinder PTSL progress (KPK, 2022: 43). Implementing competency-based performance systems, continuous training, and recruiting local Cadastral Surveyor Assistants (ASK) with increased operational budgets can address these gaps.

Enhancing community participation requires inclusive communication tailored to local socio-cultural contexts. Establishing Land Order Awareness Community Groups (KMSTP) and leveraging digital platforms alongside conventional methods can improve outreach (Sumardjono, 2021: 15–32).

An ideal HTUN-based supervision model should integrate transparency, accountability, and participation. Combining internal BPN oversight, functional audits by BPKP and BPK, and community monitoring with a digital complaint system and whistleblower protections can curb irregularities (Sutedi, 2019: 156). Periodic evaluations with academic and independent input will ensure objective improvements.

In summary, harmonized regulations, enhanced institutional capacity, inclusive community engagement, and robust supervision are vital to optimizing PTSL’s impact on legal certainty and effective land administration.

### **Comparison of the Ratio of Surveyors to PTSL Targets in Several Provinces (2023)**

<b>Province</b>	<b>Number of Surveyors</b>	<b>PTSL Target (Parcels)</b>	<b>Ratio (Parcels/Surveyor)</b>	<b>Remarks</b>
West Java	247	620,000	2,510	Highly unideal
Central Java	189	485,000	2,566	Highly unideal
North Sumatra	112	240,000	2,143	Unideal
South Sulawesi	87	175,000	2,011	Unideal
Special Region of Yogyakarta	42	65,000	1,548	Less than ideal
Aceh	54	70,000	1,296	Less than ideal

Sumber: Kementerian ATR/BPN, Laporan Kinerja PTSL 2023

## Conclusion

This research shows that PTSL contributes significantly in realizing legal protection and certainty of land rights in Indonesia, viewed from the perspective of the State Administrative Law (HTUN). PTSL, based on the UUPA and Ministerial Regulation of ATR/BPN No. 6/2018, increases land certification, exceeds the 2017-2023 annual target, and reduces new land disputes by 24% in affordable areas. Information technology, such as GeoKKP and Touch My Land, increases process efficiency by up to 68%, spatial data accuracy by up to 96.5%, and administrative transparency. However, challenges such as limited human resources, data misalignment, and complexity of customary lands and inheritances still exist. Procedural inconsistencies triggered 27.5% of PTSL certificate lawsuits granted by the State Administrative Court (2018-2023). The pressure of quantitative targets and the lack of community participation in remote areas also hampered the quality of administration.

Recommendations to improve the effectiveness of PTSL include several strategic steps. First, regulatory harmonization needs to be carried out to ensure harmony between the various regulations that govern land administration. Second, increasing the capacity of human resources (HR) through structured training is very important so that officers can carry out their duties better and efficiently. In addition, layered oversight involving community participation and independent institutions should be strengthened to increase accountability and transparency in the land registration process.

The integration of advanced technologies such as blockchain and artificial intelligence (AI) is also indispensable to improve the accuracy and security of land data. This technology can help in tracking data changes in real-time and detecting anomalies in the registration process, thereby reducing the potential for errors and irregularities. With these measures, PTSL will not only function as an effective instrument to create orderly land administration, but will also support sustainable development and the principles of good governance within the framework of the State Administrative Law (HTUN).

Furthermore, it is important to involve communities in the monitoring and decision-making process, so that they feel ownership and responsibility for the management of land resources. More intensive education and socialization on land rights and the PTSL process will also encourage active community participation, which in turn will strengthen the legitimacy and sustainability of the program

In addition, it is important to raise public awareness of their rights related to land and the PTSL process. Better education can encourage active participation of the community in monitoring and submitting objections, thereby increasing accountability in the registration process. Strengthening collaboration between the government, the community, and the private sector can also create better synergy in the implementation of PTSL. Thus, PTSL will not only increase legal certainty, but also contribute to social justice and sustainable natural resource management. This effort is expected to create a more conducive environment for investment and economic development in Indonesia.

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