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Legal Certainty over Land Boundaries: a Field Study of Re-Measurement Practices at Bpn Yogyakarta City and Sleman

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Abstract: Land boundary disputes remain a persistent challenge in land administration across Indonesia, particularly when physical markers disappear or inconsistencies arise between legal documents and on-site conditions. This study explores the legal and practical aspects of re-measuring land parcels or, in practice, redefining boundaries as an effort to uphold legal certainty in the cities of Yogyakarta and Sleman Regency. Using a normative-empirical approach, field data were collected through interviews with officials from the local offices of the National Land Agency (BPN). The findings reveal a distinct divergence in interpretation: Yogyakarta still refers to the process as a “re-measurement,” following technical guidelines under Ministerial Regulation No. 1 of 2010. In contrast, Sleman no longer recognizes the term “re-measurement,” opting instead for a consensus-based boundary redefinition, citing legal prudence and risk mitigation. Despite using modern surveying tools and formal documentation, both regions face similar obstacles absent neighbors, missing boundary markers, and even post-measurement legal disputes. This study highlights how the concept of legal certainty must not only rest on regulatory compliance but also accommodate social realities on the ground. Drawing from Gustav Radbruch’s theory, the paper argues that true legal certainty in land matters requires a balance between the rule of law, fairness, and practical usefulness.

Keyword: Land boundary, legal certainty, re-measurement, cadastral survey, property law

INTRODUCTION

Land-related conflicts in Indonesia are not only legal or administrative issues but also deeply social and political. Among the most common disputes are those concerning unclear or missing land boundaries, which persist even on certified land parcels. Certification, once believed to be the final step in securing land rights, often falls short of ensuring clarity on the ground due to the loss, shifting, or absence of boundary markers (patok tanah). These discrepancies frequently lead to tension between neighbors, hinder land transactions, and even spark prolonged legal battles (Badan Pertanahan Nasional [BPN], 2023).

To address these problems, the Indonesian government has issued a regulatory framework to guide cadastral surveying and boundary determination. *Ministerial Regulation No. 1 of 2010* provides technical guidelines for cadastral measurement, while *Ministerial Regulation No. 3 of 2023* fills the gap in situations where prior measurement records or physical markers are no longer available (ATR/BPN, 2010, 2023). However, despite these frameworks, implementation in the field often varies between regions, shaped by institutional discretion, legal interpretation, and local challenges.

This variation is clearly seen in a comparative study between the BPN office in Yogyakarta City and BPN Sleman Regency. According to Amru Estu Cahyono, S.T., cadastral officer at BPN Yogyakarta, the agency continues to use the term *re-measurement* (*pengukuran ulang*) and adheres to standardized measurement protocols involving high-precision tools such as GNSS and total stations. Verification is conducted in the presence of neighboring landowners and village officials, and results are formally documented through sketch maps and signed survey reports (Cahyono, personal communication, July 2025).

In contrast, Hendry Yuli Wibowo, S.T., M.Sc., Head of the Survey Section at BPN Sleman, emphasized that the term *re-measurement* is no longer used in Sleman's land administration. Instead, the process is referred to as *boundary redefinition* (*penataan batas*), which prioritizes stakeholder consensus and current ground realities over attempts to reconstruct potentially unverifiable past boundaries. This shift is grounded in both legal prudence and ethical concern, aiming to avoid false legal assumptions that could arise if boundaries are "restored" without concrete evidence (Wibowo, personal communication, July 2025).

This divergence raises a fundamental question: what constitutes legal certainty in land measurement? Is it the adherence to standardized legal procedures and documents, or the capacity to reflect agreements and realities on the ground, even if those deviate from prior records?

The question becomes more complex when examined through the lens of legal philosophy. According to Gustav Radbruch's theory, a sound legal system must balance three core values: legal certainty (*Rechtssicherheit*), justice (*Gerechtigkeit*), and practical utility (*Zweckmäßigkeit*) (Radbruch, 1946/2006). When these values are in tension as they often are in land boundary disputes the law must avoid rigid formalism and respond to the needs of justice and practicality.

Thus, this study aims to explore how these differing local practices whether labeled as *re-measurement* or *boundary redefinition* reflect deeper questions about the meaning of justice and certainty in cadastral administration. By comparing two regions that operate under the same national law but adopt different implementation strategies, this research provides insight into how legal certainty is constructed, contested, and realized in practice.

METHOD

This research applies a normative-empirical legal method, combining doctrinal legal analysis with field-based qualitative inquiry. The normative component involves examining relevant Indonesian legal instruments such as *Ministerial Regulation No. 1 of 2010* on cadastral survey procedures and *Ministerial Regulation No. 3 of 2023* on land administration when historic data is unavailable (ATR/BPN, 2010, 2023). The empirical component uses a comparative case study design, focusing on two local BPN offices: Yogyakarta City and Sleman Regency. Data were collected through semi-structured interviews in July 2025.

- a. In Yogyakarta, the researcher interviewed Amru Estu Cahyono, S.T., Head of the Survey Section.
- b. In Sleman, the interview was conducted with Hendry Yuli Wibowo, S.T., M.Sc., Head of the Survey Section.

These interviews explored how each office interprets and applies concepts such as re-measurement, how procedures are carried out, and how they respond to practical challenges in the field (Cahyono, personal communication, July 2025; Wibowo, personal communication, July 2025). Data were analyzed using thematic content analysis, identifying key patterns in legal interpretation, institutional behavior, and procedural execution.

Documentary materials such as survey reports, cadastral maps, and internal SOPs were also reviewed for triangulation. The research is framed by Radbruch's theory of law, which emphasizes the balance of certainty, justice, and practicality as the ultimate goals of a sound legal system (Radbruch, 1946/2006). This theoretical foundation enables the study to bridge the gap between law in theory and law in practice.

RESULTS AND DISCUSSION

1. How is the re-measurement or boundary redefinition of land implemented in BPN Kota Yogyakarta and BPN Kabupaten Sleman?

At the BPN office in Yogyakarta, the term *re-measurement* is still formally recognized and implemented as a routine procedure. As explained by Amru Estu Cahyono, S.T., this process adheres to the provisions outlined in *Ministerial Regulation No. 1 of 2010*, which defines the stages of cadastral surveying from the submission of a public request to field measurement and documentation. When measurement records are incomplete or patok boundaries are missing, *Ministerial Regulation No. 3 of 2023* is applied to allow the reconstruction of boundaries through field validation and verification by the landowners and adjacent property holders (ATR/BPN, 2010; 2023).

The tools used include GNSS receivers, total stations, and digital mapping software. Each survey is conducted with the participation of local stakeholders including neighborhood heads (RT/RW), adjacent landowners, and community witnesses. The process culminates in official documents such as the *Berita Acara Pengukuran* (Field Measurement Report), *Gambar Ukur* (Sketch Map), and supporting photographic records. These documents are essential for updating land books and issuing revised certificates when necessary (Cahyono, personal communication, July 2025).

In contrast, the BPN office in Sleman has adopted a different approach. According to Hendry Yuli Wibowo, S.T., M.Sc., the term *re-measurement* is intentionally avoided. Instead, they employ the concept of *boundary redefinition*, which involves the establishment of new boundaries based on mutual agreement among neighboring landowners. This approach is rooted in the legal understanding that BPN cannot restore something that has been lost especially when original boundary data or markers are absent. Attempting to do so might result in speculative assumptions and wrongful claims, which could be construed as *legal fiction* (Wibowo, personal communication, July 2025).

This boundary redefinition procedure begins with the obligation of the landowner to install provisional boundary markers, which must then be acknowledged and agreed upon by neighboring landholders and local officials, such as the village or hamlet head. BPN officers do not determine the location of boundaries themselves but only validate what has been agreed upon and physically marked by the involved parties. In case of disagreement, the process is halted until consensus is reached.

2. To what extent do these practices provide legal certainty for landowners?

Legal certainty in land governance entails not only clarity of ownership and boundaries but also the ability to enforce those claims in administrative and judicial settings (Tamanaha, 2004; Bedner, 2010). The Yogyakarta approach offers legal certainty through administrative formalism. Every step is governed by standard operating procedures and documented with

precision, ensuring that the land record reflects an authoritative version of the physical reality on the ground.

However, formalism alone cannot guarantee legal certainty when field conditions are problematic. For example, in cases where boundary markers have disappeared or are contested, applying the procedural model without community consensus may lead to new disputes or challenges. The Sleman model attempts to mitigate this by integrating community agreement and participatory validation into the measurement process. Although less formal in structure, it promotes substantive legal certainty by ensuring that all stakeholders are in agreement before measurement is formalized.

In this context, certainty is not simply a matter of documentation but of social legitimacy. As observed by both Cahyono and Wibowo, many land disputes occur not because of flawed procedures, but due to lack of stakeholder involvement or misunderstanding about legal consequences. Thus, community-based boundary recognition enhances the durability of cadastral outcomes, especially in rural or semi-urban areas.

3. What are the legal, technical, and ethical considerations behind using or rejecting the term “re-measurement”?

Legally, the term *re-measurement* implies that BPN is restoring or repeating a previously executed boundary measurement. In many cases, however, the original data is unavailable or outdated, making it difficult if not impossible to replicate prior surveys with accuracy. This is why the Sleman office avoids using the term altogether. Instead, *boundary redefinition* is employed to reflect the creation of a new, mutually accepted version of property limits, legally ratified through consent and technical validation (Wibowo, personal communication, July 2025).

Technically, both Yogyakarta and Sleman offices use similar methods and equipment. The difference lies in the interpretive and institutional stance. While Yogyakarta’s method treats measurement as a continuation of prior administrative acts, Sleman treats it as a negotiated legal act, emphasizing mutual agreement over bureaucratic lineage. This legal distinction protects the institution from accusations of imposing boundaries without adequate proof or participation.

Ethically, both practices reflect a desire to avoid injustice. In Yogyakarta, ethical conduct is ensured by following standardized protocols and ensuring transparency throughout the survey process. In Sleman, ethics are ensured through deliberation and mutual respect, making sure that no measurement proceeds without social acceptance. These contrasting practices highlight the tension between formal proceduralism and relational justice in land governance.

4. How can Radbruch’s legal theory help evaluate these two practices?

Gustav Radbruch’s theory of law proposes that law must be evaluated by three core values: legal certainty (*Rechtssicherheit*), justice (*Gerechtigkeit*), and purposefulness (*Zweckmäßigkeit*) (Radbruch, 1946/2006). His famous post-war dictum, often paraphrased as “law that is extremely unjust ceases to be law,” is especially relevant in contexts where strict legality may lead to unfair or irrational outcomes.

Applying this framework to the present study, we can say that:

- a. Yogyakarta’s practice embodies legal certainty, ensuring that cadastral records are technically accurate, procedurally valid, and legally documented.
- b. Sleman’s approach emphasizes justice and purposefulness, recognizing that in the absence of prior data, justice can only be achieved through dialogue and current consensus.

Radbruch’s theory encourages a situational balancing of these values. In places where legal documents and historical boundaries are intact, legal certainty should prevail. But where

such data is lost or contested, justice and practical usefulness should guide the process even if it requires flexible interpretations of existing regulations.

In essence, both models reflect Radbruch's triadic vision of law. They are not oppositional but complementary responses to varied field realities. BPN's challenge is not to choose one over the other, but to recognize the legitimacy of both and to create adaptive legal frameworks that allow field officers to apply them appropriately.

CONCLUSION

This study has explored the contrasting practices of cadastral surveying and boundary determination implemented by two regional land offices in Indonesia BPN Kota Yogyakarta and BPN Kabupaten Sleman. Despite operating under the same national legal framework, these two offices have interpreted and applied the concept of land boundary determination differently, leading to important insights about the meaning and realization of legal certainty in the land administration system.

The Yogyakarta office adheres to the formal notion of *re-measurement* as defined in Ministerial Regulation No. 1 of 2010. This approach emphasizes technical precision, standardized administrative procedures, and consistent documentation. It reflects the legal ideal of certainty (*Rechtssicherheit*), where cadastral outcomes are based on authoritative records and state-driven processes. This method is particularly suitable in environments where original land data and physical markers are still available, making replication and validation possible.

In contrast, the Sleman office rejects the term *re-measurement*, adopting instead the approach of *boundary redefinition* based on mutual agreement. This model arises from the understanding that once boundary markers and original records are lost, rigid attempts to reconstruct the past may lead to legal misjudgment. Instead, Sleman emphasizes participatory justice, where landowners, neighbors, and local officials engage in dialogue to re-establish boundary consensus. While less formal in structure, this approach enhances the *practical enforceability* and *social legitimacy* of cadastral results.

Both models contribute to legal certainty in different ways: Yogyakarta through procedural compliance, Sleman through substantive agreement. Rather than positioning one as superior, this research argues that each approach represents a valid response to the specific institutional and geographic challenges faced by local land offices. In line with Gustav Radbruch's legal theory, these divergent practices illustrate the necessary balancing act between legal certainty, justice, and practical utility (Radbruch, 2006).

The findings also underscore the importance of adaptive governance in Indonesia's land sector. The variation in implementation signals that while national standards are important, their successful application depends on local realities, community participation, and institutional discretion. Therefore, legal certainty should not be viewed merely as a product of regulation, but as a process that is continuously negotiated between law, society, and administrative capacity.

Finally, this research highlights the potential for future policy refinement. A hybrid model that integrates both procedural standards and participatory flexibility could offer a more holistic and equitable cadastral framework ensuring that landowners across Indonesia experience both the security of legal recognition and the fairness of social consensus.

Recomendations

Based on the conclusions above, the following recommendations are proposed:

a. Legal Harmonization with Local Flexibility

The Ministry of ATR/BPN should consider revising national regulations to explicitly accommodate *boundary redefinition* as a legitimate procedure, especially in cases where original data is lost. While procedural standardization is essential, local adaptation should be recognized as part of administrative discretion grounded in justice.

b. Formal Recognition of Participatory Methods

Practices such as community-based verification, village head involvement, and mutual agreement between neighbors as implemented in Sleman should be formally institutionalized within BPN's operating procedures. This will provide legal protection and clarity for landowners and reduce the potential for post-measurement disputes.

c. Capacity Building for BPN Surveyors and Communities

Both surveyors and community members need further training in legal and technical aspects of land boundary determination. Emphasizing not only technical accuracy but also ethical and legal consequences will enhance accountability and reduce conflict.

d. Further Research on Boundary Conflicts and Justice Perception

Future studies should explore how landowners perceive justice in boundary redefinition processes. Research should also assess long-term outcomes of consensus-based practices in terms of legal security and conflict reduction.

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