



PLANNING MALAYSIA:

Journal of the Malaysian Institute of Planners

VOLUME 23 ISSUE 5 (2025), Page 773 – 789

INSTITUTIONAL APPROACH TO ADDRESS DELAY IN WATER ASSET LAND OWNERSHIP WITHIN WATER SERVICES RESTRUCTURING REGIME

Azizul Abd Ghani¹, Norhidayah Md. Yunus², Anis Syazwani Sukereman³

^{1,2}Faculty of Built Environment and Surveying,

UNIVERSITI TEKNOLOGI MALAYSIA, JOHOR, MALAYSIA

³School of Real Estate and Building Surveying, College of Built Environment,
**UNIVERSITI TEKNOLOGI MARA SHAH ALAM,
SELANGOR, MALAYSIA**

Abstract

This paper highlights the importance of in-depth exploration of the institutional dynamics shaping water asset land ownership within Malaysia's restructured water services industry, focusing particularly on the pivotal role played by PAAB. Despite PAAB's proactive efforts, the industry faces persistent challenges that have resulted in significant delays in the land alienation process for water assets. These challenges have raised concerns among industry stakeholders. Notably, early adopters of industry restructuring have encountered issues during the land alienation process, with Negeri Sembilan and Johor experiencing notable hurdles. Employing institutional theory as a guiding framework, this research seeks to comprehensively examine these challenges and propose effective solutions. Through semi-structured interviews conducted with twelve respondents in Negeri Sembilan and Johor, the study identifies and analyses fifteen internal and external challenges that hinder progress in water asset land ownership. By considering normative, rational choice, historical, and empirical approaches, the study aims to recommend a solution by involving the cooperation of state and federal governments for water asset land ownership, with a focus on implementing proactive measures to enhance industry efficiency and effectiveness.

Keywords: Institutional Approach, Land Title and Water Assets Land Ownership

¹ Corresponding author. Email: azizulag83@gmail.com

INTRODUCTION

The global urban population has surged dramatically, from 1.019 billion in 1960 to 4.117 billion in 2017, with projections indicating further growth to 9.7 billion by 2050, leading to pressing water challenges such as scarcity and degradation of water quality in urban areas (UN DESA, 2019; The World Bank Group, 2018). Factors contributing to these challenges include population expansion, uncontrolled development, and industrial and agricultural growth (Intan & Nor Ashikin, 2012). Despite the historical roots of water management in Malaysia dating back to the 19th century, the sector faces increasing complexity due to urbanization, rising water consumption, pollution, land use conflicts, and climate change, necessitating comprehensive water governance strategies and restructuring efforts to ensure sustainable water resource management (Jiada Li *et al.*, 2020). In Malaysia, the restructuring of the water services industry aims to enhance efficiency, quality, and long-term sustainability, but challenges persist, particularly concerning land ownership processes, highlighting the need for a deep understanding of the dynamics of land ownership within the restructured industry to optimize its benefits and ensure seamless operations (Nariman & Azhar, 2017; Ching, 2012).

Spearheading this transformation is Pengurusan Aset Air Berhad (PAAB), an essential entity entrusted with acquiring water supply assets and the corresponding land from state water operators. The acquired assets are subsequently leased back to the state water operators for a stipulated period, typically 45 years. However, amidst the comprehensive restructuring efforts, particular challenges have arisen in the land ownership process, mainly regarding the alienation of land titles to PAAB. Several land applications have encountered delays or remain unapproved, posing significant concerns and complexities in water asset land ownership. The institutional approach, which integrates rational-choice institutionalism, old institutional economics, and new institutionalism, provides a comprehensive framework for understanding the dynamics and implications of these restructuring efforts across diverse socio-economic contexts (Silva *et al.*, 2023). Within this context, water asset land ownership plays a pivotal role in shaping the operational landscape and strategic direction of restructured entities. This paper seeks to explore the interplay between institutional approach and the challenges in water asset land ownership within the restructured water services industry, focusing on Malaysia's evolving regulatory framework and institutional arrangements.

LITERATURE REVIEW

The review of the existing literature is composed of three themed subsections. First is an overview of the restructuring of the water supply, followed by the

process and challenges of land ownership for water assets, and lastly, the significance of the institutional approach in water asset land ownership.

Overview Of The Water Supply Restructuring

The establishment of the National Water Services Commission (SPAN) in January 2008 marked a significant step in Malaysia's water services restructuring, supported by the Federal Government's development of a holistic model focused on efficiency, competitiveness, and sustainability (Phang Wai Leng *et al.*, 2016). This restructuring aims to regulate, supervise, and monitor the industry, with PAAB providing essential funding for capital expenditures (Nariman & Azhar, 2017). The Federal Government's involvement has established a holistic model for the national water services industry, emphasizing efficiency, effectiveness, competitiveness, and sustainability. In this model, PAAB assumes State Government loans initially held by concession companies, while state governments and operators transfer land ownership and sell water assets to PAAB at book value. PAAB then leases these assets back to state operators for 45 years, also taking responsibility for constructing new infrastructure and managing repairs and upgrades. The restructuring aims to enhance water and sewerage services for both consumers and environmental sustainability (SPAN, 2019).

Process and Challenges of Land Ownership for Water Assets

Land ownership of water assets is essential for effective water resource management and successful execution of Malaysia's Water Supply Service Industry Structuring Agreement. According to PAAB (2022), the State Government must grant ownership to the Federal Government's applicant agency to support seamless restructuring. Under this model, PAAB assumes State Government loans initially transferred to concession companies and enters a 45-year leaseback with state water operators, while managing new infrastructure, repairs, and upgrades. Key restructuring functions are assigned to various entities: government, regulation (SPAN), asset ownership (PAAB), and service provision (state water company). Efficient asset transfer is essential for addressing rising water demands and promoting sustainability, with land ownership for water supply achievable through land alienation, transfer, or acquisition.

Table 1: PAAB Application for Land Ownership Through Water Supply

NO.	STATE / AGREEMENT	APPLICATION DATE	APPROVED	(%)	OWNERSHIP (TITLES)	(%)	NOT YET ISSUED THE TITLE
1	Melaka	17/12/2008	107	100	93.46	99	92.52
2	N.Sembilan	31/12/2008	567	488	86.07	435	76.72
3	Johor	11/03/2009	547	377	68.92	294	53.75
TOTAL			1,221	965	79.03	828	67.81

Source: PAAB (2022a)

The National Audit Report (2019) highlights that Melaka, Negeri Sembilan, and Johor were among the first states to agree to restructure the water supply service industry in 2008 and 2009. As of September 2022; 1,221 sites were submitted for land alienation, yet only 828 received titles, despite over a decade since the initial agreements as illustrated in Table 1. This delay calls for in-depth analysis to identify contributing factors and explore solutions to expedite the land alienation process, supporting effective implementation of the industry restructuring.

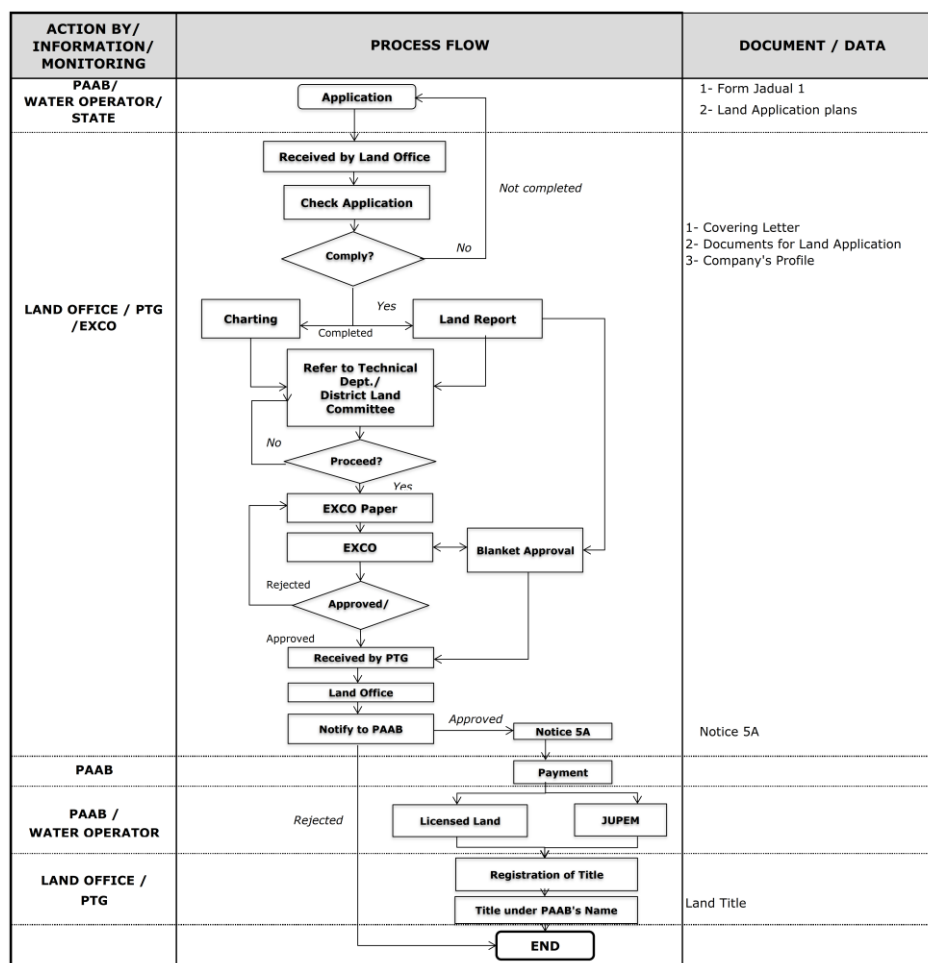


Figure 1: Standard Operating Procedure (SOP) for Land Alienation
 Source: PAAB (2022b)

Figure 1 outlines the Standard Operating Procedure (SOP) for Land Alienation from start to finish. Once an application is complete, it is submitted to MMKN for approval or rejection. If approved, the application is returned to the District Land Office, which then issues an approval letter (Notice 5A) to PAAB, specifying the payment due within a set timeframe. PAAB must make the payment promptly to facilitate the issuance of the land title. However, despite payment, PAAB reports delays in title issuance, raising concerns. Figure 2 details the process and timeline for issuing land titles, taking a minimum of seven months or 213 working days. The process may be delayed further if only one officer handles PAAB applications, especially if that officer is unavailable. The officer's responsibilities include preparing a land report, conducting site visits, and obtaining feedback from the technical department, which is required for the application to advance. Delays in receiving these inputs render applications incomplete, impeding progress. The following sections will analyse these challenges and propose strategies to streamline the land alienation process, supporting the restructuring of the water supply service industry.

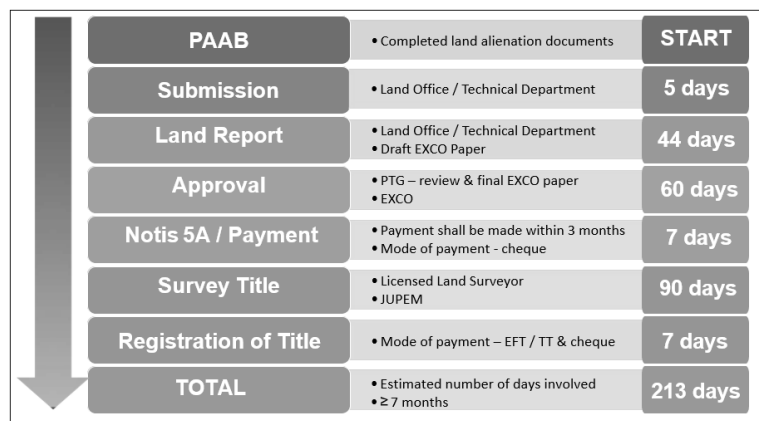


Figure 2: Process Flow and Timeline for Land Alienation Title Issuance
Source: JKPTG (2013)

In conclusion, land ownership for water assets is essential for achieving water restructuring goals and ensuring fair access to water resources. Issuing titles and transferring ownership smoothly are key to providing legal assurance for landowners and supporting sustainable water management. This study is valuable as it explores the restructuring of Malaysia's water supply service industry, examining the motivations, policies, and stakeholder roles involved. It aims to address challenges related to delays in water asset land ownership and offers solutions through an institutional approach, providing insights relevant to Malaysia.

Significance of the Institutional Approach in Water Asset Land Ownership

Institutionalism, originating from the late 19th century, has deeply impacted social sciences by highlighting the role of institutions in shaping human behavior and societal structures (Tom Kauko, 2019; Maxfield & Peters, 2020). In water resource management, institutional theory provides valuable insights into governance, regulations, and stakeholder roles, influencing policy and practice (Scott, 2008; Bakker *et al.*, 2018). Its applicability also spans international business and organizational studies, underscoring its role in understanding organizational adherence to rules and norms (Sahin & Mert, 2022; Scott & Meyer, 1983). Institutional theory's adaptability remains relevant, supporting various paradigms like policy-making and social analysis by addressing how institutions influence policies, collaboration, and resource sustainability (Richard Hofer, 2022; Ostrom, 2011).

The theory's interdisciplinary reach helps explain the creation and evolution of institutions through human interactions, which shape organizational behavior and societal norms (John & Mattea, 2017). By linking theoretical concepts with practical applications, institutional theory guides the understanding of complex institutional systems, such as in restructured water services, where it highlights governance, stakeholder interactions, and policy impacts (Bakker, 2010; Struckell *et al.*, 2022). Furthermore, institutional theory delves into how organizations interpret productive activities with humanitarian and aesthetic considerations (Chowdhury, 2015). Despite its breadth, institutional theory is less prominent in fields like social work due to its wide-ranging branches, with foundational approaches including normative, rational choice, historical, and empirical models, as outlined by Peters (2000) and shown in Table 2.

The Normative Institutional Approach highlights how authorities shape policies based on institutional norms, emphasizing the influence of institutional regulations on behavior, contrasting with individualism (Maxfield & Peters, 2020). Chowdhury (2015) discusses how interactions between powerful agencies and organizations can create misalignments, impacting institutional dynamics. Meanwhile, The Rational Choice Approach centers on maximizing benefits within institutional limits, illustrating how individuals can influence institutions through their values (Hofer, 2022).

Historical Institutionalism integrates past regulations and practices, showing how historical power dynamics affect current policies, with a focus on institutional origins (Maxfield & Peters, 2020; Hofer, 2022). The Empirical Institutional Approach emphasizes formal structures and their role in government efficiency (Hofer, 2022; Peters, 2000). Neo-institutionalism examines the real-world impacts of institutional arrangements (Maxfield & Peters, 2020). Collectively, these approaches, as reflected in Table 2, establish a conceptual

foundation for analysing the institutional dynamics underlying water asset land ownership within Malaysia's evolving governance framework.

Table 2: Institutional Approach Mechanism

NO.	APPROACH	CONCENTRATION
1	Normative	The Normative Institutional Approach demonstrates the role of authorities in formulating specific policies based on institutional regulations and processes.
2	Rational Choice	The Rational Choice Approach refers to decisions made to maximize benefits and uphold priorities, even if they are constrained by institutions, despite not aligning with existing regulations and policies.
3	Historical	The Historical and Background Institutional Approach refers to incorporating past ideas, regulations, and processes into an organization's practices, which continue to be implemented to this day.
4	Empirical	The Empirical Institutional Approach is based on old institutions that focus on formal government structures, regulations, and their implementation to ensure smooth workflow and achievement of objectives.

Sources: Peter (2000), Maxfield & Peters (2020) & Hoefer (2022)

In water asset land ownership, the institutional approach clarifies the dynamic between formal structures and individual actions, shaped by historical factors. Normative institutionalism stresses the role of authoritative agencies, while rational choice institutionalism highlights individual influence on institutions. Historical institutionalism points to the lasting impact of past policies on present decisions, providing a comprehensive view of organizational adaptation in water asset management.

RESEARCH METHODOLOGY

This study uses a qualitative approach, conducting semi-structured interviews with 12 key informants involved in various stages of the application process for water asset land ownership. These informants, chosen through purposive sampling, include senior officials from PAAB, District Land Offices, State Economic Planning Units, Land and Mines Offices, regulatory bodies, and ministries, representing both Negeri Sembilan and Johor due to their early adoption of water restructuring agreements. With high application numbers, these states were selected for in-depth analysis alongside federal bodies like the MTN, PETRA, PAAB, and JKPTG Federal.

Using narrative descriptive analysis, this methodology enables a detailed exploration of qualitative data, constructing a narrative to capture themes and nuances within the research. This approach aims to identify challenges and recommend collaborative solutions for water asset land ownership, with insights

from respondents shaping the findings. Through this analysis, the study seeks to clarify complex institutional interactions and contribute to the broader discourse on water asset land ownership.

This study relied primarily on descriptive analysis to interpret qualitative responses from key informants. While this approach provides rich contextual understanding, it limits the ability to generalize findings statistically across broader rural tourism or land administration settings. Future research may employ inferential techniques to test relationships between variables and strengthen the robustness and external validity of the conclusions drawn.

Ethical Considerations

This study complied with the research ethics requirements of Universiti Teknologi Malaysia. All participants were informed of the study's purpose, and informed consent was obtained before the interviews. Respondent confidentiality was strictly maintained, and no personal or sensitive information was disclosed.

ANALYSIS AND DISCUSSION

The findings in this section present a narrative-descriptive analysis of the challenges contributing to delays in water asset land ownership and the strategies proposed to overcome them through an institutional approach. Insights were derived from in-depth interviews with twelve key informants representing federal and state agencies involved in land administration and the restructuring of Malaysia's water services industry, as summarized in Table 3.

Challenges in Water Asset Land Ownership Delays

Land administration plays a crucial role in facilitating land transactions, development projects, and resource management. However, its effectiveness is often constrained by both internal and external factors. Respondents highlighted a range of operational and procedural issues affecting their ability to process applications efficiently.

Internal Challenges

The study identified several internal challenges that hinder the efficiency of land administration processes. These include excessive workloads among Assistant Land Officers, inadequate logistical resources such as vehicles for site inspections, substantial backlogs of pending applications, and time constraints encountered by duty officers. Additionally, inconsistencies in procedural guidelines, limited staff competency, deferred decision-making, shortages of technical personnel, missing or incomplete documentation, and delays in obtaining inter-departmental feedback were frequently reported. Collectively, these organizational constraints originate within the administrative system itself

and significantly impede the overall effectiveness and timeliness of land ownership processing, as summarized in Table 3.

Table 3: Challenges Contributing to Delays in Registering Ownership

NO	INTERPRETATION OF CHALLENGES	INTERNAL CHALLENGES	EXTERNAL CHALLENGES
1	High duty burden of Assistant Land Officer	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10 & R11	R12
2	Lack of vehicles to go site visits to prepare a land report	R1, R2, R3, R4, R5, R6, R7, R9, R10, R11, & R12	R8
3	A large and growing backlog of applications (Increasing number of applications)	R1, R2, R3, R4, R5, R6, R7, R8, R9, R11, & R12	R10
4	Time constraints of the officer on duty (Ad-hoc duties)	R1, R2, R3, R4, R5, R6, R7, R8, R9, R11, & R12	R10
5	The flowchart procedures include too many levels and stages (Varying instructions and procedures)	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, & R12	-
6	Lack of knowledge among staff	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10 & R12	R11
7	Involvement and postponement of decisions of the District Land Committee & MMKN	R2, R3, & R8	R1, R4, R5, R6, R7, R9, R10, R11, & R12
8	Lack of staff, especially technical staff, in the respective unit	R2, R3, R4, R8, R10, R11, & R12	R1, R5, R6, R7 & R9
9	File Missing and File Not Found	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, & R12	-
10	Incomplete Application	-	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, & R12
11	Delay in receiving feedback from the other parties (applicant, technical department)	-	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, & R12
12	Change of officers / Moving staff to another unit/section	R2, R3, R4, R8, R9, R11, & R12	R1, R5, R6, R7 & R10
13	High task load with others tasks and full of the meeting schedule	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, & R12	-
14	Changing of applicant's address	-	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, & R12
15	The application was rejected due to land status (resubmit)	-	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, & R12

Source: Author's own research (2024), based on interviews with Respondents R1–R12

Analysis and Insights

The findings reveal that delays in land ownership processes are shaped by an overlap of internal and external challenges, demonstrating the interconnected nature of land administration systems. Common themes include limited resources, procedural complexity, and inconsistent communication among stakeholders.

To improve efficiency, respondents suggested several measures: streamlining procedures, enhancing staff training, strengthening inter-agency collaboration, leveraging digital systems for monitoring, and advocating for supportive regulatory reforms. Addressing these factors collectively is essential to ensure effective land governance and timely issuance of titles for water assets.

Institutional Approach in Addressing Delays

Collaboration between federal and state agencies plays a pivotal role in accelerating the processing of land ownership applications for PAAB. Insights from respondents reveal that various institutional approaches—namely normative, rational choice, historical, and empirical institutionalism—provide complementary perspectives for addressing these administrative challenges. The integration of these approaches underscores the importance of coordinated governance and adaptive policy mechanisms, as illustrated in Table 4.

Normative Institutional Approach

Respondents emphasized the need for clear, consistent, and practical policies across federal and state levels. A strong normative framework, grounded in fairness, transparency, and accountability, is vital to reduce workload imbalances, minimize procedural ambiguity, and improve decision-making efficiency.

Rational Choice Institutional Approach

While some respondents viewed rational choice decision-making as essential for managing backlogs, delays, and incomplete applications, others expressed concern about its inconsistency with established policies. They suggested that rational choices should be guided by institutional principles to ensure equity and alignment with long-term governance objectives.

Historical and Background Institutional Approach

Respondents highlighted the importance of understanding historical practices to inform current policies. Reviewing past processes enables the identification of systemic bottlenecks—such as file management inefficiencies and staff turnover—while supporting continuity and adaptation to modern administrative requirements.

Table 4: Institutional Approach and Key Recommendation

NO	APPROACH	CHALLENGES	RESPONDENT
1	Normative	(i) High duty burden of Assistant Land Officer (ii) Complex flowchart procedures (iii) Staff shortage (iv) High task load (v) Application rejection due to land status	All respondents agreed that the policy needs to be clear, uniform, practical, and comprehensive as a guideline at the federal and state levels.
2	Rational Choice	(i) Backlog of applications (ii) Involvement and postponement of decisions (iii) Incomplete applications (iv) Changing applicant addresses	R3, R4, R5, R6, R9, R10 & R12: Rational Choice decisions are necessary, but caution must be exercised to ensure that the justifications provided are relevant to the current situation and benefit all parties. R1, R2, R7, R8 & R11: The Rational Choice institution is concerned that every decision made is inconsistent and unfair because it contradicts existing rules and policies.
3	Historical	(i) Time constraints of officers (ii) File management issues (iii) Staff turnover	All respondents agreed that regulations and processes closely related to history and background should be periodically reviewed and improved to keep pace with the times, technology, and national development.
4	Empirical	(i) Lack of vehicles for site visits (ii) Lack of knowledge among staff (iii) Delay in receiving feedback	All respondents agreed that the empirical institution is very helpful, especially regarding the structure, regulations, and practices that have been implemented to make decisions. It needs to be improved according to the times so that the laws are current and relevant

Source: Author's own research (2024), based on interviews with Respondents R1–R12

Empirical Institutional Approach

Empirical evidence was regarded as a key driver for informed decision-making, particularly in addressing gaps in staff capability, logistical constraints, and

response delays. Respondents recommended that data-driven approaches be regularly updated to ensure their relevance and applicability to evolving administrative contexts.

Integrative Perspective

Table 5 summarizes the implications of these institutional approaches, emphasizing the importance of adaptive policy reform that balances fairness, consistency, and efficiency. Respondents collectively supported interdisciplinary solutions that integrate normative, historical, and empirical insights for more effective land governance. Continuous policy review and technological adaptation were considered essential to maintaining institutional responsiveness and supporting Malaysia's broader development goals.

Table 5: Implications of Institutional Approaches in Land Administration

NO	APPROACH	RESPONDENT PERSPECTIVE	IMPLICATION
1	Normative	Emphasizes the importance of clear, uniform, practical, and comprehensive policies at Federal and state levels to address challenges.	Policy reforms should prioritize clarity, uniformity, and practicality to enhance the effectiveness and fairness of land administration processes. Normative approaches provide essential guidance for stakeholders, ensuring consistency and transparency in decision-making.
2	Rational Choice	Acknowledges the necessity of rational decision-making but expresses concerns about inconsistencies and unfairness in decision-making processes.	Combining insights from various institutional approaches offers a holistic approach to tackling challenges. Rational choice decisions must be relevant to the current situation and benefit all parties involved.
3	Historical	Stresses the importance of periodically reviewing and improving regulations and processes in line with historical background and development.	Regular review and updating of regulations and practices are essential to keep pace with evolving technologies and national development goals. Historical insights inform adaptation to meet contemporary needs.
4	Empirical	Recognizes the usefulness of empirical evidence in decision-making but highlights the need for continuous improvement to ensure relevance and currency.	Leveraging empirical evidence and data-driven approaches optimizes decision-making processes. Continuous improvement ensures regulations and practices remain relevant and aligned with changing circumstances.

Source: Author's own research (2024), based on interviews with Respondents R1–R12

The comparative analysis presented in Table 5 also highlights the interdependence of these institutional dimensions. The normative and rational choice approaches provide the ethical and strategic foundations for administrative decision-making, while the historical and empirical approaches contribute contextual understanding and evidence-based validation. Integrating these perspectives fosters a holistic institutional framework capable of improving the procedural efficiency, accountability, and transparency of land ownership processes.

Building upon these findings, this study underscores the value of strengthening the analytical dimension of institutional research. While the current analysis relied primarily on descriptive and narrative methods to interpret stakeholder perspectives, future research could employ basic inferential techniques—such as chi-square tests or cross-tabulations—to statistically validate the observed institutional patterns and enhance the generalizability of the findings across broader governance contexts.

Implementing Institutional Approaches through Task Force Coordination

The establishment of task force monitoring and coordination meetings exemplifies the practical implementation of institutional principles aimed at enhancing the efficiency and transparency of land ownership processes. These platforms serve as collaborative mechanisms that align federal and state stakeholders toward common objectives, facilitate systematic information sharing, and promote collective accountability, as illustrated in Figure 3.

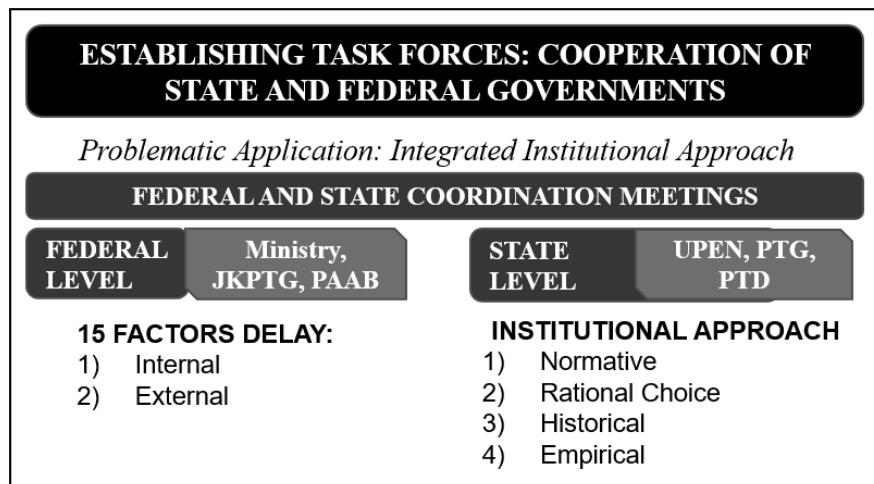


Figure 3: Cooperation Between Federal and State Agencies in Coordination Meetings
Source: Author's own research (2024)

Such coordination mechanisms promote transparency, flexibility, and proactive problem-solving. They also support capacity building by ensuring that officers receive adequate resources and training to handle complex applications effectively. Ultimately, this institutionalized cooperation enhances accountability, streamlines administrative workflows, and strengthens intergovernmental collaboration toward more efficient and sustainable land ownership management within the water services restructuring framework.

CONCLUSION

This study identified fifteen key challenges contributing to delays in the issuance of water asset land ownership titles in Malaysia. These challenges stem from a combination of bureaucratic inefficiencies, procedural inconsistencies, limited resources, and coordination gaps among federal and state institutions. The application of an institutional approach has proven valuable in addressing these barriers by enhancing process efficiency, governance transparency, and stakeholder collaboration. Institutional frameworks—namely the Normative, Rational Choice, Historical, and Empirical Institutionalism approaches—provide complementary perspectives for navigating regulatory complexities and improving administrative performance. By integrating these institutional dimensions, agencies can develop adaptive mechanisms that balance policy coherence, procedural consistency, and resource efficiency, thereby supporting more sustainable land administration practices. The study also underscores the importance of task force monitoring and coordination meetings as practical institutional mechanisms that promote intergovernmental cooperation. Such collaborative platforms enable proactive problem-solving, accountability, and knowledge sharing, which are crucial for accelerating land title issuance and achieving the broader objectives of the water services restructuring programme. Beyond its direct implications for the water sector, this research contributes distinctively to the institutional and governance literature by demonstrating how intergovernmental coordination mechanisms can effectively mitigate ownership delays in complex, multi-stakeholder systems. Furthermore, the institutional lens adopted in this study offers transferable insights applicable to homestay and community-based tourism initiatives, particularly within Malaysia's coastal and island regions, where land tenure security, institutional alignment, and local participation are equally critical to sustainable development. Overall, this study reinforces that adopting integrated institutional approaches can streamline land registration processes within the restructured water services industry, strengthen collaborative governance, and ensure that sustainable development goals are achieved through timely and transparent land ownership practices.

REFERENCES

- Bakker, K. (2010). *Privatizing water: Governance failure and the world's urban water crisis*. Cornell University Press. Retrieved from https://www.researchgate.net/publication/311666288_Bakker_Karen_2010_Privatizing_Water_Governance_Failure_and_the_World's_Urban_Water_Crisis
- Bakker, K., Simms, R., Joe, N., & Harris, L. (2018). Indigenous peoples and water governance in Canada: Regulatory injustice and prospects for reform. In R. Boelens, T. Perreault, & J. Vos (Eds.), *Water justice* (pp. 193–209). Cambridge University Press. Retrieved from <https://open.library.ubc.ca/media/stream/pdf/52383/1.0431180/5>
- Chan, N. W., Lariyah, M. S., & Phang, W. L. (2016). Pengurusan penawaran air dan pengurusan permintaan air di Malaysia: Peranan kerajaan, organisasi bukan kerajaan dan orang awam. *Prosiding Seminar Antarabangsa Ke-6 Ekologi, Habitat Manusia & Perubahan Persekitaran di Alam Melayu*. Retrieved from https://www.academia.edu/5144172/PENGURUSAN_PENAWARAN_AIR_DA_N_PENGURUSAN_PERMINTAAN_AIR_DI_MALAYSIA_PERNANAN_KE_RAJAAN_ORGANISASI_BUKAN_KERAJAAN_DAN_ORANG_AWAM
- Ching, T. K. (2012). *Malaysian water sector reform policy and performance* (Doctoral dissertation). Wageningen University, Wageningen, Netherlands. Retrieved from <https://research.wur.nl/en/publications/malaysian-water-sector-reform-policy-and-performance/>
- Chowdhury, D. (2015). *Institutional theory: Knowledge and competitiveness in elite institutions in Bangladesh—Implications for governance*. Bangladesh University Grants Commission, University of Dhaka. Retrieved from https://www.researchgate.net/publication/342917902_Knowledge_and_Competitiveness_in_Elite_Institutions_in_Bangladesh_Implications_for_Governance
- Head of the National Audit Report. (2019). *Laporan Ketua Audit Negara Siri 2: Pengurusan Syarikat Kerajaan Persekutuan*. Jabatan Audit Negara Malaysia, Putrajaya. Retrieved from <https://www.parlimen.gov.my/ipms/eps/2021-09-28/CMD.17.2021%20-%20CMD%2017.2021.pdf>
- Hofer, R. (2022). Institutionalism as a theory for understanding policy creation: An underused resource. *Journal of Policy Practice and Research*, 3(1), 71–76. Retrieved from <https://link.springer.com/article/10.1007/s42972-022-00059-0>
- Intan Sazrina, S., & Nor Ashikin, M. Y. (2013). The need for better water policy and governance in Malaysia. *Procedia – Social and Behavioral Sciences*, 81, 371–375. Retrieved from <https://doi.org/10.1016/j.sbspro.2013.06.445>
- JKPTG. (2013). *Pekeliling Ketua Pengarah Tanah dan Galian Persekutuan Bilangan 1/2013: Panduan memproses permohonan pemberimilikan tanah* (No. Fail JKPTG-950/100-1/7/1). Jabatan Ketua Pengarah Tanah dan Galian Persekutuan. Retrieved from <https://www.jkptg.gov.my/my/panduan/senarai-pekeliling/pekeliling-terbuka/tag/Permohonan%20Pemberimilikan%20Tanah>
- Kauko, T. (2019). Institutions at the interface of urban planning and real estate. *Real Estate Management and Valuation*, 27(3), 17–30. Retrieved from <https://doi.org/10.2478/remav-2019-0022>

- Lammers, J. C., & Garcia, M. A. (2017). Institutional theory approaches. University of Illinois, Urbana-Champaign. Retrieved from <https://doi.org/10.1002/9781118955567.wbieoc113>
- Li, J., Yang, X., & Sitzenfrei, R. (2020). Rethinking the framework of smart water systems: A review. *Water*, 12(2), 412. Retrieved from <https://doi.org/10.3390/w12020412>
- Nariman, M. S., & Azhar, H. (2017). Restructuring to improve water services in Malaysia. *Institutions and Economies*, 9(3), 21–49. Retrieved from <https://ideas.repec.org/s/umk/journal.html>
- Ostrom, E. (2011). Background on the institutional analysis and development framework. *Policy Studies Journal*, 39(1), 7–27. Retrieved from <https://onlinelibrary.wiley.com/doi/10.1111/j.1541-0072.2010.00394.x>
- Pengurusan Aset Air Berhad (PAAB). (2022). *Knowledge sharing session* [Unpublished internal document]. Pengurusan Aset Air Berhad, Kuala Lumpur, Malaysia.
- Pengurusan Aset Air Berhad (PAAB). (2022a). *Laporan Bulan September 2022* [Unpublished internal document]. Jabatan Pengurusan Tanah, Pengurusan Aset Air Berhad, Kuala Lumpur, Malaysia.
- Pengurusan Aset Air Berhad (PAAB). (2022b). *Standard operating procedure for land alienation* [Unpublished internal document]. Jabatan Pengurusan Tanah, Pengurusan Aset Air Berhad, Kuala Lumpur, Malaysia.
- Peters, B. G. (2000). *Institutional theory: Problems and prospects*. Political Science Series No. 69. Institute for Advanced Studies, Vienna, Austria. Retrieved from https://www.researchgate.net/publication/242269946_Institutional_Theory_Problems_and_Prospects
- Petersen, M. J., & Peters, B. G. (2020). Institutional theory and method. In *The SAGE handbook of research methods in political science and international relations* (pp. 116–128). SAGE Publications Ltd. Retrieved from <https://doi.org/10.4135/9781526486387.n13>
- Sahin, K., & Mert, K. (2021). Institutional theory in international business studies: The period of 1990–2018. *International Journal of Organizational Analysis*, 29(5), 1307–1323. Retrieved from <https://doi.org/10.1108/IJOA-09-2021-2945>
- Scott, R. W. (2008). Approaching adulthood: The maturing of institutional theory. *Theory and Society*, 37(5), 427–442. Retrieved from https://www.researchgate.net/publication/225616272_Approaching_Adulthood_The_Maturing_of_Institutional_Theory
- Scott, R. W., & Meyer, J. W. (1983). *Organizational environments: Ritual and rationality* (pp. 13–17). Sage Publications. Retrieved from <https://archive.org/details/organizationalen0000meyer/page/8/mode/2up>
- Silva, L. C., Macedo, I. M., & Thompson, M. (2023). Revisiting the debate on institutions, the state and institutional change: The relevance of institutional theory to public administration teaching. *Teaching Public Administration*, 42(1), 73–94. Retrieved from <https://eric.ed.gov/?q=source%3A%22Teaching+Public+Administration%22&id=EJ1412220>

- SPAN. (2019). *Laporan Tahunan SPAN 2010*. Suruhanjaya Perkhidmatan Air Negara, Cyberjaya, Malaysia. Retrieved from <https://www.span.gov.my/article/view/laporan-tahunan-2019>
- Struckell, E., Ojha, D., Patel, P. C., & Dhir, A. (2022). Strategic choice in times of stagnant growth and uncertainty: An institutional theory and organizational change perspective. *Technological Forecasting & Social Change*, 182, 121839. Retrieved from <https://doi.org/10.1016/j.techfore.2022.121839>
- The World Bank Group. (2018). *Population growth (annual %)*. The World Bank, Washington, DC, USA. Retrieved from <https://data.worldbank.org>
- United Nations, Department of Economic and Social Affairs (UN DESA). (2019). *World urbanization prospects: The 2018 revision*. United Nations, New York, NY, USA. Retrieved from <https://doi.org/10.18356/b9e995fe-en>

Received: 7th May 2025. Accepted: 1st October 2025