



ANALYSIS OF LEGAL INSTRUMENTS AND POLICY IMPLEMENTATION FOR IMPROVING REGIONAL ASSET MANAGEMENT IN RIAU PROVINCE

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ABSTRACT

This study aims to comprehensively identify the main problems in the implementation of regional asset management in Riau Province, investigate their root causes, and propose policy strategies to align practice with applicable legal provisions. To pursue these aims, this research utilizes an empirical legal approach combined with a descriptive qualitative method. The empirical legal approach allows the researchers to observe and interpret how laws and regulations, particularly Government Regulation Number 27 of 2014, Minister of Home Affairs Regulation Number 47 of 2021, and related regulations, are implemented in practice. The study was conducted in three stages: first, analyzing the BMD management cycle; second, identifying key issues through Pareto analysis; and third, employing SWOT analysis to assess internal and external factors affecting implementation. The main data were collected from observation, document review, and in-depth interviews with heads of regional apparatus organizations. The results show persistent problems at all stages of asset management, from planning, administration, utilization, and supervision, due to weak legal compliance, poor IT infrastructure, incomplete ownership documents, and a shortage of human resources and training. To address these issues, strengthening regulations, optimizing information systems, and developing policy strategies are recommended to enable more effective, efficient, and accountable Regional Asset management in Riau Province.

1. Introduction

The implementation and management of regional asset must be carried out in a systematic, orderly, and responsible manner in conformity with applicable legal provisions. Regional asset comprises all assets legally owned by a regional government and is a key component of financial governance, service delivery, and policy implementation at the local level. Proper and efficient management of such assets is not a mere administrative formality; it reflects the ability of a government to maximize the utilization of its resources for the greater public good, strengthening financial discipline and accountability, securing assets against fraud or mismanagement, and optimizing their benefits for community development.¹

This principle finds its legal basis in Regulation of the Minister of Home Affairs (*Peraturan Menteri Dalam Negeri/Permendagri*) Number 47 of 2021 and Government Regulation Number 27 of 2014 on the Management of State/Regional Assets. The legal framework prescribes the use of a standardized and integrated information system, the Regional Asset Information System (E-BMD), to facilitate proper recording, inventory, utilization, and supervision of regional assets. Ideally, this system should enable regional governments to produce accurate reports, control their assets effectively, and maximize their utility in delivering services to the community.²

In practice, however, the implementation of these regulations in the Riau Provincial Government has not yet been fully in conformity with the applicable legal framework. The administration of regional assets currently uses the E-BMD application. E-BMD, or Electronic BMD, is a financial application system used to manage regional assets (*Barang Milik Daerah/BMD*). However, this often results in unreliable inventories, weak control mechanisms, and under-utilization of assets. Furthermore, in local units, numerous related problems arise from a shortage of proficient human resources, weak protective measures for securing assets, and an inability to maximize the utilization of properties for service delivery and revenue enhancement. Such conditions undermine the principles of good governance, create inefficiencies, and may expose the region to financial losses and legal liabilities.³

¹ Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014. See too, Robert M. Mac Iver., The social significance of professional ethics, *The annals of the American academy of Political and Social Science*, Vol.101, no.1, 1922, page.10. See too, Raihanil Mahmudi., *Manajemen Kinerja Sektor Publik Edisi Kedua*, Yogyakarta, Upp Stim Ykpn, 2015, page.43. See too, Freddy Rangkuti., *Personal SWOT analysis*, Jakarta, Gramedia Pustaka Utama, 2015, page.23.

² Rasyidah Mustika., Evaluation of Fixed Asset Administration of the Padang City Government, *Accounting and Management*, Vol.10, no.1, 2015, page.65. See too, Sugeng Riyono., Regional Asset Utilization, *Journal of Public Administration*, Vol.11, no.2, 2013, page.240. See too, Arend Lijphart., Comparative politics and the comparative method, *American political science review*, Vol.65, no.3, 1971, p.690. See too, Muhammad Nateque Mahmood, Subas Prasad Dhakal, Kerry Brown, Robyn Keast, and Anna Wiewiora., Asset management policies and guidelines of different states in Australia: A comparative analysis, *Journal of Facilities Management*, Vol.12, no.3, 2014, page.300.

³ Rustanto Nanang, Connie Susilawati, and Martin Skitmore., Toward a public sector asset optimization strategy: the case of Indonesia, *Construction Innovation*, Vol.23, no.5, 2023, page.1188. See too, Slamet Slamet., Failure to Delegate Authority Management of Assets of State Islamic University as A Public Service Agency, *International Journal of e-business and e-*

Studies by Alhazmi⁴ and Backer and Yusoff⁵ underscore that weaknesses in asset management practices often arise from poor administrative controls, lack of expertise, and weak policy implementation mechanisms. Furthermore, Hanis et al.⁶ highlight that an effective framework for asset management must be supported by clear responsibilities, reliable data, and strong institutional controls. Alam et al.⁷ also affirm the necessity of policy ecosystem integration and multilevel bureaucratic coordination to enable policy implementation to align with legal and administrative standards. Without these conditions in place, the ability of a regional government to manage its assets efficiently will be compromised.⁸ This observation reveals a gap in practice which underscores the necessity to align legal framework and policy implementation in the field of regional asset management. Furthermore, previous studies underscore the necessity of policy ecosystem integration and multilevel bureaucratic coordination to align policy implementation with legal and administrative standards, a condition which is currently weak in the context of the Provincial Government of Riau.⁹

Government Studies, Vol.15, no.2, 2023, page.327. See too, Diaswati Mardiasmo, Charles Sampford, and Paul Barnes., Why stagnant? Behind the scenes in Indonesia's reformed state asset management policies, In *Proceedings of the 14th International Schumpeter Society Conference 2012*, page.23. AOM Events, 2012.

⁴ Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014.

⁵ Mohamed Ali bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3579. 2020.

⁶ Muhammad Hanis, Bambang Trigunaryah, and Connie Susilawati., Elements in public asset management framework for local governments in developing countries, In *Proceedings of the 2010 International Conference on Construction and Real Estate Management Volume 1*, page.413. China Architecture & Building Press, 2010.

⁷ Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.5.

⁸ Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.9. See too, Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014. See too, Mohamed Ali bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3575. 2020 See too, Victorina Tirayoh, Lady Latjandu, Harijanto Sabijono, and Christoffel Mintardjo., Public sector asset management in the government of Indonesia: A case study in Minahasa Regency, *Jurnal Bina Praja*, Vol.13, no.2, 2021, page.200. See too, Andi, Hamzah Latif Sugirman, Andi Darna, Muhammad Rizwan, and Jumriani Nawawi., State and Protection of Cultural Heritage in Bone, South Sulawesi: Perspectives on National Law and Islamic Law, *Samarah: Jurnal Hukum Keluarga dan Hukum Islam*, Vol.8, no.3, 2024, page.14267.

⁹ Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.10. See too, Muhammad Hanis, Bambang Trigunaryah, and Connie Susilawati., Elements in public asset management framework for local governments in developing countries, In *Proceedings of the 2010 International Conference on Construction and Real Estate Management Volume 1*, page.420. China Architecture & Building Press, 2010. See too, Rahayu Subekti, Adi Sulistiyono, Diah Pawestri Maharani, and I. Gusti Ayu Gangga Santi Dewi., The urgency of the

This observation reveals a gap in practice which underscores the necessity to align the legal framework and policy implementation in the field of regional asset management. Previous studies predominantly addressed the administrative and policy dimensions of asset management,¹⁰ yet there is a scarcity of legal perspectives that thoroughly identify root causes of non-compliance and inefficiencies in the application of regulations at the regional level.¹¹ Furthermore, policy strategies to resolve these problems from a legal standpoint remain underdeveloped, particularly in the context of the Riau Provincial Government.

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Therefore, this research aims to fill this gap by employing a legal framework to comprehensively identify the main problems in the implementation of regional asset management in Riau Province, investigate their root causes, and propose policy strategies to align practice with applicable legal provisions. To pursue these aims, this study utilizes legal concepts and asset management theory alongside a root-cause analysis approach and SWOT strategy to produce policy recommendations.¹³ The ultimate objective is to enable the Provincial Government

legal strategy of abandoned-land use through the formation of land bank in Indonesia, *Cogent Social Sciences*, Vol.9, no.1, 2023, page.2239050.

- ¹⁰ Mohamed Ali bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3576. 2020. See too, Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.7. See too, Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014.
- ¹¹ Rustanto Nanang, Connie Susilawati, and Martin Skitmore., Toward a public sector asset optimization strategy: the case of Indonesia, *Construction Innovation*, Vol.23, no.5, 2023, page.1207. See too, Andi, Hamzah Latif Sugirman, Andi Darna, Muhammad Rizwan, and Jumriani Nawawi., State and Protection of Cultural Heritage in Bone, South Sulawesi: Perspectives on National Law and Islamic Law, *Samarah: Jurnal Hukum Keluarga dan Hukum Islam*, Vol.8, no.3, 2024, page.14264.
- ¹² Mohamed Ali bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3573. 2020. See too, Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014.
- ¹³ Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014. See too, Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.12. See too, Mohamed Ali

of Riau to reform its practices, strengthening legal compliance, administrative discipline, and policy implementation to maximize the benefits of regional assets in delivering services to the community. This inquiry is expected to provide a valuable legal perspective and policy framework for improving the management of regional asset in Riau Province, and to contribute to strengthening the implementation of applicable regulations in a more effective, accountable, and sustainable manner. The results of this study may also serve as a policy consideration for other regions experiencing analogous problems in the administration of their assets.

2. Research Methods

This study utilizes an empirical legal approach with a descriptive qualitative method to comprehensively uncover and analyze the implementation of regional asset management (*Barang Milik Daerah*/BMD) in Riau Province. The empirical legal approach was chosen to bridge the gap between the legal framework and its actual application in practice. Specifically, this approach allows the researcher to observe and interpret how laws and regulations particularly Government Regulation Number 27 of 2014 and Regulation of the Minister of Home Affairs Number 47 of 2021 are implemented by the Provincial Government of Riau in managing its assets. Moreover, this approach allows the researcher to observe and interpret how laws and regulations particularly Government Regulation Number 27 of 2014, Government Regulation Number 28 of 2020, Government Regulation Number 38 of 2008, Government Regulation Number 6 of 2006, Peraturan Menteri Dalam Negeri (Permendagri) Number 47 of 2021, Permendagri Number 19 of 2016, Permendagri Number 108 of 2016, Permendagri Number 17 of 2007, Law Number 23 of 2014, Law Number 25 of 2002, Law Number 17 of 2003, Peraturan Daerah Provinsi Riau Number 25 of 2018, and Peraturan Gubernur Provinsi Riau Number 79 of 2020, are implemented by the Provincial Government of Riau in managing its assets.

The research was carried out in three stages. The first stage focuses on analyzing the BMD management cycle, which comprises 11 interconnected processes as defined by Government Regulation Number 27 of 2014. To gather data at this stage, the researcher collected information from 34 Regional Apparatus Organizations (*Organisasi Perangkat Daerah* or OPD) within the Riau Provincial Government, acting as the primary users of the assets. The main techniques for obtaining this data were observation and document review. The second stage made use of the output from the first, particularly the Pareto diagram of problems, to identify key issues in implementation. At this stage, the theoretical framework of Asset Management was applied to interpret the main problems.

To strengthen this analysis, the researcher conducted triangulation of data by interviewing the heads of Regional Apparatus Organizations and related stakeholders. The third stage drew upon the results from the second, employing SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis to assess internal and external factors affecting the implementation of BMD management policy in Riau Province. The main data collection in this phase came from in-depth

bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3577. 2020.

interviews with heads of OPD and other representatives. The combination of empirical legal, descriptive qualitative, and SWOT methods provided a comprehensive view of the implementation gap and policy strategies to align practice with applicable legal provisions.

3. Results and Discussion

3.1. Identification of Key Problems in Regional Asset Management

The lack of attention to the management and maintenance of regional assets that are irregular and less orderly in the implementation of regional asset management rules is often reflected in the review of the Financial Audit Agency (*Badan Pemeriksa Keuangan/BPK*) of the finances of the Riau Provincial Government. Regional fixed asset management is an effort that is carried out effectively and efficiently to increase added value for local governments in increasing revenue and supporting their role as a public organization serving the community. Asset management starts from the planning stage to deletion. The management of regional asset in Indonesia is regulated in Permendagri Number 19 of 2016 concerning the Management of regional asset by detailing the management of assets divided into 11 stages, namely: needs planning and budgeting, procurement, use, utilization, security and maintenance, assessment, signing, destruction, elimination, administration and coaching, supervision and control.

The initial identification of this study seeks to visualize the problems of regional asset management in Riau Province and help identify and prioritize factors that have a major impact on the problem. This process begins by identifying the problem and grouping the related factors into relevant categories, where the factors are arranged in descending order based on their frequency or impact. This graph also displays a cumulative line showing the relative contribution of each factor. With this visualization, the dominant factors on the left side of the graph become priority targets for intervention, allowing for more effective and efficient handling of the problem. In this study, it was found that there are four cyclical processes that are often encountered. The problems are: Planning of Needs and Budgeting of regional asset, Procurement of regional asset, Use of regional asset, and Utilization of regional asset.

The BMD administration system in Riau Province still faces several problems that need to be overcome. One of the main problems is the use of a manual administration system that includes inventory, reconciliation, and asset reporting, which is contrary to Permendagri 47 of 2021, which requires the use of E-BMD. This manual system has a high risk of error and has not provided confidence and certainty of value in the BMD report. Other inhibiting factors include the limitations of information technology, such as IT infrastructure and human resources that master IT, as well as limited budgets for BMD inventory and a lack of training for OPD employees in using the E-BMD system. As a result, the efficiency and accuracy of BMD management is still low, and policy-making based on reliable databases has not been effective yet. To overcome this problem, several solutions are needed, including the provision of adequate IT infrastructure, intensive training for OPD employees, adequate budget support, BMD administration training in accordance with Permendagri 47 of 2021, and increasing employee awareness of the importance of good administration. With the implementation of these solutions, it is hoped that Riau Province can overcome problems in BMD

administration and achieve higher efficiency and accuracy in accordance with the provisions of Permendagri 47 of 2021. To identify the problem, the study conducted an interview of the Head of the Subdivision of Security and Utilization of BMD or Riau Provincial Government. Table 1 showed that problems related to the legal security of Riau Provincial Regional Asset, such as first, not all BMDs have complete ownership documents, which can potentially cause legal problems in the future, including ownership disputes and difficulties in transferring assets.

Table 1. Legal Security Problems of regional asset

Yes	Information	Sum
1	Number of Land Plots	1112 Parsley
2	Certified Land	510 Parsley
3	Uncertified Land	602 Parsley

In addition, the physical security of assets has not been optimal. Many BMD lands are left abandoned without boundary signs and ownership signs, so there is a risk of them being used by other parties illegally. Lack of maintenance is also a major issue, where many assets are not properly maintained, thus potentially experiencing damage and depreciation. Sub-optimal maintenance can increase the risk of loss and shorten the life of assets, resulting in losses for local governments. Additionally, this problem creates security gaps and inefficiencies in asset management. Furthermore, BMD recording and reporting are not optimal, making it difficult to track the existence and condition of assets. Incomplete and inaccurate records increase the risk of asset loss and misuse, and complicate the auditing and data-driven decision-making process.

Table 2. Progress of Certification of Riau Provincial Government

NO	CERTIFICATION PROGRESS	CERTIFICATE ADDITION
1	Year 2020	9 Parsley
2	Year 2021	19 Parsley
3	Year 2022	68 Parsley

Source: BPKAD Riau Province, 2024

The amount of land that needs BMD security measures, which is still very large, is 602 parcels, not followed by the implementation of adequate BMD certification. This can be seen from the increase in certification, but with a relatively small amount, namely only 11% of the total land that has not been certified (68 parcels out of 602 parcels). If the performance of security runs with an average of 60 percent of certificates per year, it will take almost 10 years for the implementation of BMD certification by the Riau Provincial Government. Table 2 shows the progress of regional asset (BMD) certification by the Riau Provincial Government from 2020 to 2022. In 2020, only 9 land parcels were certified, increasing to 19 in 2021, and significantly rising to 68 in 2022, as reported by Regional Financial and

Asset Management Agency (*Badan Pengelola Keuangan dan Aset Daerah/BPKAD*) Riau Province in 2024. Despite this progress, the certification rate remains low, covering only 11% of the 602 uncertified parcels. At this pace, achieving full certification could take nearly a decade, highlighting the need for faster processes to secure legal ownership and prevent disputes over regional assets.

The next problem is related to problems in the cycle of regional asset Utilization in the Regional Government of Riau Province. The use of BMD is still very minimal by the Riau Provincial Government. This can be seen from the fact that there are still many Regional Asset assets of the Riau Provincial Government that are in idle condition on the Goods Inventory Card (*Kartu Inventaris Barang/KIB*) of the Goods Manager. Currently, it is recorded that, based on the data from BPKAD Riau Province 2024, in the Goods Manager there are 142 land parcels with a value of IDR 2,861,108,207,906 which can be optimized by the Riau Provincial Government. The amount of land is very large in comparison to the amount that has been optimized, which is IDR 100,048,546,000.

This means that currently the Riau Provincial Government utilizes only 4% of the total BMD in the Goods Manager, where the BMD in the Goods Manager is BMD in idle status or silent and is not being used for Regional Government operations. The potential for increasing the use of regional asset in Riau Province by up to 20 times is still not fully explored. One of the main problems is the mechanism of borrowing and using BMD that does not comply with the provisions. For example, there are often no documents for submitting applications, research by goods managers, or the governor's approval for borrowing. This violates the Regulation of the Minister of Home Affairs Number 19 of 2016, especially Article 72 and Article 164, which stipulate that the use of BMD by other parties must be outlined in the agreement and the loan application must be approved by the governor, regent, or mayor by attaching certain documents.

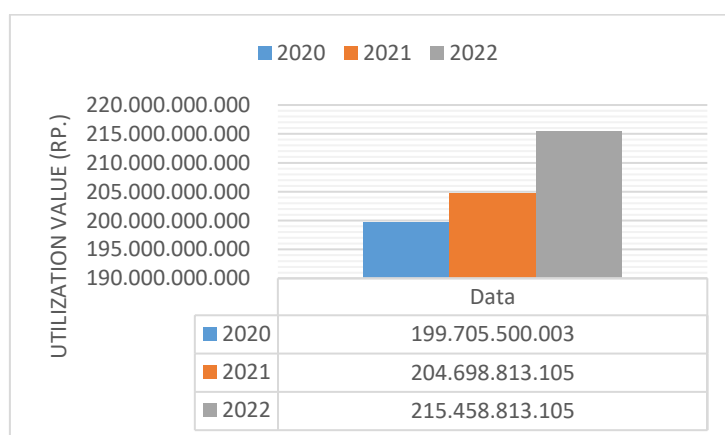


Figure 1. The Value of regional asset Utilization of Riau Province

Furthermore, the impact of poor BMD utilization is significant, as many assets remain underused and do not provide the benefits they should for both the OPD and the community. These assets are not managed optimally or efficiently, which results in missed opportunities to improve public services, foster community welfare, and maximize the potential of regional resources. Furthermore, this sub-optimal utilization directly contributes to the loss of regional original revenue

potential. OPD miss the opportunity to generate additional income from these underused assets income that could have been leveraged to fund various development programs and provide better services to the community. As shown in Figure 1, with total BMD valued at approximately IDR 45 trillion, and the total utilization of assets which has been gradually increasing from 2020 to 2022 (about IDR 220 billion) still far from its full potential, there is a clear need to optimize the use of these assets to produce greater benefits for the region and its people.

The findings of this study highlight critical issues in the management of regional asset (BMD) in Riau Province, aligning with prior research on public asset management inefficiencies. The reliance on manual administration systems, contrary to Permendagri 47/2021, mirrors findings by Karmila et al.¹⁴ who noted that inadequate IT infrastructure and limited human resource capacity hinder reliable financial reporting in Riau. Similarly, Alhazmi¹⁵ identified poor IT adoption as a barrier to effective asset management in Saudi Arabia's public sector, emphasizing the need for digital systems like E-BMD to enhance accuracy and efficiency.

The low certification rate (11% of 602 parcels) reflects challenges in legal security, consistent with Hanis et al.¹⁶ who found incomplete ownership documentation as a common issue in developing countries' local governments. This is further supported by Subekti et al.¹⁷ who highlighted legal ambiguities in Indonesian land asset management, increasing dispute risks. Comparatively, the underutilization of BMD (only 4% optimized) aligns with Mardiasmo et al.¹⁸ who reported stagnant asset utilization in Indonesia due to non-compliance with regulations like Permendagri 19/2016. Alam et al.¹⁹ advocate for integrated policy ecosystems to enhance asset use, suggesting Riau's issues stem from weak inter-agency coordination, as also noted by Backer and Yusoff.²⁰

The lack of maintenance and physical security, leading to asset depreciation,

¹⁴ Karmila Karmila, Amries Rusli Tanjung, and Edfan Darlis., The Influence of Human Resource Capacity, Information Technology Utilization, and Internal Control on the Reliability of Local Government Financial Reporting (Study on the Riau Provincial Government), *Sosspotlight*, Vol.9, no.1, 2014, page.40.

¹⁵ Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014.

¹⁶ Muhammad Hanis, Bambang Trigunarsyah, and Connie Susilawati., Elements in public asset management framework for local governments in developing countries, In *Proceedings of the 2010 International Conference on Construction and Real Estate Management Volume 1*, page.422. China Architecture & Building Press, 2010.

¹⁷ Rahayu Subekti, Adi Sulistiyono, Diah Pawestri Maharani, and I. Gusti Ayu Gangga Santi Dewi., The urgency of the legal strategy of abandoned-land use through the formation of land bank in Indonesia, *Cogent Social Sciences*, Vol.9, no.1, 2023, page.2239051.

¹⁸ Diaswati Mardiasmo, Charles Sampford, and Paul Barnes., Why stagnant? Behind the scenes in Indonesia's reformed state asset management policies, In *Proceedings of the 14th International Schumpeter Society Conference 2012*, page.25. AOM Events, 2012.

¹⁹ Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.10.

²⁰ Mohamed Ali bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3574. 2020.

corroborates Yaotai,²¹ who linked poor maintenance to financial losses in U.S. state governments. Akbar and Handayani²² emphasize that suboptimal asset management reduces public service delivery, a concern evident in Riau's missed revenue opportunities. Strengthening these findings, some studies supports the use of qualitative methods like the Pareto diagram to prioritize intervention areas, validating this study's approach.²³ Nanang et al.²⁴ and Tirayoh et al.²⁵ propose structured SOPs and training, aligning with suggested solutions for Riau, such as enhanced IT infrastructure and OPD capacity building. Additionally, Puspitarini and Devianto²⁶ and Andriyani and Ernanda²⁷ underscore the importance of accurate asset valuation, which Riau lacks due to manual processes. The slow certification progress (Table 2) echoes Sugirman et al.²⁸ who noted delays in securing cultural heritage assets in Indonesia. Implementing E-BMD, as mandated, and fostering leadership commitment, as suggested by Oky and Zaid,²⁹ could address these gaps, ensuring compliance, efficiency, and accountability in BMD management.

3.2. Root Cause Analysis of regional asset management Challenges

The problems were then identified within the four related cycles of regional asset management. To uncover the root causes of these problems, the 5 Whys method was applied. This approach involves repeatedly asking "why" until the fundamental issues become clear. The results of the 5 Whys analysis were subsequently processed using a Fishbone Diagram, as shown in Figure 2.

²¹ Yaotai Lu., *Public Asset Management: Empirical evidence from the state governments in the United States*, Florida, Florida Atlantic University, 2011, page.23.

²² Bahrullah Akbar., *Public sector accounting: concepts and theories*, Jakarta, CV. Bumi Metro Raya, 2013, page.54. See too, Meity Handayani., Evaluation of the Presentation of Fixed Asset Reporting to Improve Government Institutional Supervision, *Journal of Bina Praja*, Vol.5, no.3, 2013, page.192.

²³ Ward Creswell John and J. David Creswell., *Research design: Qualitative, quantitative, and mixed methods approaches*, London: Sage Publications, 2009, page.54.

²⁴ Rustanto Nanang, Connie Susilawati, and Martin Skitmore., Toward a public sector asset optimization strategy: the case of Indonesia, *Construction Innovation*, Vol.23, no.5, 2023, page.1182.

²⁵ Victorina Tirayoh, Lady Latjandu, Harijanto Sabijono, and Christoffel Mintardjo., Public sector asset management in the government of Indonesia: A case study in Minahasa Regency, *Jurnal Bina Praja*, Vol.13, no.2, 2021, page.202.

²⁶ Intan Puspitarini, and Irfan Rachmat Devianto., Determinants of public asset value for land property: A study in the city of Tangerang, Indonesia, *Planning Malaysia*, Vol.19, no.3, 2021, page.23.

²⁷ Idah Andriyani, and Heru Ernanda., Implementation of asset management on operation and maintenance of irrigation system, lesson from Pao irrigation system in Bondowoso District, East Java, Indonesia, In *AIP Conference Proceedings*, vol. 3176, no. 1. AIP Publishing, 2024.

²⁸ Andi, Hamzah Latif Sugirman, Andi Darna, Muhammad Rizwan, and Jumriani Nawawi., State and Protection of Cultural Heritage in Bone, South Sulawesi: Perspectives on National Law and Islamic Law, *Samarah: Jurnal Hukum Keluarga dan Hukum Islam*, Vol.8, no.3, 2024, page.14261.

²⁹ Rachmad Oky and Aminuddin Zaid., Advocating for Enhanced Understanding: Empowering Government Officials with Insights into Village Income Dynamics, *Jurnal Pengabdian Hukum Indonesia (Indonesian Journal of Legal Community Engagement)*, Vol.6, no.1, 2023, page.182.

3.2.1. Asset Inventory

The Riau Provincial Government faces various serious problems in asset inventory, which significantly hinder the efficiency and effectiveness of regional asset (BMD) management. Poor data quality is a major challenge, where asset data is often inaccurate and outdated due to a lack of regular inventories, less careful manual processes, and gaps between field data and the system. Furthermore, proof of asset ownership is frequently incomplete, document processing is cumbersome, and weak coordination between agencies worsens the situation. Data integrity is also low, with recordings still done manually, a lack of integrated systems, and a shortage of human resources proficient in Information and Communication Technology (ICT).

Business processes related to inefficient asset management are marked by inventories that do not comply with Minister of Home Affairs Regulation Number 47 of 2021, slow data updating, and complex asset document management. All of this is exacerbated by limited resources, a tight budget, and a lack of training, which results in employees having poor competency in asset management. The use of information technology is also very limited, with a scarcity of integrated applications for asset management, which hinders the development and management of information systems. Weakness in management is further apparent in the lack of leadership commitment, weak supervision and monitoring, the absence of clear standards and procedures, and poor coordination between Regional Apparatus Organizations (OPD), all of which contribute to sub-optimal asset management in Riau Province.

Therefore, comprehensive and structured measures are required to resolve these issues, such as optimizing the data updating process through information technology, strengthening coordination between OPDs, improving training and socialization for related OPDs, formulating clear standards and procedures, strengthening supervision and monitoring, digitizing inventories, developing an integrated BMD information system (E-BMD), and preparing performance-based planning and budgeting. With the implementation of these solutions, it is expected that the management of inventory, classification, real-time updating, and proof of ownership of BMD in Riau Province will become more effective, efficient, and accountable, thereby yielding optimal benefits for regional asset management and development.

3.2.2 Legal Audit

The Riau Provincial Government faces significant challenges in asset management, particularly related to inaccuracies and outdated data. This is due to a lack of regular inventories, manual processes that are still in use, and poor data integration, which results in unreliable information. Furthermore, many assets do not have complete

ownership documents, causing unclear ownership proof. Asset valuations are often inaccurate due to a lack of knowledge, clear Standard Operational Procedures (SOPs), and effective coordination between agencies. The process of updating data is slow because it is done manually and in a non-structured way, while the asset valuation process is inefficient due to a shortage of competent human resources and inadequate facilities and infrastructure.

This human resources limitation includes a lack of expertise in asset valuation and management, which further worsens the condition of asset management in the province. Without adequate facilities and infrastructure, the asset valuation process becomes difficult to implement accurately and efficiently, resulting in far-from-optimal asset management.

3.2.3. Asset Valuation

The valuation of regional assets (BMD) in Riau Province is a crucial aspect of asset management that aims to ensure the efficiency and effectiveness of asset utilization. Selecting appropriate valuation methods and relevant criteria is extremely important to guarantee the accuracy of asset values, reflect their true worth, and support strategic decision-making. The appraisal team must possess appropriate qualifications and certifications, while a thorough analysis of data sources is required to assure the certainty, verification, and reliability of information used in the valuation process.

However, various challenges are encountered, including a lack of coordination and understanding of the BMD valuation process, unpreparedness of data and physical conditions of BMD, and poor communication and utilization of information technology. Low transparency in the valuation process is also a significant barrier. To resolve these issues, there needs to be improved coordination, enhancement of data and physical conditions of BMD, and greater communication and socialization of valuation results. Furthermore, the transparency of the valuation process and the credibility of the assessors must be strengthened to increase acceptance and trust in the results.

In conclusion, BMD valuation is a key element in regional asset management. By applying appropriate methods and criteria and maintaining the credibility of the process, the results can be optimally used for strategic decision-making. Overcoming these challenges and implementing effective solutions will support more transparent, accountable, and beneficial asset management for the community.

3.2.4. Asset Optimization

A lack of understanding about the importance of BMD management at various organizational levels results in insufficient attention and

allocation of resources. Human resources and facilities are not adequately available to carry out management tasks optimally, causing inefficiencies and inaccuracies in asset management. Furthermore, poor coordination, both internally and externally, results in overlapping responsibilities and inconsistent policy implementation, which further hampers policy delivery. Weaknesses in regulations and standardization create legal gaps and allow for abuse of assets. Additionally, an organizational culture that does not yet support accountability and innovation inhibits progress and initiatives for improvement in BMD management.

To resolve these issues, several solutions can be implemented. First, understanding of the importance of BMD management should be enhanced through training and socialization for stakeholders. Second, institutional strengthening should be carried out by formulating a comprehensive management strategy, forming a professional team, and improving coordination and facilities. Third, developing human resources' capacity through training and certification will help improve knowledge and skills in BMD management. These measures aim to increase the effectiveness of BMD management, assure accountability, and create greater transparency, thereby supporting the optimal and sustainable management of regional assets.

3.2.5. Supervision and Control

The supervision of regional assets (BMD) in Riau Province faces challenges such as weak compliance, poor internal controls, and difficulties in implementing corrective and preventive measures. Data verification is hampered by limited understanding of procedures, technological constraints, shortage of competent human resources, and poor coordination, all of which can lead to asset misuse, losses, and non-compliance with policies. The proposed solutions include implementing strict internal controls, regular training, clear supervision policies, enhanced education on verification procedures, technology upgrades, and human resource development. Control failures often arise from low budget priorities for technology to support asset management, which results in deviations, asset losses, and an increased risk of non-compliance. To address these issues, it is necessary to implement strict Standard Operating Procedures (SOPs), improve coordination, enforce policy compliance, allocate a sufficient budget for technology, and evaluate and enhance leadership capacities. Overall, optimizing BMD management in Riau Province requires special attention to information system design, supervision, and control mechanisms. The main issues that need addressing include information transparency, data integration, oversight and verification processes, and control and audits. By implementing appropriate solutions, such as training, improving regulations and infrastructure, and applying adequate SOPs and technology, it is expected that BMD

management can become more transparent, accountable, and efficient. --- Let me know if you'd like any tweaks in style or tone.

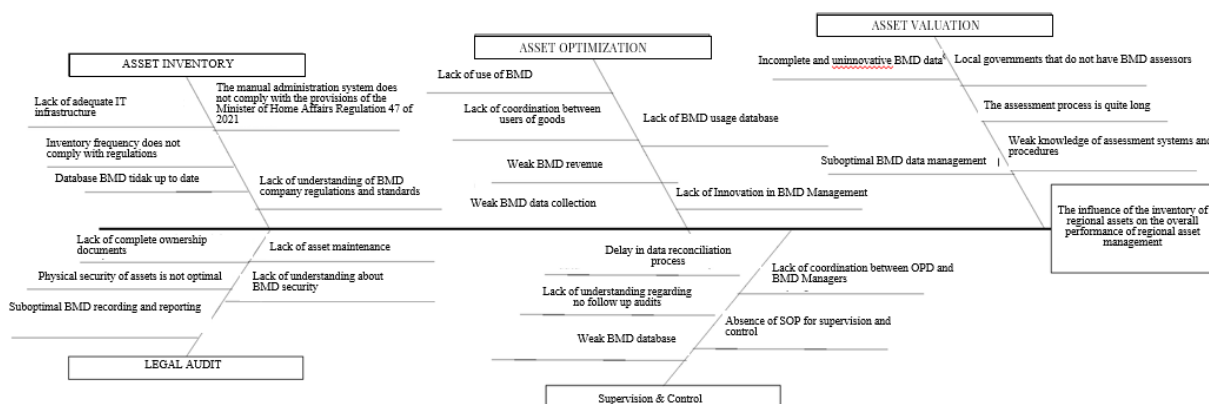


Figure 2. Fishbone Diagram Problem Analysis in the Asset Management Cycle

Source: Data Processed, 2024

The root cause analysis using the 5 Whys method and Fishbone Diagram reveals systemic deficiencies in Riau Province's regional asset (BMD) management, aligning with global and Indonesian studies. Poor data quality and manual processes, as identified in asset inventory, echo Karmila et al.³⁰ who found inadequate IT infrastructure undermines financial reporting reliability in Riau. Alhazmi³¹ similarly notes that limited IT adoption hampers Saudi public sector asset management, reinforcing the need for E-BMD systems per Permendagri 47/2021. Incomplete ownership documentation, a key legal audit issue, aligns with Hanis et al.³² who identified documentation gaps in developing countries, and Subekti et al.³³ who highlight legal ambiguities in Indonesian land assets. Asset valuation challenges due to insufficient expertise mirror Puspitarini and Devianto,³⁴ emphasizing the need for qualified appraisers.

Comparatively, underutilization of assets (Section 3.2.4) reflects Mardiasmo et al.³⁵

³⁰ Karmila Karmila, Amries Rusli Tanjung, and Edfan Darlis., The Influence of Human Resource Capacity, Information Technology Utilization, and Internal Control on the Reliability of Local Government Financial Reporting (Study on the Riau Provincial Government), *Sosspotlight*, Vol.9, no.1, 2014, page.43.

³¹ Naief Mohammed Alhazmi., Improving asset management in the public sector in the Kingdom of Saudi Arabia, PhD diss., University of Leeds, 2014.

³² Muhammad Hanis, Bambang Trigunaryah, and Connie Susilawati., Elements in public asset management framework for local governments in developing countries, In *Proceedings of the 2010 International Conference on Construction and Real Estate Management Volume 1*, page.424. China Architecture & Building Press, 2010.

³³ Rahayu Subekti, Adi Sulistiyono, Diah Pawestri Maharani, and I. Gusti Ayu Gangga Santi Dewi., The urgency of the legal strategy of abandoned-land use through the formation of land bank in Indonesia, *Cogent Social Sciences*, Vol.9, no.1, 2023, page.2239053.

³⁴ Intan Puspitarini, and Irfan Rachmat Devianto., Determinants of public asset value for land property: A study in the city of Tangerang, Indonesia, *Planning Malaysia*, Vol.19, no.3, 2021, page.25.

³⁵ Diaswati Mardiasmo, Charles Sampford, and Paul Barnes., Why stagnant? Behind the scenes in Indonesia's reformed state asset management policies, In *Proceedings of the 14th International Schumpeter Society Conference 2012*, page.21. AOM Events, 2012.

who noted stagnant asset use in Indonesia due to non-compliance with regulations like Permendagri 19/2016. Alam et al.³⁶ and Backer and Yusoff³⁷ attribute such issues to weak inter-agency coordination, evident in Riau's poor OPD collaboration. Supervision and control failures, driven by weak internal controls, align with Akbar,³⁸ who stressed accountability gaps in public finance. Lu³⁹ and Giglio et al.⁴⁰ advocate lifecycle management to address maintenance and depreciation issues, as seen in Riau's suboptimal asset care. Schraven et al.⁴¹ highlight coordination and technology deficits in public infrastructure management, supporting Riau's need for integrated systems.

Further reinforcing these findings, Rymarzak and Trojanowski⁴² highlight that public sector asset management in Poland suffers from inadequate documentation and maintenance, similar to Riau's issues with uncertified parcels and abandoned lands. Giglio et al.⁴³ advocate for lifecycle asset management to optimize public sector assets, suggesting Riau's underutilization could be addressed through systematic planning and maintenance. Schraven et al.⁴⁴ note that ineffective infrastructure asset management, as seen in Riau's manual systems, stems from poor coordination and limited technological adoption. Yaotai⁴⁵ emphasizes a holistic approach to public capital asset management, supporting the need for integrated E-BMD systems and enhanced inter-agency collaboration to improve Riau's BMD efficiency and accountability.

³⁶ Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.16.

³⁷ Mohamed Ali bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3571. 2020.

³⁸ Bahrullah Akbar., *Public sector accounting: concepts and theories*, Jakarta, CV. Bumi Metro Raya, 2013, page.54. See too, Meity Handayani., Evaluation of the Presentation of Fixed Asset Reporting to Improve Government Institutional Supervision, *Journal of Bina Praja*, Vol.5, no.3, 2013, page.194.

³⁹ Yaotai Lu., *Public Asset Management: Empirical evidence from the state governments in the United States*, Florida, Florida Atlantic University, 2011, page.24.

⁴⁰ Joseph M. Giglio., John H. Friar, and William F. Crittenden., Integrating lifecycle asset management in the public sector, *Business Horizons*, Vol.61, no.4, 2018, page.511.

⁴¹ Daan Schraven, Andreas Hartmann, and Geert Dewulf., Effectiveness of infrastructure asset management: challenges for public agencies, Built environment project and asset management, Vol.1, no.1, 2011, page.72.

⁴² Małgorzata Rymarzak and Dariusz Trojanowski., Asset management of the public sector in Poland, *Real estate management and valuation*, Vol.21, no.1, 2013, page.11.

⁴³ Joseph M. Giglio., John H. Friar, and William F. Crittenden., Integrating lifecycle asset management in the public sector, *Business Horizons*, Vol.61, no.4, 2018, page.513.

⁴⁴ Daan Schraven, Andreas Hartmann, and Geert Dewulf., Effectiveness of infrastructure asset management: challenges for public agencies, Built environment project and asset management, Vol.1, no.1, 2011, page.72.

⁴⁵ Yaotai Lu., Public capital asset management: A holistic perspective, *Journal of Public Procurement*, Vol.17, no.4, 2017, page.521.

3.3. Policy Strategies for Enhanced Regional Asset Management

The Riau Provincial Government can take advantage of existing strengths and opportunities by optimizing the use of the E-BMD application to increase the efficiency and effectiveness of regional asset management. With strong leadership commitment and supportive regulations, the government can enhance BMD management through better synergy and cooperation between agencies. To address weaknesses such as incomplete asset documentation and sub-optimal utilization the government needs to improve documentation to increase accountability and transparency and maximize the economic value of regional assets. In the face of threats, such as regulatory changes and security challenges, human resource capacity-building and technology utilization become top priorities. Strengthening regulations and policies is also crucial to ensuring the optimal management of strategic assets.

Furthermore, improving cooperation and communication between agencies will help resolve weaknesses in existing coordination. When faced with the risks of regulatory and security disruptions, the government needs to focus on training and monitoring its personnel to respond effectively to change. Enhancing physical and digital security systems is equally important to protect assets from potential breaches. Finally, implementing risk management will help the government deal with potential natural disasters that may affect regional asset management. With this strategy, it is hoped that BMD management in Riau Province can become more effective, efficient, and secure. After the above process, it is assumed that using the IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) matrix as the unit of analysis in formulating the SWOT strategy will help quantify the research findings (Table 3).

Table 3. IFAS and EFAS Assessment Matrix

Strengths	Significance	Weight	Rating	Score
Successive achievement of unqualified (WTP) opinions from BPK	1	0.05	1	0.05
Clear and structured organizational structure	2	0.1	2	0.2
Regulations governing asset management	1	0.05	3	0.15
Reliable performance of the Riau Provincial Budget	2	0.1	3	0.3
Subtotal		0.4		1
Weaknesses				
Absence of information system in asset management	3	0.15	5	0.75
Limitations of the competence of human resources of goods managers	3	0.15	3	0.45
Inadequate supporting facilities and infrastructure	1	0.05	2	0.1
Distribution of inadequate asset management budget	3	0.15	5	0.75
Subtotal		0.6		2.4
Total	20	1		3.4
Opportunities				
Utilization of information technology	3	0.2	5	0.8
Regulations for asset management transformation that are already available	2	0.1	3	0.3
Total unoptimized asset management is still high	1	0.1	3	0.2
Subtotal				1.5

Strengths	Significance	Weight	Rating	Score
Threats				
Regulatory Changes	3	0.2	5	0.8
Inadequate asset management security	3	0.2	5	0.8
Implementation of asset management without the support of information technology	3	0.2	4	0.6
Public trust in the Regional Government has declined	1	0.1	1	0.1
Subtotal				2.3

Table 3 shows the results of the IFAS and EFAS analysis for the Riau Provincial Government's asset management. The Internal Factor Analysis Summary (IFAS) highlights both the strengths and weaknesses within the organization. The main strengths include a clear and structured organizational structure, reliable financial performance, regulations governing asset management, and successive achievements of unqualified (*Wajar Tanpa Pengecualian*/WTP) opinions from the Supreme Audit Agency (*Badan Pemeriksa Keuangan*/BPK). However, weaknesses outweigh these strengths. The greatest weaknesses identified are the absence of a proper information system for asset management, limitations in human resources' competency, distribution of the asset management budget, and inadequate facilities and infrastructure.

Meanwhile, the External Factor Analysis Summary (EFAS) shows opportunities and threats from outside the organization. Opportunities, such as the utilization of information technology and existing regulations for transformation, are available to improve management practices. Nevertheless, significant external threats remain, including policy and regulatory changes, weak asset security, the implementation of asset management without technology, and declining public trust in the regional government. Overall, the IFAS score (-0.8) and EFAS score (-) reflect a weak condition that necessitates internal strengthening and strategies to maximize opportunities while mitigating weaknesses and addressing external threats.

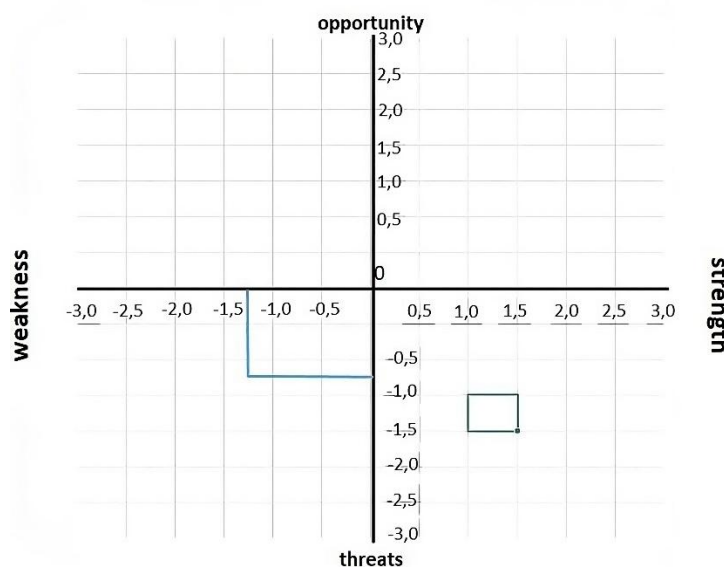


Figure 3. Asset Management SWOT Quadrant

Source: processed by researchers, 2024

Based on the findings, the scope of regional asset management by the Riau Provincial Government has frequently encountered recurring problems. Furthermore, the main issues identified in the implementation of regional asset management in Riau Province highlight the need for a clear strategy and action plan to improve the performance of the implementation of asset management across the Provincial Government.

The first and most crucial step to strengthening the implementation of regional asset management in Riau is the preparation and development of human resources. The apparatus responsible for managing these assets, particularly the User of Assets (*Pengguna Barang*), plays a key role in this process. The User of Assets is directly involved in the day-to-day management and utilization of regional assets distributed to their respective organizations. Therefore, improving their competency and understanding of asset management is essential to maximize their roles and responsibilities in safeguarding and optimizing the use of these assets.

Furthermore, strengthening the system and procedures is equally important. The implementation of BMD management should be supported by an integrated information system to produce real-time data and to align with the Minister of Home Affairs Regulations Number 19 of 2016 and Number 47 of 2021. Establishing Standard Operational Procedures (S.O.P) will help streamline the process of implementing Regional Asset Management across the Regional Apparatus Organization (Organisasi Perangkat Daerah or OPD) in Riau Province.

To standardize the management of regional assets, the Riau Provincial Government needs to distribute responsibilities that were previously centralized under the Regional Financial and Asset Management Agency (BPKAD) to all OPDs. This redistribution is expected to affect the budgeting process, considering that the first step in the implementation of the Regional Asset Management cycle is the planning of needs and the allocation of the budget. This approach will help avoid inequality or a lack of budget allocation in certain OPDs.

Before the utilization of regional assets, the administrative process must be carried out through E-BMD, in conformity with the Regulation of the Minister of Home Affairs Number 47 of 2021. The use of this platform aims to optimize the implementation of regional asset management in Riau Province. With the total value of regional assets amounting to approximately 43 trillion rupiah, it is crucial to maximize their utilization in a way that is in harmony with existing laws and regulations. Encouraging the use of idle or under-utilized Regional Assets can help realize their full potential and benefits, not only for the government's financial health but also for the delivery of services to the community.⁴⁶

⁴⁶ Muhammad Hasbi Hanis., *A public asset management framework for Indonesian local governments*, PhD diss., Queensland University of Technology, 2012. See too, Yuli Yasin, Muhammad Irfan Helmy, Ali Ma'yuf, and Agus Arwani., Waqf and sustainable development law: models of waqf institutions in the Kingdom of Saudi Arabia and Indonesia, *Ijtihad: Jurnal Wacana Hukum Islam Dan Kemanusiaan*, Vol.23, no.1, 2023, page.111. See too, Liosten Rianna Roosida Uly Tampubolon, Siti Marwiyah, and Eny Haryati., Integrating CBT and SWOT models for marine ecotourism management in Tlocor Indonesia, *Cogent Social Sciences*, Vol.11, no.1, 2025, page.2494713. See too, Dhiana Puspitawati, Moh Fadli, Mustafa Lutfi, Syahriza Alkhoir Anggoro,

Through these strategies, developing human resources, strengthening procedures and systems, and optimizing the utilization of assets, the Riau Provincial Government can implement a more effective, efficient, and transparent Regional Asset Management process. This will, in turn, maximize the benefits of these assets for the people of Riau Province.

The proposed strategies for Riau's regional asset (BMD) management, leveraging E-BMD, capacity building, and enhanced coordination, align with global and Indonesian research. The emphasis on adopting E-BMD to address manual system inefficiencies (Table 3, weakness weight 0.15) mirrors Naief,⁴⁷ who found digital systems critical for Saudi public sector efficiency. Karmila et al.⁴⁸ confirm IT infrastructure deficits hinder Riau's financial reporting, justifying E-BMD implementation. Strengthening human resource capacity aligns with Afandi,⁴⁹ emphasizing training to overcome competency gaps (weight 0.15). Hanis et al. support decentralizing responsibilities to OPDs, as centralized systems like BPKAD limit agility, a weakness in Riau.⁵⁰

Comparatively, optimizing idle assets (IDR 2.86 trillion, 4% utilized) reflects Mardiasmo et al.⁵¹ who noted stagnant Indonesian asset use due to non-compliance with regulations like Permendagri 19/2016. Alam et al.⁵² advocate integrated policy ecosystems, supporting Riau's focus on inter-agency synergy to address coordination weaknesses. Security enhancements for uncertified parcels align with Subekti et al.⁵³ who highlight legal risks from poor documentation. Handayani⁵⁴ and Lu⁵⁵ underscore that underutilization and poor maintenance reduce public service benefits, reinforcing Riau's need for SOPs and asset optimization. Strengthening these

and Mohd Hazmi Mohd Rusli., Conceptualizing policy on underwater cultural heritage: Towards legal protection and ecotourism promotion in Karimun Jawa, Indonesia, *Journal of Indonesian Legal Studies*, Vol.8, no.2, 2023, page.660.

⁴⁷ Naief Mohammed Alhazmi., *Improving asset management in the public sector in the Kingdom of Saudi Arabia*, PhD diss., University of Leeds, 2014.

⁴⁸ Karmila Karmila, Amries Rusli Tanjung, and Edfan Darlis., The Influence of Human Resource Capacity, Information Technology Utilization, and Internal Control on the Reliability of Local Government Financial Reporting (Study on the Riau Provincial Government), *Sospotlight*, Vol.9, no.1, 2014, page.44.

⁴⁹ P. Afandi., *Theory, Concept and Indicators of Human Resource Management*, Yogyakarta, Nusa Media, 2018, Page.132.

⁵⁰ Muhammad Hanis, Bambang Trigunarsyah, and Connie Susilawati., Elements in public asset management framework for local governments in developing countries, In *Proceedings of the 2010 International Conference on Construction and Real Estate Management Volume 1*, page.427. China Architecture & Building Press, 2010.

⁵¹ Diaswati Mardiasmo, Charles Sampford, and Paul Barnes., Why stagnant? Behind the scenes in Indonesia's reformed state asset management policies, In *Proceedings of the 14th International Schumpeter Society Conference 2012*, page.24. AOM Events, 2012.

⁵² Syamsul Alam, Zulfiah Larisu, Muhammad Arsyad, Abdul Kadir, Taufik, and Faturachman Alputra Sudirman., Strengthening local asset management through an integrated policy ecosystem: The role of mid-level bureaucratic connectivity, *Public Money & Management*, Vol.12, no.3, 2025, page.11.

⁵³ Rahayu Subekti, Adi Sulistiyono, Diah Pawestri Maharani, and I. Gusti Ayu Gangga Santi Dewi., The urgency of the legal strategy of abandoned-land use through the formation of land bank in Indonesia, *Cogent Social Sciences*, Vol.9, no.1, 2023, page.2239055.

⁵⁴ Meity Handayani., Evaluation of the Presentation of Fixed Asset Reporting to Improve Government Institutional Supervision, *Journal of Bina Praja*, Vol.5, no.3, 2013, page.195.

⁵⁵ Yaotai Lu., *Public Asset Management: Empirical evidence from the state governments in the United States*, Florida, Florida Atlantic University, 2011, page.25.

strategies, Creswell validates SWOT and IFAS/EFAS analyses for strategic planning, confirming their use in Riau.⁵⁶ Nanang et al.⁵⁷ and Tirayoh et al.⁵⁸ propose training and SOPs to address budget and infrastructure limitations (weights 0.15, 0.05). Backer and Yusoff⁵⁹ emphasize leadership commitment, critical for Riau's regulatory compliance. Sugirman et al. and Puspitarini and Devianto⁶⁰ highlight the need for robust security and valuation systems, supporting Riau's risk management focus against regulatory changes (threat weight 0.2). Oky and Zaid⁶¹ and Soegoto and Pangestika⁶² advocate technology-driven transparency, aligning with E-BMD adoption. Abubakar and Handayani and Handoyo et al.⁶³ stress resilience against external threats like disasters, reinforcing Riau's risk management strategy. These measures ensure efficient, accountable BMD management, maximizing Riau's IDR 43 trillion assets for public benefit.

4. Conclusion

Based on the results of the first and second phases of this research, it is clear that the management of regional assets (BMD) in Riau Province faces significant and persistent problems across all stages of the asset management cycle, from planning and administration to utilization, security, and supervision. At the planning stage, procurement frequently encounters obstacles due to an imbalance between needs and available budget. Furthermore, in the administration cycle, the database is largely manual and has not yet implemented the E-BMD system in conformity with Permendagri Number 47 of 2021. The lack of proper documentation and incomplete land certification, affecting more than 8 trillion-rupiah worth of land, further undermine the security of these assets. Additionally, utilization is weak, with only 4% of total assets currently in use and the rest left idle, adding operational and maintenance burdens while yielding minimal local

⁵⁶ Ward Creswell John and J. David Creswell., *Research design: Qualitative, quantitative, and mixed methods approaches*, London: Sage Publications, 2009, page.57.

⁵⁷ Rustanto Nanang, Connie Susilawati, and Martin Skitmore., Toward a public sector asset optimization strategy: the case of Indonesia, *Construction Innovation*, Vol.23, no.5, 2023, page.1185.

⁵⁸ Victorina Tirayoh, Lady Latjandu, Harijanto Sabijono, and Christoffel Mintardjo., Public sector asset management in the government of Indonesia: A case study in Minahasa Regency, *Jurnal Bina Praja*, Vol.13, no.2, 2021, page.207.

⁵⁹ Mohamed Ali bin Mohamed Abu Backer and Wan Zahari Wan Yusoff., A review of asset management practice in Malaysian local governments, In *Proceedings of the 25th International Business Information Management Association Conference-Innovation Vision*, page.3572. 2020.

⁶⁰ Andi, Hamzah Latif Sugirman, Andi Darna, Muhammad Rizwan, and Jumriani Nawawi., State and Protection of Cultural Heritage in Bone, South Sulawesi: Perspectives on National Law and Islamic Law, *Samarah: Jurnal Hukum Keluarga dan Hukum Islam*, Vol.8, no.3, 2024, page.14263.

⁶¹ Rachmad Oky and Aminuddin Zaid., Advocating for Enhanced Understanding: Empowering Government Officials with Insights into Village Income Dynamics, *Jurnal Pengabdian Hukum Indonesia (Indonesian Journal of Legal Community Engagement)*, Vol.6, no.1, 2023, page.184.

⁶² Dedi Sulistiyo Soegoto and Yulia Pangestika., The strategic role of smart city (bandung care) in the development of Bandung city, *Journal of Engineering Science and Technology*, Vol.16, no.1, 2021, page.050.

⁶³ Lastuti Abubakar and Tri Handayani., The Environmental Fund Management Model in Indonesia: Some Lessons in Legal Regulation and Practice, *Environmental Policy and Law*, Vol.53, no.3, 2023, p.213. See too, Felix Wisnu Handoyo, Syarifah Aini Dalimunthe, Purwanto Purwanto, Ikval Suardi, Chitra Indah Yuliana, Erla Mychelisdas, Irwanda Wisnu Wardhana, and Agus Eko Nugroho., Enhancing Disaster Resilience: Insights from the Cianjur Earthquake to Improve Indonesia's Risk Financing Strategies, *SAGE Open*, Vol.14, no.2, 2024, page.215.

revenue. Other dimensions, such as inventory, legal audits, optimization, supervision, and control, are also riddled with weaknesses. The inventory process suffers from poor IT infrastructure and non-compliance with procedures; the legal dimension highlights incomplete ownership documents and weak physical safeguards; and the optimization process is affected by a shortage of human resources and training. Furthermore, supervision and control mechanisms are weak due to delayed reconciliation and poor understanding of BPK's follow-up recommendations, while asset valuation is constrained by incomplete data and a shortage of qualified appraisers. To address these issues, it is recommended to strengthen regulations and policies, enhance human resources' capacity and capabilities, optimize information systems, and improve all phases of the asset management cycle. Additionally, allocating greater funding for the E-BMD system and fully implementing the BPK's recommendations will collectively enable more effective, efficient, and transparent Regional Asset management in Riau Province.

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