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Effectiveness of Regional Property Management in Mahakam Ulu Regency: A Gap Analysis between Standard Operating Procedures and Implementation Practices

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ABSTRACT

The unqualified (WTP) audit opinion that Mahakam Ulu Regency has received since fiscal year 2019 has not been fully matched by orderly management of regional property (Barang Milik Daerah, BMD). This study analyses the effectiveness of BMD management and identifies the forms, loci, and causes of gaps between standard operating procedures (SOPs) and implementation practices. A qualitative, descriptive-evaluative single embedded case study was employed. Primary data were collected through in-depth interviews with twelve informants representing property managers, implementing units, internal auditors, and property users, while secondary data came from SOP documents, the first-semester 2026 BMD report, and the 2027 property needs plan. Data were analysed using the Miles and Huberman interactive model assisted by NVivo, gap analysis, the multiple governance perspective, and the fit model. The results show that effectiveness is partial and tiered: reporting accountability is strong, procedural compliance and administrative order are partly achieved, asset security is suboptimal, and asset utilisation has not been achieved. Only one of eleven management stages fully complies with the SOPs. Design, implementation, and capacity gaps concentrate at stages involving many cross-unit decision points and are amplified by upstream and border geography. Reporting effectiveness should therefore be distinguished from asset management effectiveness.

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1. INTRODUCTION

Public assets are strategic resources that support government administration and public service delivery. International literature regards the management of local government land, buildings, and infrastructure as a managerial function that shapes both service quality and fiscal health, yet a wide gap remains between professional knowledge of asset management and actual practice (Kaganova & Telgarsky, 2018). Public property management is also frequently hampered by incomplete asset registers (Cohen et al., 2023). From the perspective of *New Public Management*, the management of public resources should be judged not only by administrative order but also by its performance, efficiency, and effectiveness (Hood, 1991).

In Indonesia, local government assets are known as *Barang Milik Daerah* (BMD, regional property). Their management is governed by Government Regulation No. 27 of 2014 as amended by Government Regulation No. 28 of 2020, with technical guidelines in Minister of Home Affairs Regulation No. 19 of 2016 as amended by Minister of Home Affairs Regulation No. 7 of 2024. These rules cover the entire management cycle, from needs planning to guidance, supervision, and control, and are translated into SOPs at the organisational level.

Nationally, the quality of local financial reporting continues to improve. Of the 545 local government financial statements (LKPD) for fiscal year (FY) 2024, 491 or 90.1 percent received an unqualified opinion (*Wajar Tanpa Pengecualian*, WTP), 53 (9.7 percent) received a qualified opinion, and one received a disclaimer (Alamsyah, 2025). For FY 2025, the number of WTP opinions rose to 509 of 546 LKPD or 93.2 percent, while qualified opinions fell to 35 (CNBC Indonesia, 2026). These achievements do not yet reflect the resolution of management problems. Up to the first semester of 2025, local governments and regional enterprises had received 637,016 audit recommendations, or 81.1 percent of the 785,257 recommendations issued by the Audit Board of Indonesia (BPK), and only 80.9 percent of them had been followed up (Noor, 2026). In other words, almost one in five audit recommendations to local governments remains unresolved, indicating that a WTP opinion does not guarantee that regional assets are well managed.

Mahakam Ulu Regency in East Kalimantan Province illustrates this paradox clearly. The regency was established in 2013 as a new autonomous region carved out of West Kutai Regency. It consists of five districts and 50 villages (*kampung*) covering about 15.3 thousand square kilometres and borders Sarawak, Malaysia. Its population density is only about 2 persons per square kilometre, the lowest in East Kalimantan (Iswenda, 2024). The regency has received a WTP opinion every year since FY 2019, including for its FY 2024 financial statements (BPK RI Perwakilan Provinsi Kalimantan Timur, 2025), yet audit notes on fixed assets keep recurring. In the FY 2022 audit, BPK noted that the recording and management of fixed assets were inadequate, so that the asset inventory cards did not fully provide adequate BMD information, with risks of misuse, loss, and overlapping claims, particularly on uncertified land (Rifandi, 2023). Preliminary data from this study reinforce this picture. The gross value of the regency's fixed assets reached about IDR 6.02 trillion in the first semester of 2026, yet none of the 40 asset SOPs drafted in 2025 had been enacted by the regent. Schools, auxiliary health centres, district offices, and river transport facilities are scattered across remote villages that are largely accessible only by river, making inventory, physical verification, and asset security costly and time-consuming.

Previous studies have examined the effectiveness of regional asset management from various angles. Wati et al. (2026) analysed the factors affecting asset management effectiveness, Angkasa et al. (2026) highlighted the role of management information systems and digital asset management, and Pusparani et al. (2021) examined barriers to the

implementation of BMD management policy. Qualitative evaluations in Manggarai (Ruek et al., 2025), Indramayu (Hafidz et al., 2025), and Sikka (Elsari et al., 2026) found that asset management was not yet fully effective even though these regions held WTP opinions. Tamelab et al. (2021) and Murdianah et al. (2022) emphasised the role of information systems and staff quality. Most of these studies used quantitative approaches or general evaluations, rarely compared written procedures with practice stage by stage across the BMD cycle, rarely focused on new autonomous regions in upstream and border areas, and were mostly conducted before Minister of Home Affairs Regulation No. 7 of 2024 took effect. Theoretically, implementation models such as Edwards III (1980) tend to treat policy standards as given and do not measure the distance between standards and practice.

A qualitative inquiry is important because gaps between SOPs and practice cannot be understood from performance figures or audit opinions alone. Such gaps arise from the way implementers interpret rules, work around constraints, and balance auditors' demands against service needs, which can only be captured through in-depth interviews corroborated by documents. The novelty of this study lies in three aspects. First, it integrates organisational effectiveness theory, gap analysis, the *multiple governance* perspective, and the fit model to trace gaps back to the layer where they originate. Second, the gap analysis is carried out across eleven BMD management stages and classifies gaps into design, implementation, and capacity gaps. Third, it addresses the rarely studied context of a new autonomous region in an upstream border area. Accordingly, this study aims to analyse the effectiveness of BMD management in Mahakam Ulu Regency and to identify the forms and loci of gaps between SOPs and implementation practices together with their causes.

2. LITERATURE REVIEW

2.1. Organisational Effectiveness

Steers (1985) defines organisational effectiveness as the extent to which an organisation achieves its goals while taking account of internal processes and the resources it mobilises. The goal attainment approach assesses final outcomes, whereas the internal process approach assesses the smoothness and coordination of workflows. Cameron (1986) argues that effectiveness is paradoxical, because an organisation can be effective on one criterion and ineffective on another at the same time. Quinn and Rohrbaugh (1983) show that effectiveness criteria depend on competing values such as control, stability, and external goal attainment. In this study, the effectiveness of BMD management is operationalised through five dimensions: procedural compliance, administrative order, asset security, utilisation optimisation, and accountability.

2.2. Policy Implementation and Multiple Governance

Implementation studies have long observed that the distance between plans and results usually emerges during implementation rather than formulation, and that the number of decision points in joint action lowers the probability of success (Pressman & Wildavsky, 1984). Edwards III (1980) identified communication, resources, disposition, and bureaucratic structure as determinants of implementation. Hill and Hupe (2014) proposed the multiple governance perspective, which distinguishes constitutive, directional, and operational levels of action. Each level produces rules for the level below, while implementers face multiple accountabilities to superiors, legislators, professional standards, and auditors. This perspective allows SOP–practice gaps to be traced back to the layer where they originate. Korten (1980) complements it with the fit model, in which a programme succeeds when there is a fit between the programme, the implementing organisation, and the beneficiaries. Lipsky (2010) adds that street-level bureaucrats working with limited resources develop routines and discretion that ultimately shape policy in practice, while

Matland (1995) shows that implementation strategies depend on the degree of policy ambiguity and conflict.

2.3. Compliance and Institutional Perspectives

Compliance with procedures can be formed through rewards and sanctions, identification with respected parties, or internalisation of values (Kelman, 1958), as well as through the legitimacy of rules as perceived by implementers (Tyler, 2006). Responsive regulation proposes an enforcement pyramid that starts with persuasion and escalates to sanctions only when necessary (Ayres & Braithwaite, 1992). Institutional theory explains that organisations adopt formal structures to gain legitimacy and may *decouple* them from day-to-day technical activities (Meyer & Rowan, 1977). Merton (1940) warned that rules can become ends in themselves, a phenomenon known as *goal displacement*.

2.4. Gap Analysis and Regional Asset Management

Gap analysis is rooted in the service quality gap model, which compares expectations with actual performance at particular points in the service delivery chain (Parasuraman et al., 1985). This study groups gaps into three categories: design gaps (weaknesses in the standard itself), implementation gaps (the standard is adequate but not carried out as intended), and capacity gaps (organisational capability is insufficient to meet the standard). Siregar (2004) places physical and legal inventory as the foundation of asset management, because asset valuation and optimisation are only possible when asset data are accurate and complete.

3. METHOD

This study employed a qualitative approach with a descriptive-evaluative single embedded case study design (Yin, 2018). This design was chosen because the phenomenon under study, namely the gap between SOPs and practice, takes place in a real-life context whose boundaries with the phenomenon are not clear-cut, and requires an in-depth understanding of how officials carry out, interpret, and adapt procedures. The case is BMD management by the Mahakam Ulu Regency Government, with the stages of the BMD cycle and their implementing units as embedded units of analysis. The study was conducted at the Regional Financial and Asset Management Agency (BPKAD), the Regional Secretariat, the Regional Inspectorate, and several regional agencies (OPD) in Mahakam Ulu Regency.

Twelve informants were selected purposively based on their direct involvement in BMD management. They came from four groups: property managers (the Head of BPKAD and the Head of the Asset Division), implementers in regional agencies (five SIMDA BMD operators, a property administration officer, a property custodian, and a storekeeper), the internal auditor (Regional Inspectorate), and the property user (Regional Secretariat). To maintain confidentiality, informants' names are not reported and each informant is coded I-01 to I-12, as presented in Table 1.

Table 1. Profile of research informants

Code	Position	Group
I-01 to I-05	SIMDA BMD operators at the DPRD Secretariat, Regional Revenue Agency, Social Affairs Office, Health Office, and Environment Office	Agency implementers
I-06	Head of BPKAD	Property manager
I-07	Head of the Asset Division, BPKAD	Property manager
I-08	Property administration officer in an agency	Agency implementer
I-09	Property custodian in an agency	Agency implementer

Code	Position	Group
I-10	Storekeeper in an agency	Agency implementer
I-11	Regional Inspectorate	Internal auditor
I-12	Regional Secretariat as property user	Property user

Source: Research data, processed by the authors (2026).

Data were collected through three techniques. Semi-structured in-depth interviews were conducted from 12 to 27 October 2026 using a guide derived from the five effectiveness dimensions and the eleven BMD management stages. Observation covered property administration and storage practices in regional agencies. Documentation included the Final Report on the Preparation of Asset Division SOPs of BPKAD Mahakam Ulu (2025), containing 40 SOPs in seven groups, the BMD Report for the first semester of 2026, and the Regional Secretary's Decree on the 2027 Regional Property Needs Plan (RKBMD) with its attachments.

Data trustworthiness was assessed through the criteria of credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Credibility was strengthened through source triangulation, comparing the accounts of managers, implementers, auditors, and users, and method triangulation, confronting interview results with the contents of the SOP documents, BMD report, and RKBMD attachments. Dependability and confirmability were maintained by keeping transcripts, the codebook, and analytic memos as an audit trail.

Data analysis followed the interactive model of data condensation, data display, and conclusion drawing (Miles et al., 2014). Interview transcripts were divided into 76 answer segments and coded in NVivo using a hybrid strategy. Seven parent nodes were developed deductively and inductively, with 49 child nodes emerging from the data. The coding results were further analysed through matrix coding queries and cluster analysis. Gap analysis was then performed by comparing expected and actual performance at each stage and classifying the level of compliance as full, partial, non-compliant, or not yet regulated or implemented.

4. RESULTS AND DISCUSSION

4.1. Results

4.1.1. Overview of NVivo Coding Results

All interview transcripts were divided into 76 answer segments and coded into seven parent nodes and 49 child nodes. A summary of the parent nodes with their numbers of sources and references is presented in Table 2, while the hierarchical structure of the parent nodes generated in NVivo is shown in Figure 1.

Table 2. Summary of parent nodes from NVivo coding

Parent node	Sources	References	Coding logic
BMD management effectiveness	12	50	Deductive (effectiveness dimensions)
Standards and regulations (SOP)	10	11	Deductive (rule layers)
Practice by stage	12	48	Deductive (BMD cycle)
SOP–practice gaps	7	26	Deductive (gap categories)
Supporting factors	12	33	Inductive
Inhibiting factors	7	25	Inductive
Improvement efforts and needs	7	8	Inductive

Source: NVivo coding of interview transcripts, processed by the authors (2026).

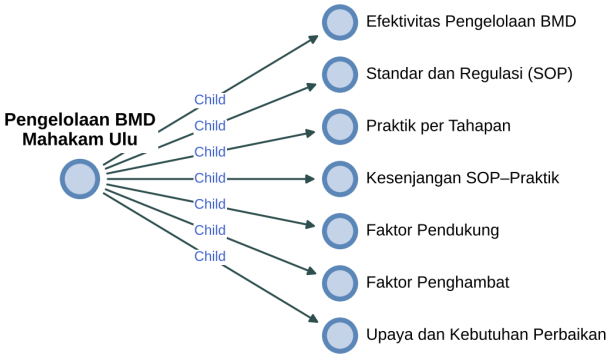


Figure 1. Hierarchy of parent nodes in BMD management in Mahakam Ulu Regency
Source: NVivo output, processed by the authors (2026).

Figure 1 shows that all interview data converge on a single root node, BMD management in Mahakam Ulu Regency, which branches into seven parent nodes. Four parent nodes were developed deductively from the theoretical framework, while the other three emerged inductively from informants' answers. Table 2 shows that the effectiveness node (50 references) and the practice-by-stage node (48 references) are the densest and are linked to all twelve informants. In contrast, the gap and inhibiting-factor nodes are linked to only seven informants. This difference arises because the questions put to the five SIMDA BMD operators were limited to their roles, involvement, and work references, so the absence of links between them and the inhibiting-factor node reflects the scope of the questions rather than evidence that operators face no obstacles. The standards and regulations node has only 11 references, indicating that informants talked far more about what they do than about the rules behind it.

4.1.2. Effectiveness of Regional Property Management

The hierarchy of effectiveness nodes generated in NVivo is presented in Figure 2.

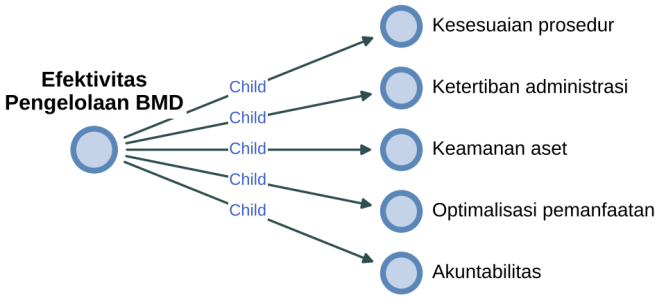


Figure 2. Hierarchy of BMD management effectiveness nodes
Source: NVivo output, processed by the authors (2026).

Figure 2 shows that the effectiveness node branches into five dimensions: procedural compliance, administrative order, asset security, utilisation optimisation, and accountability. The weight of these branches is uneven. Of the 64 references across the five dimensions, 44 (68.8 percent) concern administrative order (23 references from 11 informants) and procedural compliance (21 references from 12 informants), 12 (18.8 percent) concern

accountability, and only 8 (12.5 percent) concern asset security and utilisation. Utilisation was mentioned by only two of the twelve informants, both from the property manager group. This pattern provides an early indication that officials' attention is directed more towards administrative tidiness than towards the outcomes of asset management itself. The Head of BPKAD formulated the measure of success plainly:

> *"Our measures of success are orderly administration (inventory, recording, reporting); assets that are physically, administratively, and legally secure; assets optimally used for public services; and a good BPK opinion on the LKPD without recurring asset findings. Most of this is already in place: the BMD report has been prepared and the asset census has been carried out. What is not yet optimal is land certification and the settlement of BPK findings." (I-06, interview, 27 October 2026)*

Procedural compliance. All SIMDA BMD operators stated that they had been appointed by decree, had attended technical training (*bimtek*) from BPKAD, and used the BPKAD SOPs as their daily work reference. One operator stated that they relied on the government regulation, the ministerial regulation, and "the BMD management SOPs issued by BPKAD Mahakam Ulu" (I-01, interview, 12 October 2026). Implementers thus treat the SOPs as binding official guidelines. The Head of BPKAD, however, revealed that "the SOPs were drafted by the asset division and have not been enacted by the Regent" (I-06). Document review confirmed that the number, issue date, revision date, and effective date fields of all SOPs remain blank.

Administrative order. Recording, asset inventory cards (KIB), room inventory cards (KIR), semester and annual reports, and quarterly reconciliation are in place, yet informants acknowledged delays and data discrepancies. The property administration officer explained:

> *"Delays sometimes occur because the reconciliation of capital expenditure within the agency has not been completed, or because the handover minutes (BAST) from third parties or the commitment-making officer are submitted late." (I-08, interview, 27 October 2026)*

The Head of the Asset Division added that the most frequent discrepancies in reconciliation concern capitalised values and inter-agency transfers, that is, when "assets move physically (for example, operational vehicles or computers) but the recording documents have not been signed by both agencies" (I-07). The Regional Secretariat, as property user, considered routine reports to be timely, but for real-time asset data requests "provision still requires manual re-confirmation in the field" (I-12).

Document review corroborated these accounts. Within a single first-semester 2026 BMD report, the number of items in the recapitulation format differs from the detailed lists, as presented in Table 3. The list of heavily damaged goods is also identical to the list of other assets, indicating that this format was not compiled from actual data.

Table 3. Differences in item counts between formats in the first-semester 2026 BMD report

Asset group	Recapitulation (Format IV.L.4.4)	Detailed list (Format II.O.4.1–4.5)	Difference
Land	273 plots	271 plots	2 plots
Equipment and machinery	48,528 units	45,386 units	3,142 units (6.9%)
Buildings	1,170 units	1,030 units	140 units (13.6%)
Roads, networks, and irrigation	786 units	686 units	100 units

Asset group	Recapitulation (Format IV.L.4.4)	Detailed list (Format II.O.4.1–4.5)	Difference
Other fixed assets	135,612 units	152,197 units	16,585 units (10.9%)

Source: BMD Report of Mahakam Ulu Regency, first semester 2026, processed by the authors (2026).

Asset movement data show that the gross value of fixed assets reached about IDR 6.02 trillion, with roads, networks, and irrigation accounting for 53.2 percent, buildings 19.7 percent, and construction in progress 14.7 percent or about IDR 882.3 billion. Additions during the semester amounted to IDR 258.7 billion, while deductions in all fixed asset groups were zero.

Needs planning. RKBMD proposals are prepared on the basis of KIB and inventory results, reviewed by the Inspectorate, verified by the Asset Division, and enacted by the Regional Secretary on 30 June 2026. The needs analysis sheets account for the quantity and condition of available goods, yet 81 of 107 items (75.7 percent) were given high priority and most received maximum scores on all four assessment criteria. Of the 309 units of available goods recorded by five property users, only 28.8 percent were in good condition, while 24.3 percent were heavily damaged and beyond repair but still recorded as available. In Long Apari District, which borders Sarawak, this proportion reached 31.0 percent.

Asset security and utilisation. Some of the 271 land plots owned by the regency hold certificates of right of use, while others are still backed only by statements of land control, and building documents such as grant minutes from the parent regency and building approvals are incomplete. BPKAD has responded by signing a memorandum of understanding with the National Land Agency (BPN), keeping original certificates in a central safe, digitising land documents, and installing ownership signboards on assets in remote locations. Regarding utilisation, the Head of the Asset Division stated openly:

> *"At present Mahakam Ulu Regency has not carried out any utilisation of regional assets, while transfers are made through open auctions via KPKNL and grants to villages or religious institutions. When the vehicles or heavy equipment to be auctioned are in remote districts (such as Long Apari or Long Pahangai), the cost of transporting the auctioned goods out of the location is often higher than their reserve value." (I-07, interview, 27 October 2026)*

Accountability. Follow-up on audit recommendations is handled by a dedicated team. The Head of BPKAD explained that "each recommendation is mapped to the responsible agency, given a deadline, and monitored periodically," with obstacles in the form of "incomplete or missing supporting documents, slow agency responses, limited staff and budget, and access to asset locations" (I-06). The Inspectorate noted five recurring findings: fixed assets that cannot be located, official vehicles held by unauthorised parties, uncertified land, inaccurate KIB not synchronised with the application, and heavily damaged assets that have not been written off (I-11). A summary of achievement for each dimension is presented in Table 4.

Table 4. Achievement of BMD management effectiveness dimensions

Dimension	Key evidence	Assessment
Procedural compliance	Implementers appointed and trained; RKBMD enacted; only 1 of 11 stages fully compliant; 0 of 40 SOPs enacted	Partly achieved
Administrative order	KIB, KIR, reports, and quarterly reconciliation in place; late documents; 6.9–13.6% discrepancies between formats	Partly achieved

Dimension	Key evidence	Assessment
Asset security	Central safe and MoU with BPN; uncertified land; vehicles held by unauthorised parties	Suboptimal
Utilisation optimisation	No utilisation activity; 8 of 40 SOPs unused; 24.3% of available goods beyond repair	Not achieved
Accountability	WTP opinion for seven consecutive years; follow-up team; recurring asset findings	Partly achieved

Source: Interviews, NVivo results, and document review, processed by the authors (2026).

4.1.3. Forms and Loci of SOP–Practice Gaps

The hierarchy of SOP–practice gap nodes generated in NVivo is presented in Figure 3.

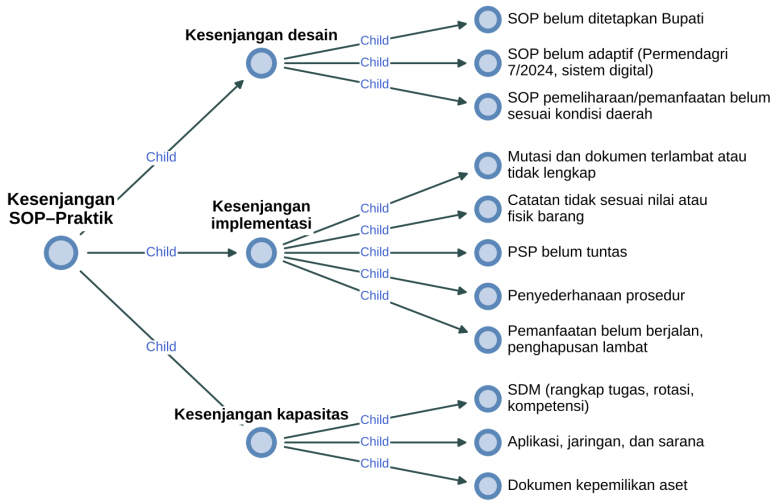


Figure 3. Hierarchy of SOP–practice gap nodes
Source: NVivo output, processed by the authors (2026).

Figure 3 shows that the SOP–practice gap node branches into three categories with eleven third-level nodes. Design gaps comprise three nodes relating to the status and contextualisation of the SOPs, implementation gaps comprise five nodes relating to documents, records, and delayed stages, and capacity gaps comprise three nodes relating to human resources, facilities, and ownership documents. In terms of weight, implementation gaps have 15 references, capacity gaps 14, and design gaps only 4. Implementation and capacity gaps were each discussed by seven informants, whereas design gaps were raised by only three, namely the Head of BPKAD, the Head of the Asset Division, and the Inspectorate. This suggests that weaknesses in SOP design are more visible from the position of managers and auditors who observe many agencies at once, whereas implementers who work with the SOPs every day tend to regard them as adequate.

Design gaps appear in several respects. Besides the SOPs not having been enacted, the Head of BPKAD stated that adjustment to Minister of Home Affairs Regulation No. 7 of 2024 is "still gradual" (I-06). Document review shows that the SOPs on determination of use status (PSP) and write-off place final approval with the Head of BPKAD, whereas national rules assign this authority to the regional head and the property manager. There is also no specific SOP on destruction, and most work steps are assigned to BPKAD officials while the tasks of agency property custodians are barely described. The Inspectorate offered the following assessment:

"Formally, the BMD management SOPs are adequate (referring to the regional regulation and regent regulation on BMD management). In practice, however, the SOPs are often not operational enough (too general), not adaptive to the latest digital systems, and not yet fully understood and applied by property custodians at the work unit or agency level." (I-11, interview, 27 October 2026)

A different view came from a property custodian who considered the SOPs "easy enough to understand because they come with flowcharts of the work steps" (I-09). This difference in perspective shows that the SOPs are clear for the main workflow but not detailed enough for the situations that most often trigger gaps.

Implementation gaps take four main forms: late or incomplete transfer and handover documents, mismatches between records and physical conditions, delayed PSP and write-offs, and discretionary postponement of physical documents. The Head of the Asset Division acknowledged:

"Honestly, PSP in Mahakam Ulu Regency has not been 100% completed. Many assets handed over from the parent regency (West Kutai) when Mahakam Ulu was established have incomplete ownership documents or insufficiently detailed BAST, and user agencies are late in proactively proposing PSP after physical work is 100% complete." (I-07, interview, 27 October 2026)

A property custodian described a common way of keeping services running:

"In general the SOPs are still followed. However, in urgent situations the submission of physical documents is sometimes preceded by sending a digital copy (PDF) via WhatsApp to speed up distribution, while the physical minutes are signed later so that public services or activities are not delayed." (I-09, interview, 27 October 2026)

Matrix coding queries show that property administration has the strongest association with implementation gaps (9 segments), followed by write-off (5 segments) and security and maintenance. Write-off was identified as a gap point by six informants holding different positions. Table 5 presents the results of the gap analysis for each stage. Only the procurement stage, on the receiving side, is fully compliant; six stages are partly compliant, two are non-compliant, and two are not yet regulated or implemented.

Table 5. Gap analysis results by BMD management stage

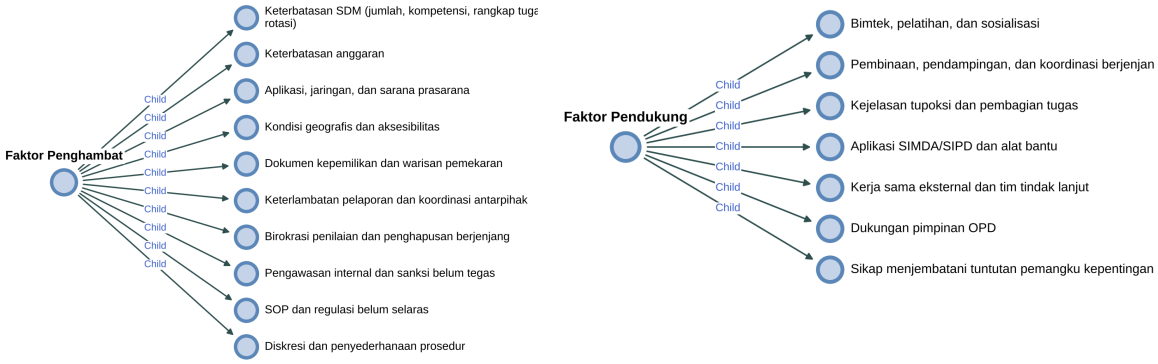
Stage	Main findings on actual performance	Compliance	Gap category
Needs planning	Procedure followed; uniform priority scores; codification not aligned with price standards	Partial	Implementation
Procurement (receipt)	Receipt, inspection, and initial recording in sequence	Full	–
Determination of use status	Incomplete; late agency proposals; inherited assets without documents	Non-compliant	Implementation, capacity, design
Utilisation	Not implemented; SOP not suited to market and geography	Not implemented	Design
Security and maintenance	Central safe; uncertified land; vehicles held by unauthorised parties	Partial	All three
Valuation	Slow valuation due to limited appraisers in border areas	Partial	Capacity
Transfer	Auctions and grants carried out; mobilisation costs exceed reserve values	Partial	Capacity
Destruction	No specific SOP	Not regulated	Design
Write-off	Multi-layered and slow; damaged goods still recorded; zero deductions	Non-compliant	Implementation, capacity

Stage	Main findings on actual performance	Compliance	Gap category
Administration	Recording and reconciliation in place; late documents; discrepancies between formats	Partial	Implementation, capacity
Guidance and supervision	Training, consultation, and review; weak supervision by agency heads	Partial	Implementation

Source: Interviews, NVivo results, SOP documents, BMD report, and RKBMD 2027, processed by the authors (2026).

4.1.4. Causes of the Gaps

The causes of the gaps were analysed through two inductive parent nodes, inhibiting factors and supporting factors. Their node hierarchies generated in NVivo are presented in Figure 4.



(a) (b)

Figure 4. Hierarchy of (a) inhibiting factor nodes and (b) supporting factor nodes
Source: NVivo output, processed by the authors (2026).

Figure 4(a) shows ten inhibiting-factor nodes that can be grouped into five clusters: resources (human resources, budget, and applications and networks), regional conditions (geography and access), document governance (ownership documents and late reporting), process (multi-layered write-off bureaucracy), and control and rules (weak supervision and sanctions, misaligned SOPs, and discretion). The densest nodes are ownership documents inherited from the regional split (10 references), late reporting and coordination (8 references), and limited human resources (7 references). Figure 4(b) shows seven supporting-factor nodes centred on technical training, education, and socialisation; tiered guidance, mentoring, and coordination; clarity of main duties and task division; the SIMDA/SIPD applications; and external cooperation and the follow-up team. Supporting factors are linked to all twelve informants, and technical training was mentioned by ten. Support from agency heads and the bridging of stakeholder demands each appeared for only one informant, so leadership has not yet become a widely felt strength. The pattern of the two hierarchies indicates that supporting factors operate on knowledge and basic procedures, whereas inhibiting factors are embedded in structural aspects, namely documents, human resources, and territory, which cannot be overcome by training alone.

Capacity gaps relate to human resources, applications and networks, budget, and ownership documents. The Head of BPKAD described the state of resource support as follows:

> *"The asset division has 18 staff, and there are still few certified personnel in assets or procurement. As for applications, we use SIPD/e-BMD/SIMDA BMD, which have not been updated. The obstacles are the internet network and the capability of*

operators in the agencies. Overall, this support is not yet fully sufficient and needs to be improved gradually." (I-06, interview, 27 October 2026)

Property custodians generally hold additional duties. One custodian explained that "receiving new goods and asset reconciliation or inspection are prioritised, while routine administrative tasks are done in between operational work" (I-09). The Inspectorate summarised the causes of deviations as follows:

"Deviations generally occur for several reasons, namely the human resources of property custodians, with high staff rotation every year, lack of competence, and custodians often holding the role as an additional duty (not a dedicated functional position), weak internal supervision by agency heads as property users, and lost or problematic supporting documents ." (I-11, interview, 27 October 2026)

Geography emerged inductively as a cross-cutting factor. The Head of BPKAD stated that "the cost and time of physical verification, census, and guidance are high, assets in remote villages are difficult to monitor, and document delivery and internet connections are often disrupted, especially in bad weather or when the river is low" (I-06). Matrix coding queries also show that ownership documents inherited from the regional split are linked to all three gap categories, while late reporting and coordination are most strongly linked to implementation gaps. Cluster analysis shows that property managers and the Inspectorate form a separate branch from implementers and users, joining only at a distance of about 0.85. This means that the picture of the gaps is strongly shaped by informants' positions in the BMD management structure.

4.2. Discussion

4.2.1. Tiered Effectiveness: Strong in Reporting, Weak in Outcomes

The results reveal a distance between administrative outputs and asset management outcomes. Effectiveness is high in reporting accountability, moderate in administrative order, low in legal security, and absent in utilisation. Judged by internal processes, BMD management in Mahakam Ulu appears fairly effective; judged by goal attainment, the results are much lower (Steers, 1985). This finding provides empirical support for the effectiveness paradox (Cameron, 1986) and shows that the values of control and stability take precedence over external goal attainment (Quinn & Rohrbaugh, 1983). The sharpest contrast lies between seven consecutive years of WTP opinions and the complete absence of asset utilisation.

This pattern can be read as a symptom of *decoupling* (Meyer & Rowan, 1977). The SOPs are complete and well formatted, reports are prepared for audit purposes, and reconciliation produces minutes, while the physical movement of goods precedes documents, damaged goods remain on the books, and item counts differ between formats within a single report. The formal structure provides legitimacy before auditors, whereas the physical handling of assets follows an operational logic. *Goal displacement* (Merton, 1940) is also visible, not as rigid rule-following but as priority setting: custodians with additional duties put audit-deadline work first and postpone updates that are not immediately examined. This extends Merton's concept by showing that goal displacement can arise from time scarcity.

The finding is consistent with Ruek et al. (2025), who found that asset management in Manggarai was not yet fully effective despite three consecutive WTP opinions, and with Entjaurau and Gelatan (2023), who found administrative compliance without effectiveness in Mimika. Compared with Indramayu, which has optimally utilised about 40 percent of its assets (Hafidz et al., 2025), Mahakam Ulu is at an earlier stage. This difference is explained

not only by managerial capability but also by market preconditions. With a population density of about two persons per square kilometre, prospective tenants, partners, and auction buyers are very limited. Revenue-oriented asset optimisation strategies (Aneta et al., 2024) are therefore difficult to apply directly in upstream and border areas; social utilisation through grants or inter-agency loans of use is more realistic in this context.

4.2.2. Gaps Arise Where Units Meet

The gaps are not randomly distributed but concentrated at stages requiring decisions from many units. PSP requires an agency proposal, BPKAD verification, and a decision by the competent official, while write-off requires inspection by the agency, BPKAD verification, appraisal by a government valuer, tiered approval, and often an auction. This supports the thesis that the more clearance points there are, the lower the probability that implementation proceeds as planned (Pressman & Wildavsky, 1984). Zero deductions during the semester and heavily damaged goods still recorded as available provide documentary evidence of these delays.

From the multiple governance perspective, design gaps reflect misaligned rule layers (Hill & Hupe, 2014). The constitutive and directional layers have been updated, while the operational layer has not been enacted and is only partly adjusted, and some approval authorities in the SOPs do not match national rules. The SOPs were also drafted from the BPKAD structure downwards rather than from the behaviour expected of property custodians, contrary to the logic of *backward mapping* (Elmore, 1979). This explains why implementers find the SOPs easy to understand while the Inspectorate considers them too general. Unlike Hafidz et al. (2025) and Tamelab et al. (2021), who reported the absence of technical SOPs, the problem in Mahakam Ulu has shifted from the existence of SOPs to their legal status, alignment of authority, coverage, and contextualisation.

Interestingly, implementers regard the unenacted SOPs as official guidelines. Their compliance resembles identification with BPKAD as a trusted mentor rather than compliance driven by sanctions (Kelman, 1958), and the SOPs acquire practical legitimacy (Tyler, 2006). Such legitimacy can be built through guidance even before legal status is final, but it is fragile under staff rotation and provides no basis for imposing sanctions.

Implementation gaps reflect the adaptive discretion of street-level bureaucrats (Lipsky, 2010). Sending digital copies before signing physical minutes, monitoring remote assets through periodic photographs, and keeping parallel records in Excel are coping routines oriented towards service continuity, not deviations for personal gain. These routines still create risks of forgotten documents and data discrepancies later on. Communication and disposition are relatively good, whereas resources and bureaucratic structure explain most of the gaps. This partly supports the Edwards III (1980) model while revealing its limits in explaining gaps that originate in SOP design. Following Matland (1995), property administration has low ambiguity and conflict, so resources are decisive, whereas utilisation has high ambiguity and therefore requires experimentation. These results partly confirm Pusparani et al. (2021) on dual duties and staff shortages.

4.2.3. Capacity Misfit and the Spatial Context

The sharpest misfit lies between programme demands and the capability of the implementing organisation (Korten, 1980). The SOPs assume focused custodians, complete documents, up-to-date applications, and stable networks, whereas in reality custodians hold additional duties and are rotated every year, applications have not been updated, and connections are unreliable. Yuswanita et al. (2020), Murdianah et al. (2022), Wati et al. (2026), and Angkasa et al. (2026) show that information systems, human resource competence, and digital asset management significantly affect asset management effectiveness. This study explains the mechanism behind these relationships: competence

only pays off when job design allows continuity and focus, and digitalisation only helps when systems are integrated and networks are reliable.

Geography, which was not part of the initial framework, amplifies all gaps by raising verification costs, slowing document flows, disrupting online reporting, and dampening auction demand. Together with incomplete ownership documents inherited from the regional split, which are linked to all three gap categories, this finding suggests that implementation models developed for urban contexts need to incorporate spatial accessibility and institutional history when applied to upstream and border regions. Because most gaps stem from inability rather than unwillingness, sanctions such as withholding additional allowances should sit at the top of the responsive enforcement pyramid (Ayres & Braithwaite, 1992) and be applied to deliberate violations such as unauthorised possession of official vehicles, with guidance and early warnings forming its base.

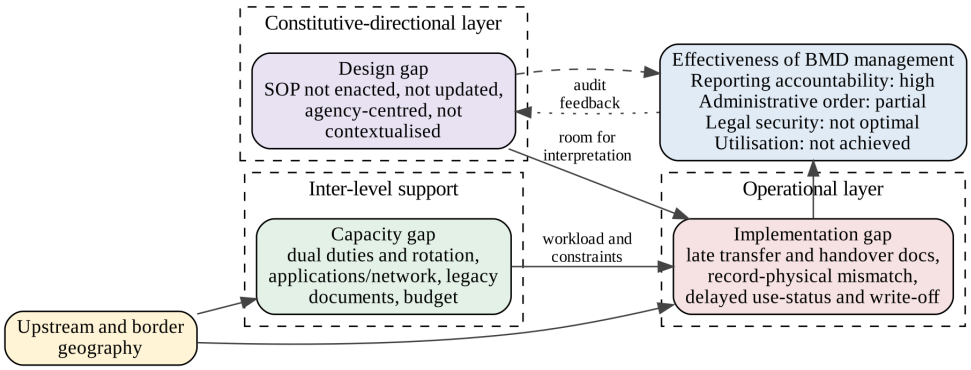


Figure 5. Model of the relationship between SOP–practice gaps and the effectiveness of BMD management

Source: Developed by the authors from the research findings (2026).

Figure 5 summarises these relationships and yields two propositions for further research. First, the more cross-unit decision points a management stage involves, the larger its implementation gap. Second, in regions with low spatial accessibility, capacity gaps matter more for effectiveness than design gaps.

5. CONCLUSION

This study answers two research questions. First, the effectiveness of BMD management in Mahakam Ulu Regency is partial and tiered: strong in reporting accountability, partly achieved in procedural compliance and administrative order, suboptimal in asset security, and not achieved in utilisation. The WTP opinion reflects reporting effectiveness more than the effectiveness of asset management itself. Second, the gaps between SOPs and practice take the form of design, implementation, and capacity gaps, located mainly at stages with many cross-unit decision points, namely determination of use status, write-off, and property administration. They are caused by misaligned rule layers, multi-layered approval procedures, dual duties and rotation of property custodians, limited applications, networks, and budgets, ownership documents inherited from the regional split, and the geography of upstream and border areas.

Theoretically, this study offers the concept of tiered effectiveness and shows that the multiple governance perspective needs to be complemented by spatial accessibility and institutional history when applied to new autonomous regions in border areas. Practically, the Mahakam Ulu Regency Government is advised to enact the SOPs through a Regent Regulation and align approval authorities with national rules; develop derivative SOPs for property custodians covering transfers, assets in remote locations, and the postponement of

digital documents; strengthen the position of property custodians through a functional position or a minimum term of assignment; carry out collective write-offs by district to reduce valuation and mobilisation costs; accelerate land certification with the National Land Agency; and integrate planning, financial, and BMD applications with barcode or QR code labelling. BMD performance indicators should also include outcome measures such as the percentage of certified land, damaged goods written off, and assets with determined use status.

This study has several limitations. The informants did not include external auditors, legislators, or village heads as local stakeholders of assets. Physical verification was not carried out directly on sample assets in the most remote districts, and the findings of a single case study are not intended for statistical generalisation. Future research should test the two propositions through comparative studies across regions, extend the informants to external parties, and complement interviews with physical verification of sample assets.

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