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AN ACCOUNTING-BASED EVALUATION FRAMEWORK FOR DISASTER REPORTING IN DECENTRALIZED GOVERNANCE: INTEGRATING IPSASB QUALITATIVE CHARACTERISTICS, GRI REPORTING PRINCIPLES, AND INSTITUTIONAL THEORY

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Abstract

Disaster reporting has become an essential instrument for strengthening public accountability in disaster risk management, yet its accounting quality remains underexplored. Existing studies have predominantly examined disaster governance from institutional, operational, or policy perspectives, with limited attention to whether disaster reports provide useful, transparent, and stakeholder-oriented information in accordance with internationally recognised reporting principles. This study addresses this gap by developing and applying an integrated accounting-based evaluation framework that combines the International Public Sector Accounting Standards Board (IPSASB) qualitative characteristics of useful public-sector information with the Global Reporting Initiative (GRI) reporting principles. Institutional Theory is adopted as the theoretical lens to explain how regulatory, professional, and organisational pressures influence reporting practices within Indonesia's decentralized disaster governance system. A qualitative multiple-case study design was employed using directed qualitative content analysis of sixteen official disaster management reports issued by the National Disaster Management Agency (BNPB), Provincial Disaster Management Agencies (BPBDs), and provincial governments. The analysis evaluates disaster reporting against six IPSASB qualitative characteristics—relevance, faithful representation, comparability, verifiability, timeliness, and understandability—and four GRI reporting principles—materiality, completeness, stakeholder inclusiveness, and balance. The findings reveal that Indonesia's disaster reporting system demonstrates strong financial accountability and regulatory compliance but remains fragmented across multiple reporting instruments. While financial disclosures generally satisfy IPSASB qualitative characteristics, reporting on stakeholder engagement, methodological transparency, organisational learning, and long-term recovery outcomes remains comparatively limited. The study contributes to public sector accounting by extending the application of IPSASB qualitative characteristics beyond financial reporting and integrating them with GRI reporting principles to evaluate disaster reporting as a multidimensional accountability mechanism. The proposed framework offers a transferable approach for improving transparency, comparability, and public accountability in disaster reporting across decentralized governance systems.

Keywords: Disaster reporting; Public sector accounting; IPSASB; Global Reporting Initiative; Disaster governance; Indonesia.

1. INTRODUCTION

Natural disasters have become one of the most significant governance challenges confronting governments worldwide. Increasing disaster frequency, growing economic losses, rapid urbanisation, and climate-related risks have substantially expanded public expenditure on disaster prevention, emergency response, recovery, and resilience building. As governments allocate larger proportions of public resources to disaster risk management, expectations regarding transparency, accountability, and responsible stewardship have also intensified. Disaster management is therefore no longer evaluated solely by the effectiveness of emergency response; it is increasingly judged by the quality of information governments provide to demonstrate how public resources are managed and whether disaster interventions create meaningful social outcomes. These developments have elevated disaster reporting from an administrative obligation to an important component of public sector accountability. Through disaster reports, governments communicate organisational priorities, financial performance, programme achievements, disaster impacts, and future policy directions to a broad range of stakeholders, including legislatures, auditors, development partners, researchers, and the public. High-quality reporting enables stakeholders to evaluate whether public resources have been deployed efficiently, whether disaster management objectives have been achieved, and whether public institutions remain accountable for reducing disaster risks and strengthening community resilience.

Indonesia provides a particularly relevant context for examining disaster reporting. Located along the Pacific Ring of Fire and exposed to frequent earthquakes, volcanic eruptions, floods, landslides, droughts, and coastal hazards, the country experiences one of the highest levels of disaster risk globally. Since the enactment of Law No. 24 of 2007 on Disaster Management, Indonesia has progressively strengthened its institutional architecture by establishing the National Disaster Management Agency (BNPB) and Provincial Disaster Management Agencies (BPBDs). Responsibility for disaster risk reduction, emergency response, rehabilitation, and reconstruction is distributed across national and sub-national governments within a decentralized governance system. Consequently, disaster accountability is communicated through multiple reporting instruments, including annual performance reports, budget realization reports, audited financial statements, and other statutory reports prepared by different levels of government.

Although this reporting system satisfies statutory requirements for administrative and financial accountability, questions remain regarding its capacity to communicate comprehensive and decision-useful information about disaster governance. Existing reporting practices are largely shaped by public financial management regulations and the Government Performance Accountability System (SAKIP), both of which emphasise compliance with organisational performance targets and financial stewardship. Comparatively less attention has been given to whether disaster reports adequately represent disaster impacts, methodological transparency, stakeholder concerns, or long-term recovery outcomes. As a result, stakeholders frequently need to consult multiple documents to obtain a comprehensive understanding of disaster management performance, limiting the accessibility and usefulness of reported information.

The academic literature mirrors this imbalance. Previous studies have made substantial contributions to understanding disaster governance, disaster risk reduction, emergency management, and institutional coordination. Other studies have examined public accountability and financial management during disaster response or post-disaster reconstruction. However, relatively few investigations have approached disaster reporting from a public sector accounting perspective. Even fewer have evaluated disaster reports using internationally recognised reporting principles that simultaneously address financial reporting quality and broader social accountability. Consequently, there remains no comprehensive accounting framework for evaluating whether disaster reports satisfy the qualitative characteristics expected of useful public-sector information while also reflecting the principles of transparent and stakeholder-oriented sustainability reporting.

This study addresses that gap by developing and applying an integrated accounting-based evaluation framework for disaster reporting. Rather than proposing an entirely new reporting standard, the framework synthesises two internationally recognised bodies of guidance. The first draws upon the IPSASB Conceptual Framework, which defines the qualitative characteristics of useful public-sector information: relevance, faithful representation, comparability, verifiability, timeliness, and understandability. These characteristics provide the accounting foundation for evaluating the quality of information disclosed in disaster reports. The second incorporates the reporting principles contained in the Global Reporting Initiative (GRI) Universal Standards, specifically materiality, completeness, stakeholder inclusiveness, and balance. These principles extend the analysis beyond financial stewardship to examine whether disaster reporting captures the broader dimensions of public accountability expected within contemporary governance.

Institutional Theory provides the theoretical foundation for explaining why reporting practices differ across organisations operating within the same governance system. Public-sector organisations do not develop reporting practices solely to maximise information quality; they also respond to coercive regulatory requirements, normative expectations associated with professional standards, and mimetic pressures arising from organisational learning and institutional imitation. Examining disaster reporting through this theoretical lens enables the study to move beyond describing disclosure practices toward explaining the institutional mechanisms that shape reporting quality within decentralized governance.

The study employs a qualitative multiple-case study design based on official disaster management reports produced by BNPB, provincial BPBDs, and provincial governments. Using directed qualitative content analysis, each report is examined against the integrated accounting-based evaluation framework to assess the extent to which internationally recognised reporting principles are reflected in current disaster reporting practices. Rather than evaluating organisational performance itself, the study evaluates the quality of the information through which disaster accountability is communicated.

This research makes three contributions to the literature. First, it extends public sector accounting scholarship by demonstrating how internationally recognised accounting and sustainability reporting principles can be integrated into a coherent framework for evaluating disaster reporting quality. Second, it contributes to disaster governance research by reframing disaster reports as accountability mechanisms rather than merely administrative documents. Finally, it provides practical guidance for policymakers, auditors, and disaster management agencies seeking to strengthen transparency, comparability, and public accountability within decentralized disaster governance systems.

The remainder of this article is organised as follows. Section 2 reviews the relevant literature on public sector accounting, disaster governance, sustainability reporting, and Institutional Theory before developing the study's conceptual framework. Section 3 describes the research methodology and analytical framework. Section 4 presents the empirical findings, followed by a discussion of their theoretical and practical implications. The final section concludes the paper by outlining the study's contributions, limitations, and recommendations for future research.

2. LITERATURE REVIEW and CONCEPTUAL FRAMEWORK

2.1. Disaster Governance and the Evolution of Public Accountability

Disaster governance has evolved considerably over the past three decades. Earlier approaches viewed disasters primarily as emergency events requiring rapid response and humanitarian assistance. Contemporary perspectives, however, conceptualise disasters as complex governance challenges that demand coordinated institutional arrangements, long-term resilience planning, stakeholder participation, and accountable public decision-making (Tierney, 2012; UNDRR, 2015). This transition reflects a broader understanding that disaster risk is socially constructed and that government institutions play a central role in reducing vulnerability before disasters occur as well as supporting recovery afterwards.

International policy frameworks have accelerated this transformation. The Sendai Framework for Disaster Risk Reduction 2015–2030 explicitly recognises accountability, transparency, and evidence-based decision-making as prerequisites for effective disaster governance (UNDRR, 2015). Governments are expected not only to implement disaster risk reduction policies but also to demonstrate how public resources contribute to resilience, preparedness, response, and recovery. Consequently, disaster reporting has become increasingly important as a mechanism through which governments communicate their stewardship of public resources and justify disaster-related interventions.

Within public administration research, disaster governance has been examined from multiple perspectives, including institutional coordination, policy implementation, collaborative governance, and adaptive capacity (Comfort, Boin, & Demchak, 2010; Kapucu & Van Wart, 2006; Ansell, Sørensen, & Torfing, 2021). These studies consistently demonstrate that effective disaster management depends upon information sharing, institutional coordination, and organisational learning. Nevertheless, most investigations evaluate governance processes or operational performance rather than the quality of information communicated through official reports.

Recent studies have also highlighted increasing public expectations regarding governmental transparency following major disasters (Alexander, 2018; Boin, Hart, Stern, & Sundelius, 2017). Public trust depends not only on organisational performance but also on governments' willingness to disclose successes, failures, resource allocation, and lessons learned. Despite these developments, disaster reporting remains an underexplored component of disaster governance. Existing research rarely evaluates whether official reports satisfy internationally recognised accounting principles or whether they provide information that is useful for diverse stakeholder groups.

This omission is particularly significant in decentralised governance systems such as Indonesia, where disaster accountability is distributed across multiple levels of government. National agencies establish policy direction and coordinate disaster management, while provincial and local governments retain substantial operational responsibilities. Such institutional complexity increases the importance of consistent reporting practices capable of supporting transparency, accountability, and intergovernmental learning. Understanding disaster reporting therefore requires engagement not only with disaster governance literature but also with public sector accounting scholarship, where the quality and usefulness of public information constitute central concerns.

2.2. Public Sector Accounting and the Quality of Public Information

Public sector accounting has progressively shifted from a narrow emphasis on financial control toward a broader concern with public accountability and decision usefulness. Contemporary public-sector reporting seeks not merely to document financial transactions but to provide information that enables citizens, legislatures, auditors, and other stakeholders to evaluate how public resources are managed and whether government programmes achieve their intended objectives (Christiaens, Vanhee, Manes-Rossi, Aversano, & Van Caillie, 2015; Jorge, Brusca, & Nogueira, 2021).

This evolution is reflected in the Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities, issued by the International Public Sector Accounting Standards Board (IPSASB, 2023). The framework identifies six qualitative characteristics of useful public-sector information: relevance, faithful representation, comparability, verifiability, timeliness, and understandability. Together, these characteristics provide internationally recognised criteria for evaluating whether public reports effectively support accountability and decision-making.

Relevance requires that reported information possesses predictive or confirmatory value for users' decisions. Faithful representation emphasises completeness, neutrality, and freedom from material error. Comparability enables stakeholders to identify similarities and differences across reporting entities and reporting periods. Verifiability enhances confidence in reported information through supporting evidence and reproducible measurement processes. Timeliness ensures that information remains useful when decisions are made, while understandability requires reports to be clearly organised and accessible to intended users (IPSASB, 2023).

These qualitative characteristics have been widely applied in studies examining financial reporting quality within governments and public-sector organisations (Brusca, Gómez-Villegas, & Montesinos, 2016; Manes-Rossi, Cohen, Caperchione, & Brusca, 2020). Existing research generally concludes that high-quality public reporting strengthens democratic accountability, increases transparency, and improves stakeholder confidence in public institutions. However, the application of IPSASB principles has focused predominantly on financial statements, integrated reporting, and public financial management reforms. Comparatively little attention has been devoted to evaluating disaster reporting, despite the substantial public resources devoted to disaster risk management.

Disaster reports differ fundamentally from conventional financial reports because they communicate both financial and non-financial information. They typically include organisational performance indicators, operational activities, disaster statistics, recovery programmes, and budget realisation within a single reporting system. Consequently, assessing disaster reporting quality requires a framework capable of evaluating financial reliability while simultaneously recognising broader dimensions of social accountability. This limitation suggests that public sector accounting principles alone provide an important but incomplete basis for evaluating disaster reporting.

2.3. Sustainability Reporting and Social Accountability in the Public Sector

The growing importance of sustainability reporting has expanded expectations regarding public-sector disclosure beyond traditional financial accountability. Governments are increasingly expected to communicate not only how resources are spent but also how public interventions affect society, the environment, and long-term sustainable development (Adams, 2017; Farneti & Guthrie, 2009).

The Global Reporting Initiative (GRI) Universal Standards provide one of the most widely adopted frameworks for sustainability reporting across public and private organisations (Global Reporting Initiative, 2021). Rather than prescribing specific performance indicators, the standards establish reporting principles that improve the quality and credibility of organisational disclosures. Four principles are particularly relevant for disaster reporting: materiality, completeness, stakeholder inclusiveness, and balance.

Materiality requires organisations to disclose issues that significantly influence stakeholder assessments and organisational impacts. Completeness concerns the extent to which reported information adequately represents organisational activities and their consequences. Stakeholder inclusiveness recognises that organisations should identify and respond to the information needs of diverse stakeholder groups. Balance requires reports to present both positive achievements and areas requiring improvement, thereby supporting credible and objective reporting (Global Reporting Initiative, 2021).

Public-sector sustainability reporting research suggests that these principles strengthen organisational legitimacy and public accountability by encouraging broader disclosure of social outcomes rather than merely financial performance (Dumay, Guthrie, & Farneti, 2010; Farneti, Caperchione, Cohen, & Manes-Rossi, 2019). Nevertheless, adoption remains uneven across governments because reporting practices continue to be influenced by statutory financial reporting requirements and administrative traditions. Disaster management represents a particularly important context for sustainability reporting. Effective disaster governance requires governments to communicate not only expenditure and programme implementation but also the social consequences of disasters, including impacts on vulnerable communities, recovery processes, resilience building, and long-term risk reduction. Existing disaster reports, however, frequently prioritise operational achievements and financial accountability while providing comparatively limited discussion of stakeholder engagement, community resilience, or reporting balance. This gap highlights the need to integrate sustainability reporting principles with public sector accounting concepts when evaluating disaster reporting quality.

2.4. Institutional Theory and Public-Sector Reporting Behaviour

While IPSASB and GRI establish normative expectations for high-quality reporting, they do not explain why reporting practices differ across organisations operating within similar institutional environments. Institutional Theory provides an appropriate explanatory perspective because it recognises that organisational reporting is shaped not only by technical efficiency but also by pressures arising from the wider institutional environment (DiMaggio & Powell, 1983; Scott, 2014).

Institutional Theory identifies three principal mechanisms through which organisational behaviour becomes institutionalised. Coercive pressures arise from laws, regulations, funding arrangements, and formal oversight mechanisms. Normative pressures emerge through professional standards, education, and shared professional values. Mimetic pressures encourage organisations to imitate practices perceived as legitimate or successful under conditions of uncertainty (DiMaggio & Powell, 1983).

Within the public sector, these institutional pressures significantly influence reporting practices. Governments frequently adopt reporting systems to satisfy regulatory requirements, demonstrate compliance, or conform to professional expectations rather than solely to improve decision usefulness (Liguori & Steccolini, 2014; Gomes, Fernandes, & Carvalho, 2015). Consequently, public reports often reflect institutional legitimacy as much as information quality.

Indonesia's decentralised disaster governance system provides an appropriate setting for examining these institutional dynamics. National regulations, ministerial guidance, public financial management reforms, and auditing requirements generate strong coercive pressures for performance and financial reporting. Professional accounting standards and internal government accountability systems create normative expectations regarding reporting quality, while provincial agencies frequently adapt reporting formats developed by BNPB or other leading institutions through mimetic processes. Institutional Theory therefore provides an explanatory framework for understanding why disaster reporting practices may exhibit both convergence and variation across government organisations.

2.5. Research Gap and Development of the Integrated Accounting-Based Evaluation Framework

The literature demonstrates considerable progress in understanding disaster governance, public-sector accounting, sustainability reporting, and institutional change. Nevertheless, these streams have largely developed independently.

Disaster governance research has concentrated on institutional coordination, resilience, and emergency management but has devoted limited attention to the accounting quality of disaster reporting. Public sector accounting research provides robust principles for evaluating financial information but rarely examines disaster reports as accountability mechanisms. Sustainability reporting research expands organisational accountability toward broader social outcomes but has seldom been applied to disaster management within public-sector contexts. Finally, Institutional Theory explains why reporting practices emerge but does not itself provide criteria for evaluating reporting quality.

This study addresses these limitations by integrating these complementary perspectives into a single analytical framework. The framework combines the IPSASB qualitative characteristics—relevance, faithful representation, comparability, verifiability, timeliness, and understandability—with the GRI reporting principles of materiality, completeness, stakeholder inclusiveness, and balance. Institutional Theory provides the explanatory lens through which observed reporting practices are interpreted. Rather than proposing a new accounting standard, the framework synthesises internationally recognised reporting principles to evaluate disaster reporting quality in a manner that simultaneously addresses financial accountability, social accountability, and institutional behaviour. Figure 1 illustrates the conceptual framework guiding the empirical analysis.

3. RESEARCH METHOD

3.1. Research Philosophy

This study adopts an interpretivist research philosophy, recognising that organisational reporting is a socially constructed representation of public accountability rather than a neutral record of organisational activities. Disaster reports do not merely communicate financial transactions or operational achievements; they also reflect institutional expectations, regulatory requirements, and professional norms that shape how public organisations present information to stakeholders. Consequently, evaluating disaster reporting requires interpretation of both the content disclosed and the institutional context within which those disclosures are produced.

An interpretivist perspective is appropriate because the objective of this research is not to measure organisational performance or disaster outcomes directly, but rather to understand how public-sector organisations communicate accountability through official reporting. The study therefore focuses on the quality of reported information rather than the operational effectiveness of disaster management agencies.

3.2. Research Design

The study employs a qualitative multiple-case study design supported by directed qualitative content analysis. Multiple-case studies enable researchers to investigate complex organisational phenomena across different institutional settings while preserving contextual richness (Yin, 2018). This design is particularly appropriate because disaster reporting in Indonesia is produced by multiple organisations operating within a shared regulatory environment but exhibiting different reporting practices.

Directed qualitative content analysis provides a systematic approach for examining documentary evidence using predetermined theoretical categories (Hsieh & Shannon, 2005). Rather than allowing coding categories to emerge inductively, this study applies coding categories derived from internationally recognised reporting frameworks. This approach ensures that document analysis is theory-driven while maintaining sufficient flexibility to identify contextual variations across reporting entities. The methodological approach is consistent with previous public-sector accounting studies that evaluate organisational disclosures using established conceptual frameworks rather than developing entirely new coding categories.

3.3. Research Setting

Indonesia provides a unique empirical context for evaluating disaster reporting because disaster governance operates within a decentralised administrative system. Following the enactment of Law No. 24 of 2007 on Disaster Management, responsibility for disaster risk reduction, emergency response, rehabilitation, and reconstruction is distributed across national, provincial, and local governments.

The National Disaster Management Agency (BNPB) performs national coordination, develops strategic policy, and supervises disaster management implementation. Provincial Disaster Management Agencies (BPBDs) are responsible for translating national policy into regional disaster management programmes while responding to local disaster risks. Financial accountability and organisational performance are communicated through multiple reporting instruments prepared by different government entities and governed by public financial management regulations. This decentralised institutional arrangement provides an appropriate setting for examining how organisational context influences disaster reporting quality and whether reporting practices converge or diverge across different levels of government.

3.4. Data Sources

The empirical analysis is based on a documentary corpus comprising sixteen official disaster management reports published by BNPB, provincial BPBDs, and provincial governments. The corpus includes:

1. Annual performance reports (*Laporan Kinerja / LKjIP*);
2. Government Performance Accountability Reports (*LAKIP*);
3. Audited financial statements;
4. Budget realisation reports; and
5. Supporting financial accountability reports.

These reports were selected because they constitute the principal instruments through which disaster management agencies communicate organisational performance, financial stewardship, and disaster-related activities to oversight institutions and the public. This study use 16 reports from national and 5 regional Indonesia Disaster Management Body. There are five provinces: West Java, Aceh, West Nusa Tenggara, West Sumatera and Southeast Kalimantan for three period time fom 2022-2025.

The use of official government documents offers several methodological advantages. First, documentary evidence provides unobtrusive access to organisational reporting practices without influencing organisational behaviour. Second, official reports represent formal institutional outputs subject to regulatory review and auditing procedures. Third, documentary analysis enables comparison across multiple organisations using a consistent analytical framework.

3.5. Unit of Analysis

The primary unit of analysis is the individual disaster management report, while the analytical unit comprises disclosure items contained within each report. Each report was examined paragraph by paragraph, table by table, and where appropriate, figure by figure to identify evidence corresponding to the reporting principles contained within the integrated accounting-based evaluation framework. The analysis therefore focuses on disclosure quality rather than organisational performance.

3.6. Development of the Integrated Accounting-Based Evaluation Framework

The analytical framework developed in this study integrates two complementary bodies of international reporting guidance. *The first* dimension evaluates the quality of public-sector information using the qualitative characteristics proposed in the IPSASB Conceptual Framework:

1. Relevance
2. Faithful Representation
3. Comparability
4. Verifiability
5. Timeliness
6. Understandability

These characteristics assess whether reported information supports accountability and informed decision-making.

The second dimension evaluates the broader social accountability dimension using four reporting principles derived from the Global Reporting Initiative (GRI Universal Standards):

1. Materiality
2. Completeness
3. Stakeholder Inclusiveness
4. Balance

Together, these principles enable disaster reports to be evaluated from both public-sector accounting and sustainability reporting perspectives. Institutional Theory provides the explanatory framework through which observed reporting practices are interpreted rather than serving as an additional coding dimension.

Analysis proceeded through two complementary stages. The first stage assessed reporting quality by evaluating documentary evidence against the IPSASB qualitative characteristics and GRI reporting principles. The second stage interpreted observed disclosure patterns using Institutional Theory. Rather than treating disclosure quality as merely a technical outcome, the analysis considered how reporting behaviour reflected broader institutional pressures associated with public financial management regulations, professional accounting norms, and organisational legitimacy. This two-stage analytical strategy enabled the study to distinguish between what organisations reported and why reporting practices assumed particular forms within Indonesia's decentralised governance system.

4. RESULTS AND DISCUSSION

4.1. Overview of the Disaster Reporting Corpus

The empirical analysis examines the documentary reporting practices of Indonesian disaster management institutions operating within a decentralized governance system. Sixteen official reports issued by the National Disaster Management Agency (BNPB), Provincial Disaster Management Agencies (BPBDs), and provincial governments constitute the analytical corpus. These reports include annual performance reports (*Laporan Kinerja* and *LAKIP*), audited financial statements, and budget realization reports prepared in accordance with prevailing public financial management regulations.

Rather than representing a single reporting system, the corpus illustrates a network of complementary accountability documents produced for different institutional purposes. Performance reports primarily communicate organisational objectives, programme implementation, and annual achievements, whereas financial statements and budget realization reports demonstrate stewardship over public resources and compliance with government accounting requirements.

This fragmentation is an important empirical characteristic of Indonesia's disaster reporting system. Stakeholders seeking to understand disaster governance must consult multiple reports because financial accountability, operational performance, disaster statistics, and recovery outcomes are communicated through separate reporting mechanisms.

Table 4.1 Characteristics of the Disaster Reporting Corpus

	Primary Purpose	**Dominant Information**
BNPB Annual Performance Reports	National strategic accountability	Strategy, KPIs, programme performance, disaster statistics
Provincial BPBD Performance Reports	Operational accountability	Annual programme implementation and regional performance
Financial Statements	Financial stewardship	Assets, liabilities, expenditure and financial position
Budget Realization Reports	Budget accountability	Budget allocation and expenditure realization

The documentary corpus therefore reflects a decentralised accountability architecture in which different organisations fulfil different reporting obligations under a common institutional framework.

4.1.1. Theme One: Institutional Characteristics of Disaster Reporting

The first stage of analysis examined how disaster reporting is organised across Indonesia's decentralised governance system. Across the corpus, disaster reporting demonstrates a clear institutional separation between operational accountability and financial accountability. BNPB annual reports provide the most comprehensive narrative by integrating organisational strategy, disaster management programmes, annual performance indicators, and financial information. Provincial performance reports similarly describe programme implementation and annual achievements but generally contain less strategic information than national reports. In contrast, audited financial statements and budget realization reports focus primarily on demonstrating compliance with government accounting standards and public financial management regulations. Although these reports provide detailed financial information, they contain comparatively limited discussion of disaster outcomes, organisational learning, or community recovery.

The analysis therefore suggests that disaster accountability is communicated through multiple specialised reporting instruments rather than through a single integrated report. This institutional fragmentation has important implications for public accountability. Individual reports perform their statutory functions effectively, yet no single document provides stakeholders with a complete representation of disaster governance.

4.1.2. Theme Two: Accounting Quality of Disaster Reporting

The second stage evaluates the accounting quality of disaster reporting using the qualitative characteristics proposed by the IPSASB Conceptual Framework. **Table 4.2** show the analysis of accounting principle in Indonesia Reporting. *Relevance.* The documentary evidence indicates that reported information is generally relevant to statutory accountability. Annual reports consistently disclose organisational objectives, programme implementation, annual performance indicators, disaster management activities, and budget realization. These disclosures enable oversight institutions to evaluate organisational performance against annual planning targets. However, relevance declines when viewed from the perspective of broader public accountability. Information concerning long-term recovery outcomes, disaster resilience, socioeconomic impacts, and programme effectiveness is comparatively limited. Consequently, the reports provide stronger support for administrative evaluation than for assessing the broader public value created by disaster expenditure.

Faithful Representation. Financial disclosures demonstrate relatively strong faithful representation. Budget realization, financial position, and expenditure are reported using standard government accounting practices and supported by audited financial statements where applicable. Nevertheless, disaster-related information exhibits greater variability. Reports generally present disaster statistics and operational achievements without systematically explaining estimation methods, data verification procedures, or reporting limitations. Although the information appears internally consistent, limited methodological disclosure constrains users' ability to evaluate the reliability of non-financial information independently.

Comparability. Comparability is strongest within individual organisations, where reporting structures remain relatively consistent across reporting periods. BNPB reports in particular employ stable organisational indicators that facilitate longitudinal comparison. Cross-organisational comparability is less developed. Provincial reports differ in reporting structure, disclosure depth, and presentation of performance indicators, making systematic comparison between provinces more difficult. These variations reflect differences in organisational capacity and reporting practice rather than differences in accounting standards alone.

Verifiability. Financial information demonstrates relatively high verifiability because it is supported by official accounting records, audited financial statements, and budget documentation. Conversely, non-financial disclosures relating to disaster impacts, programme effectiveness, and organisational achievements rarely identify underlying data sources or verification procedures. This limits the extent to which independent users can reproduce or validate reported information.

Timeliness. All reports satisfy statutory annual reporting requirements and therefore support periodic accountability. However, annual reporting provides only a retrospective assessment of disaster management activities. Given the dynamic nature of disaster risk, annual reports offer limited support for real-time operational decision-making or rapid policy adjustment during disaster response.

Understandability. The reports generally follow standard government reporting formats and employ consistent organisational structures. Financial tables, narrative explanations, and performance indicators are presented systematically.

Nevertheless, the simultaneous use of multiple reporting instruments may reduce overall understandability for external stakeholders. Information relating to disaster governance is dispersed across separate reports prepared for different administrative purposes, increasing the complexity of obtaining a comprehensive understanding of organisational performance.

Table 4.3 Evaluation Based on IPSASB Qualitative Characteristics

Qualitative Characteristic	Overall Assessment	Principal Observation
Relevance	High	Strong administrative usefulness; limited societal outcome information
Faithful Representation	Moderate–High	Reliable financial information; limited methodological disclosure
Comparability	Moderate	Consistent within organisations; weaker across provinces
Verifiability	Moderate	Financial evidence stronger than non-financial evidence
Timeliness	Moderate	Annual reporting supports accountability but not operational responsiveness
Understandability	Moderate–High	Clear report structures but fragmented reporting system

4.1.3. Theme Three: Social Accountability of Disaster Reporting

The third stage evaluates disaster reporting using the GRI reporting principles.

Materiality is addressed primarily from an organisational perspective. Reports emphasise programme implementation, budget execution, and organisational achievements, while comparatively limited attention is devoted to the long-term social consequences of disasters, vulnerable populations, livelihood recovery, or resilience outcomes.

Completeness varies across report categories. BNPB reports integrate strategic objectives, disaster statistics, organisational performance, and financial information more comprehensively than provincial reports. Financial statements provide detailed financial disclosures but contain limited discussion of operational outcomes.

Collectively, the reporting system provides substantial information, yet that information remains distributed across multiple documents rather than presented in an integrated manner.

Evidence of stakeholder engagement is comparatively limited throughout the corpus. Most reports communicate information primarily for government oversight institutions, auditors, and legislative accountability.

Relatively little discussion addresses consultation with disaster-affected communities, civil society organisations, or other external stakeholders.

Balance. Most reports place greater emphasis on programme achievements and successful implementation than on organisational shortcomings, implementation barriers, or lessons learned. Although challenges are occasionally acknowledged, negative outcomes receive considerably less systematic attention than positive achievements.

Table 4.4 Evaluation Based on GRI Reporting Principles

Reporting Principle	Overall Assessment	Principal Observation
Materiality	Moderate	Organisational priorities dominate over societal outcomes
Completeness	Moderate	Information is comprehensive collectively but fragmented institutionally
Stakeholder Inclusiveness	Low	Limited evidence of stakeholder participation in reporting
Balance	Low	Positive organisational performance receives greater emphasis than limitations

4.1.4. Integrated Interpretation

Taken together, the IPSASB and GRI analyses reveal a consistent pattern. Indonesia's disaster reporting system demonstrates comparatively strong financial accountability but more limited social accountability. Reports effectively satisfy statutory obligations relating to organisational performance and financial stewardship; however, information concerning disaster resilience, stakeholder participation, and long-term recovery remains comparatively underdeveloped.

Rather than indicating weaknesses in organisational commitment, these patterns appear to reflect the institutional design of public-sector reporting. Existing reporting systems have evolved primarily to satisfy administrative accountability requirements established through public financial management reforms. Broader expectations associated with sustainability reporting and stakeholder-oriented accountability have yet to be systematically incorporated into disaster reporting practice.

4.1.5. Summary of Empirical Findings

Four principal findings emerge from the analysis. First, disaster reporting within Indonesia's decentralised governance system is institutionally fragmented across multiple reporting instruments. Second, financial reporting quality is generally stronger than non-financial reporting quality, particularly with respect to verifiability and faithful representation. Third, social accountability dimensions, including stakeholder inclusiveness and balanced reporting, remain comparatively underdeveloped.

Finally, the integrated accounting-based evaluation framework demonstrates that combining IPSASB qualitative characteristics with GRI reporting principles provides a more comprehensive assessment of disaster reporting quality than either framework alone. The results therefore establish an empirical foundation for the discussion presented in the following section, where Institutional Theory is used to explain why these reporting patterns emerge within Indonesia's decentralised governance system.

4.2. Discussion

4.2.1. Reframing Disaster Reporting as a Public Accountability System

The findings demonstrate that Indonesia's disaster reporting system is considerably more sophisticated than a collection of statutory administrative reports. Rather, it represents a multi-layered public accountability system through which government organisations communicate financial stewardship, organisational performance, and disaster management activities within a decentralised governance structure. Nevertheless, the analysis also shows that these accountability mechanisms remain institutionally fragmented. Financial accountability, operational performance, disaster statistics, and organisational learning are distributed across separate reporting instruments that satisfy different regulatory purposes but do not collectively provide a fully integrated account of disaster governance.

This finding contributes to the growing body of public-sector accounting literature arguing that accountability extends beyond compliance with financial regulations. Contemporary public accountability requires governments to communicate information that enables stakeholders to understand not only how public resources are spent but also how those resources contribute to public value creation (Christiaens et al., 2015; Jorge et al., 2021). In the Indonesian context, statutory reporting obligations have produced a robust system of financial accountability; however, they have not yet evolved into an integrated reporting architecture capable of communicating the broader social consequences of disaster management.

The results therefore support the proposition that disaster reporting should be understood as an accountability process rather than simply an administrative requirement. Similar arguments have emerged within sustainability reporting research, where reporting quality is increasingly evaluated according to its capacity to facilitate dialogue, transparency, and organisational learning rather than merely satisfying disclosure regulations (Adams, 2017; Farneti et al., 2019).

4.2.2. Public-Sector Accounting Quality in Disaster Reporting

Evaluation using the IPSASB qualitative characteristics demonstrates that Indonesian disaster reports generally satisfy the fundamental requirements of public-sector financial accountability. Financial disclosures exhibit relatively strong evidence of relevance, faithful representation, and verifiability because they are embedded within established public financial management systems and supported by government accounting regulations.

However, accounting quality becomes less consistent when attention shifts from financial information to operational and social information. Disaster statistics, programme outcomes, and organisational achievements are frequently reported without detailed explanations of measurement methodology, data verification procedures, or underlying assumptions. Consequently, users may understand what has been reported but remain unable to independently evaluate the reliability of the reported information.

This distinction reflects an important characteristic of public-sector accounting. IPSASB qualitative characteristics were originally developed to enhance the usefulness of general-purpose financial reporting. When applied to disaster reporting, they reveal that financial reporting standards alone cannot fully evaluate the quality of non-financial accountability information. Disaster governance increasingly depends upon qualitative evidence concerning resilience, preparedness, recovery, and community outcomes, all of which require reporting practices that extend beyond traditional financial reporting.

The findings therefore suggest that the IPSASB framework remains highly effective for evaluating financial stewardship but should be complemented by broader reporting principles when governments communicate complex social programmes such as disaster risk management.

4.2.3. Extending Social Accountability through Sustainability Reporting Principles

The incorporation of GRI reporting principles provides a complementary perspective that is largely absent from conventional public-sector accounting evaluations. Whereas the IPSASB framework evaluates whether information is useful, the GRI principles examine whether organisations communicate information that reflects stakeholder concerns and broader societal impacts. The analysis indicates that stakeholder inclusiveness and balanced reporting remain the least developed dimensions of Indonesia's disaster reporting system. Official reports primarily communicate organisational achievements, programme implementation, and regulatory compliance. Comparatively limited attention is devoted to community perspectives, implementation challenges, unsuccessful interventions, or lessons learned from disaster response.

These findings are consistent with previous studies of public-sector sustainability reporting, which argue that governments often emphasise accountability to regulatory institutions while giving less consideration to accountability towards citizens and affected communities (Farneti & Guthrie, 2009; Dumay et al., 2010). Disaster management presents a particularly important case because affected communities are not passive recipients of government services; they are central stakeholders whose experiences directly influence the effectiveness of disaster risk reduction and recovery programmes. Expanding disaster reporting to incorporate stakeholder-oriented disclosures would therefore strengthen both democratic accountability and organisational learning. Reports that acknowledge implementation challenges alongside achievements are likely to provide greater decision usefulness for policymakers, researchers, donors, and local communities.

4.2.4. Institutional Theory as an Explanation for Reporting Behaviour

Institutional Theory provides a coherent explanation for the reporting patterns observed throughout the documentary corpus. Rather than viewing reporting quality solely as the product of organisational choice, the findings indicate that disaster reporting is shaped by multiple institutional pressures operating simultaneously.

First, coercive pressures arise from Indonesia's legal and regulatory framework governing public financial management, government performance accountability, and disaster administration. These formal requirements explain why financial disclosures and organisational performance indicators exhibit relatively high levels of consistency across reporting entities. Organisations report particular categories of information because they are required to do so by legislation, ministerial regulations, and auditing procedures. Second, normative pressures emerge through the professionalisation of public-sector accounting. Government accountants, auditors, and performance management officials operate within professional environments that emphasise compliance with accounting standards, financial stewardship, and performance measurement. These professional norms contribute to relatively strong reporting quality in financial disclosures while simultaneously reinforcing administrative reporting traditions.

Finally, mimetic pressures become evident in the similarity of report structures across provincial disaster management agencies. Provincial organisations frequently adopt reporting formats developed by BNPB or other established agencies, particularly when operating under uncertainty or limited organisational capacity. Such imitation contributes to greater procedural consistency but does not necessarily improve the quality or completeness of disclosed information.

Collectively, these institutional pressures explain why Indonesia's disaster reporting system demonstrates strong procedural accountability yet comparatively weaker social accountability. Reporting practices have evolved primarily to satisfy institutional legitimacy rather than to maximise stakeholder-oriented information quality. This finding extends previous institutional accounting research by demonstrating how regulatory compliance and organisational legitimacy influence disaster reporting within decentralised governance systems (DiMaggio & Powell, 1983; Scott, 2014; Liguori & Steccolini, 2014).

5. CONCLUSION and CONTRIBUTION

5.1. Conclusion

The findings have practical implications for policymakers, disaster management agencies, auditors, and standard-setting bodies.

1. For BNPB and provincial BPBDs, the results highlight the need to move beyond compliance-based reporting towards integrated public accountability reporting. Existing reporting practices satisfy statutory obligations but could be strengthened by incorporating more explicit disclosure concerning disaster impacts, methodological transparency, stakeholder engagement, lessons learned, and long-term recovery outcomes. Such improvements would enhance the usefulness of disaster reports for decision-makers, oversight institutions, researchers, and affected communities.
2. For the Ministry of Home Affairs, the Ministry of Finance, the National Development Planning Agency (Bappenas), and the Supreme Audit Agency (BPK), the integrated framework developed in this study provides an analytical tool for reviewing the quality of disaster reporting across government institutions. Incorporating both accounting quality and sustainability reporting principles into reporting guidance would improve consistency, comparability, and transparency across jurisdictions.
3. More broadly, the findings contribute to ongoing discussions concerning public-sector accountability under the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals. Strengthening disaster reporting is not merely a matter of improving documentation; it is an important mechanism for enhancing institutional learning, public trust, and evidence-based policy development.

This study makes three principal theoretical contributions.

First, it extends public-sector accounting research by demonstrating that disaster reporting should be evaluated using both financial reporting quality and social reporting quality. Existing studies have generally examined these dimensions separately. Integrating the IPSASB qualitative characteristics with GRI reporting principles provides a more comprehensive basis for evaluating public accountability.

Second, the study contributes to disaster governance literature by repositioning official disaster reports as accounting artefacts rather than purely administrative documents. This perspective shifts scholarly attention from measuring organisational performance to evaluating the quality of information through which governments demonstrate accountability.

Third, Institutional Theory enriches understanding of disaster reporting by explaining why reporting quality reflects institutional expectations as well as technical reporting considerations. Consequently, improving disaster reporting requires institutional reforms that address reporting culture, stakeholder engagement, and organisational learning in addition to accounting regulations

5.2. Practical and Policy Implications

The findings have several practical implications for disaster management agencies and public-sector regulators:

1. For BNPB and provincial BPBDs, integrating financial and non-financial reporting within a more coherent reporting architecture would reduce fragmentation and improve transparency. Standardising disclosure relating to disaster impacts, recovery outcomes, stakeholder engagement, and methodological explanations would strengthen comparability across jurisdictions while improving decision usefulness.
2. For policymakers, the integrated accounting-based evaluation framework developed in this study offers a practical instrument for reviewing disaster reporting quality. The framework may support revisions to reporting guidance, internal evaluation procedures, and capacity-building programmes designed to improve public-sector accountability.
3. Finally, the framework provides researchers with a transferable analytical approach for examining disaster reporting in other decentralised governance systems. Although developed using Indonesian evidence, its underlying principles are derived from internationally recognised accounting and sustainability reporting standards, facilitating application across different institutional contexts.

5.3. Limitations and Future Research

Several limitations should be acknowledged. The analysis focuses exclusively on documentary evidence and therefore evaluates reported accountability rather than actual organisational performance. Future studies could combine documentary analysis with interviews involving disaster management officials, auditors, civil society organisations, and affected communities to examine how reporting practices are produced and interpreted.

In addition, this study analyses reports produced within Indonesia's decentralised governance framework. Comparative research involving other disaster-prone countries would enable assessment of the framework's broader applicability and contribute to the development of internationally comparable approaches to disaster reporting evaluation.

Future research may also explore the relationship between reporting quality and disaster management outcomes, thereby strengthening understanding of whether improvements in public reporting contribute to organisational learning, public trust, and disaster resilience.

5.4. Recommendations for Future Research

Future studies may extend this research in several directions. First, comparative cross-country analyses could evaluate whether similar reporting patterns emerge within other decentralized governance systems, thereby strengthening the international applicability of the framework. Longitudinal studies may examine how disaster reporting evolves following major disasters, regulatory reforms, or changes in public financial management systems.

Second, quantitative research could also develop a Disaster Reporting Quality Index (DRQI) derived from the integrated evaluation framework proposed in this study. Such an index would enable statistical analysis of the determinants of disaster reporting quality and facilitate comparison across jurisdictions and reporting periods. Future investigations should further explore the relationship between disaster reporting quality, institutional trust, organisational learning, disaster resilience, and public value creation. Integrating accounting research with disaster governance scholarship offers significant opportunities for advancing understanding of how transparent and accountable reporting contributes to more resilient public institutions.

Ultimately, strengthening disaster reporting is not solely an accounting exercise. It represents a broader commitment to democratic governance, institutional transparency, and responsible stewardship of public resources in societies increasingly exposed to disaster risk.

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Table 4.2. Analysis of Accounting Principles in Indonesian Disaster Reporting

No.	Report	Main Reporting Purpose	Accountability	Transparency	Materiality	Completeness	Decision Usefulness	Contribution to Empirical Discussion
1	**Laporan Kinerja BNPB Tahun 2022**	National performance accountability	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	Demonstrates integrated disclosure of strategy, KPIs, programme performance and budget realization.
2	**Laporan Kinerja BNPB 2023**	National performance accountability	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	Shows continuity of strategic performance reporting and organizational accountability.
3	**Laporan Kinerja BNPB TA 2024**	National performance accountability	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	Most comprehensive national report linking disaster programmes with performance indicators.
4	**LKIP BPBD Jawa Barat 2023**	Provincial performance accountability	✓✓	✓✓	✓	✓✓	✓✓	Focuses on programme implementation and annual performance realization.
5	**LKIP BPBD Jawa Barat 2024**	Provincial performance accountability	✓✓	✓✓	✓	✓✓	✓✓	Emphasizes operational achievements rather than disaster outcome reporting.
6	**LAKIP NTB 2024**	Provincial accountability report	✓✓	✓	✓	✓✓	✓	Demonstrates compliance with SAKIP and administrative accountability.
7	**LAKIP NTB 2025**	Provincial accountability report	✓✓	✓	✓	✓✓	✓	Continues emphasis on programme implementation and budget accountability.
8	**LK Aceh 2024**	Provincial disaster	✓✓	✓✓	✓✓	✓✓	✓✓	Provides broader operational information including disaster response activities.

No.	Report	Main Reporting Purpose	Accountability	Transparency	Materiality	Completeness	Decision Usefulness	Contribution to Empirical Discussion
		management report						
9	**Realisasi Anggaran Aceh 2025**	Budget realization	✓✓✓	✓✓✓	✓	✓	✓	Strong evidence of financial stewardship but limited linkage to disaster outcomes.
10	**Laporan Keuangan BPBA Aceh 2022 (Audited)**	Financial statements	✓✓✓	✓✓✓	–	✓✓	✓	Provides audited financial accountability and budget execution evidence.
11	**Laporan Keuangan BPBA Aceh 2020**	Financial statements	✓✓✓	✓✓✓	–	✓✓	✓	Supports longitudinal assessment of financial disclosure practices.
12	**Ringkasan Laporan Keuangan BPBA Aceh 2021**	Summary financial report	✓✓	✓✓	–	✓	✓	Summarized financial accountability for public communication.
13	**Neraca Keuangan Riau 2025**	Balance sheet	✓✓	✓✓✓	–	✓	–	Demonstrates financial position but provides limited disaster context.
14	**Laporan Realisasi Anggaran Sumbar 2025**	Budget realization	✓✓✓	✓✓✓	✓	✓	✓	Illustrates compliance-oriented financial reporting.
15	**LK BPBD Jawa Barat 2023**	Financial report	✓✓✓	✓✓	✓	✓✓	✓	Financial reporting complements the LKIP performance report.
16	**Neraca NTB 2024**	Balance sheet	✓✓	✓✓✓	–	✓	–	Reports financial position with limited operational interpretation.

Legend

- ✓✓✓ = Strong evidence
- ✓✓ = Moderate evidence
- ✓ = Limited evidence
- – = Not the primary focus of the report