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Applying the Information Systems Success Model and Stakeholder Theory to Disaster Risk Management as a Corruption Deterrent Measure: A Conceptual Comparative Analysis of the SADC Region's Disaster Enhancement Framework

Takawira Chirume[1]; Silas Silaigwana[2]; Dr. Onesmus Nyaude[3]

[1,2,3]Durban University of Technology (DUT)

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Abstract: Disaster risk management (DRM) has become a strategic governance priority across the Southern African Development Community (SADC) because of the increasing frequency and severity of climate-induced hazards, including droughts, floods, tropical cyclones and disease outbreaks. Although member states have strengthened disaster preparedness and institutional frameworks, governance weaknesses—including fragmented information systems, inadequate stakeholder coordination and limited accountability—continue to undermine effective disaster response and create opportunities for corruption. This paper develops an integrated conceptual framework that combines the Information Systems Success Model (ISSM), Stakeholder Theory and Institutional Theory to explain how information governance can enhance transparency, strengthen accountability and deter corruption within disaster management systems. Using a conceptual comparative analysis of selected SADC countries, the study synthesises evidence from recent peer-reviewed literature, regional policy frameworks and institutional reports to examine the relationship between information systems quality, stakeholder collaboration and governance performance. The analysis indicates that countries with integrated digital information systems, interoperable data platforms, transparent procurement processes and inclusive stakeholder participation demonstrate greater disaster governance effectiveness and lower corruption vulnerabilities than those characterised by fragmented institutional arrangements. The paper proposes the Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF) as a governance model that embeds anti-corruption principles within disaster information management. The study contributes to disaster governance scholarship by demonstrating that high-quality information systems, collaborative stakeholder engagement and supportive institutional environments are mutually reinforcing determinants of resilient, transparent and corruption-resistant disaster risk management across the SADC region (UNDRR, 2015; OECD, 2023; UNDP, 2022).

Keywords: *Disaster Risk Management; Information Systems Success Model; Stakeholder Theory; Disaster Information Governance; Corruption Deterrence; Institutional Accountability; SADC; Disaster Governance.*

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I. INTRODUCTION AND BACKGROUND

The Southern African Development Community (SADC) is increasingly exposed to climate-induced hazards, including droughts, floods, tropical cyclones, heatwaves, epidemics and food insecurity. The growing frequency and intensity of these hazards, driven by climate change, environmental degradation, rapid urbanisation and socio-economic vulnerability, have transformed disaster risk management (DRM) into a strategic governance priority rather than a purely humanitarian function. Major disasters such as Cyclones Idai, Kenneth, Eloise, Ana and Freddy, together with recurrent El Niño-induced droughts, have resulted in substantial human, economic and environmental losses across the region, exposing weaknesses in institutional preparedness and governance systems. Consequently, strengthening disaster governance has become central to achieving the objectives of the Sendai Framework for Disaster Risk Reduction (2015–2030), the Sustainable Development Goals, the African Union Agenda 2063 and the SADC Regional Indicative Strategic Development Plan, all

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of which emphasise resilience, accountability and inclusive governance (UNDRR, 2015; IPCC, 2023; SADC, 2022).

Contemporary disaster governance extends beyond emergency response to encompass risk reduction, preparedness, recovery, resilience building and institutional learning. Effective DRM therefore depends on robust governance arrangements that facilitate timely information sharing, coordinated decision-making, transparent resource allocation and collaboration among government agencies, humanitarian organisations, the private sector and local communities. However, despite significant investments in disaster preparedness and early warning systems, many SADC member states continue to experience fragmented institutional arrangements, weak information management, inadequate inter-agency coordination and inconsistent accountability mechanisms. These shortcomings frequently delay emergency responses, reduce operational efficiency and compromise the equitable distribution of humanitarian assistance (OECD, 2023; World Bank, 2023).

One of the most persistent challenges facing disaster governance in the region is the fragmentation of disaster information systems. Critical information relating to hazard monitoring, vulnerability assessments, beneficiary registration, procurement, logistics and financial management is often dispersed across multiple institutions with limited interoperability. The absence of integrated information platforms weakens evidence-based decision-making, encourages duplication of interventions and restricts real-time monitoring of disaster resources. More importantly, fragmented information environments create opportunities for procurement irregularities, diversion of humanitarian assistance, manipulation of beneficiary databases and other forms of corruption that undermine public confidence in disaster institutions and reduce the effectiveness of disaster interventions (Transparency International, 2021; UNDP, 2022).

Increasingly, corruption is recognised as a disaster risk multiplier rather than merely a legal or ethical concern. Emergency conditions frequently require accelerated procurement processes, rapid mobilisation of financial resources and simplified administrative procedures. Although these measures facilitate timely humanitarian assistance, they may simultaneously weaken oversight mechanisms and increase opportunities for fraud, political patronage and financial mismanagement. The diversion of relief supplies, inflated emergency contracts, ghost beneficiaries and weak expenditure controls reduce the effectiveness of disaster response while disproportionately affecting vulnerable communities. Consequently, strengthening transparency and accountability has become an integral component of resilient disaster governance (OECD, 2023; UNODC, 2021).

Advances in digital technologies offer significant opportunities to address these governance challenges. Geographic Information Systems (GIS), artificial intelligence, cloud computing, remote sensing, blockchain, mobile technologies and integrated disaster management information systems have enhanced hazard monitoring, resource tracking, beneficiary verification and real-time decision-making. Nevertheless, technological investments alone cannot guarantee effective disaster governance. Their effectiveness depends on information quality, institutional capacity, stakeholder acceptance, governance structures and sustained collaboration among organisations responsible for disaster management. Successful digital transformation therefore requires the integration of technological capability with sound governance principles and inclusive stakeholder participation (Janssen et al., 2020; World Bank, 2023).

This study adopts the Information Systems Success Model (ISSM) and Stakeholder Theory as its principal theoretical foundations, supported by Institutional Theory. The ISSM explains how information quality, system quality and service quality influence organisational performance and decision-making, whereas Stakeholder Theory emphasises collaborative governance, shared accountability and stakeholder participation. Institutional Theory complements these perspectives by explaining how legal frameworks, organisational norms and governance structures shape institutional behaviour. Collectively, these theories provide a comprehensive framework for examining how integrated information governance can enhance disaster management effectiveness while reducing corruption vulnerabilities.

Accordingly, this paper argues that corruption deterrence should be viewed as a governance outcome of effective disaster information management rather than solely as an enforcement function. Through a conceptual comparative analysis of selected SADC member states, the study examines how integrated information systems, collaborative stakeholder governance and supportive institutional environments reinforce transparency, accountability and disaster resilience. It concludes by proposing the Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF) as a regional governance model capable of strengthening disaster resilience while embedding anti-corruption principles throughout the disaster management cycle.

- *Study Problem*

Despite substantial investments in disaster risk reduction, institutional reforms and regional policy harmonisation, disaster risk management (DRM) within the Southern African Development Community (SADC) continues to face significant governance challenges. Many member states operate fragmented disaster information systems characterised by limited interoperability, inconsistent data-sharing protocols, weak inter-agency coordination and inadequate monitoring mechanisms. These deficiencies compromise evidence-based decision-making, delay emergency response, reduce the efficiency of humanitarian operations and weaken institutional accountability. More critically, fragmented information environments create opportunities for procurement irregularities, diversion of relief supplies, manipulation of beneficiary registers and other forms of corruption that undermine disaster response effectiveness and public confidence in governance institutions (Transparency International, 2021; OECD, 2023; UNDP, 2022).

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Although previous studies have extensively examined climate resilience, disaster preparedness and institutional capacity within the SADC region, comparatively little attention has been given to the interaction between disaster information systems, stakeholder collaboration and corruption deterrence. Existing applications of the Information Systems Success Model have largely focused on sectors such as healthcare, education, banking and e-government, while Stakeholder Theory has primarily been applied to collaborative governance without explicitly examining its contribution to transparency and anti-corruption in disaster management. Consequently, the relationship between information systems quality, stakeholder engagement, institutional governance and corruption prevention remains insufficiently theorised within disaster risk management literature, particularly in the African context.

This study addresses this gap by integrating the Information Systems Success Model, Stakeholder Theory and Institutional Theory to develop a comprehensive governance framework for disaster risk management. It argues that high-quality information systems, inclusive stakeholder participation and supportive institutional environments are mutually reinforcing determinants of transparent, accountable and corruption-resistant disaster governance. By providing a comparative conceptual analysis of selected SADC member states, the study contributes a novel interdisciplinary perspective that advances both disaster governance scholarship and anti-corruption research.

➢ *Study Objectives*

- *General Objective*

To develop an integrated disaster governance framework that applies the Information Systems Success Model (ISSM), Stakeholder Theory (ST), and Institutional Theory (IT) to strengthen transparency, accountability, and corruption deterrence within disaster risk management systems in the Southern African Development Community (SADC).

- *Specific Objectives*

The study seeks to:

✓ Examine the contribution of the Information Systems Success Model to information quality, transparency, and operational effectiveness in disaster risk management within the SADC region.
✓ Evaluate the role of Stakeholder Theory in promoting collaborative governance, institutional accountability, and corruption deterrence throughout the disaster management cycle.
✓ Compare disaster governance frameworks in selected SADC member states with respect to information systems integration, stakeholder participation, and accountability mechanisms.
✓ Develop an integrated conceptual framework that explains how information systems, stakeholder collaboration, and institutional governance collectively enhance disaster resilience and reduce corruption risks in the SADC region.

II. LITERATURE REVIEW

➢ *Disaster Risk Management and Disaster Governance*

Disaster Risk Management (DRM) has evolved from a reactive emergency response function into a comprehensive governance approach that emphasises prevention, preparedness, mitigation, response, recovery and resilience. Contemporary scholarship recognises that disasters are not solely the result of natural hazards but arise from the interaction between hazards and existing social, economic, environmental and institutional vulnerabilities. Consequently, effective disaster governance requires coordinated institutions, robust information systems and evidence-based decision-making capable of reducing vulnerability before disasters occur (UNDRR, 2015; Kelman, 2020).

The adoption of the Sendai Framework for Disaster Risk Reduction (2015–2030) marked a significant shift towards proactive disaster governance by promoting risk-informed planning, institutional accountability, stakeholder participation and investment in resilience. This approach has strengthened the integration of disaster risk reduction into national development planning while recognising governance quality as a determinant of disaster outcomes (UNDRR, 2015; OECD, 2023).

Within the SADC region, recurrent droughts, cyclones, floods and disease outbreaks have exposed persistent weaknesses in institutional coordination, public financial management and disaster information governance. Although several countries have strengthened legislative and institutional arrangements, governance capacity remains uneven, resulting in disparities in preparedness, response effectiveness and recovery. These experiences demonstrate that resilient disaster management depends not only on financial investment but also on transparent governance, integrated information systems and collaborative institutions (SADC, 2022; World Bank, 2023).

Recent studies therefore argue that disaster governance should be viewed as a multidimensional system combining technology, institutions, stakeholder participation and accountability. This perspective provides an appropriate foundation for examining disaster management through the complementary lenses of information systems, stakeholder governance and institutional theory (Janssen et al., 2020; OECD, 2023).

➢ *Information Systems in Disaster Risk Management*

Information systems have become central to modern disaster governance because they support hazard monitoring, early warning, vulnerability assessment, logistics coordination, beneficiary registration and resource tracking. Technologies such as Geographic Information Systems (GIS), artificial intelligence, remote sensing, cloud computing, mobile applications and blockchain have significantly improved the capacity of governments to generate and utilise real-time information during disasters (World Bank, 2023; UNDP, 2022).

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The Information Systems Success Model (ISSM) provides a useful framework for evaluating these technologies through six interrelated dimensions: system quality, information quality, service quality, system use, user satisfaction and organisational benefits (DeLone & McLean, 2003). Within disaster management, these dimensions influence the accuracy, reliability and accessibility of disaster information, thereby improving operational coordination and evidence-based decision-making.

Nevertheless, technological investments alone do not guarantee improved governance outcomes. Many developing countries continue to experience fragmented databases, incompatible platforms, inadequate ICT infrastructure and limited technical capacity, which reduce interoperability and constrain timely decision-making. Consequently, information systems should be understood as socio-technical systems whose effectiveness depends on institutional support, governance arrangements and user acceptance rather than technological sophistication alone (Petter, DeLone & McLean, 2013; OECD, 2023).

Emerging evidence also demonstrates that integrated digital platforms enhance accountability by improving procurement transparency, financial tracking, beneficiary verification and auditability. Consequently, disaster information systems increasingly function not only as operational tools but also as governance mechanisms capable of strengthening transparency and reducing corruption opportunities (Transparency International, 2021; Bertot, Jaeger & Grimes, 2012).

- *Stakeholder Collaboration and Disaster Governance*

Disaster governance is inherently collaborative because no single institution possesses sufficient resources or expertise to manage increasingly complex disaster risks independently. Governments, humanitarian organisations, civil society, local authorities, development partners, private sector organisations and communities collectively contribute to disaster preparedness, emergency response and recovery. Effective collaboration therefore depends upon trust, shared information, coordinated decision-making and clearly defined institutional responsibilities (Ansell & Gash, 2008; UNDRR, 2015).

Stakeholder Theory provides the conceptual foundation for understanding these collaborative relationships by arguing that organisational success depends upon balancing the interests of all affected stakeholders rather than prioritising individual institutional objectives (Freeman, 1984). Within disaster management, stakeholder participation enhances resource mobilisation, beneficiary targeting, monitoring, accountability and institutional legitimacy.

Community participation has become particularly important in contemporary disaster governance because local populations possess valuable contextual knowledge regarding hazards, vulnerability and coping strategies. Integrating indigenous knowledge with scientific information improves disaster preparedness while strengthening ownership and accountability. Similarly, active involvement of civil society organisations and the media increases public oversight and reduces opportunities for elite capture and political interference during disaster response (Gaillard & Mercer, 2013; UNDP, 2022).

Across the SADC region, countries that have institutionalised collaborative governance generally demonstrate stronger disaster coordination and greater public confidence than those characterised by fragmented institutional arrangements. These experiences suggest that stakeholder collaboration represents a strategic governance mechanism for both improving disaster resilience and strengthening accountability (SADC, 2022; World Bank, 2023).

- *Corruption in Disaster Risk Management*

Corruption has emerged as a significant governance challenge within disaster risk management because emergency situations frequently involve accelerated procurement, rapid financial disbursement and relaxed administrative controls. While these measures facilitate humanitarian assistance, they may also create opportunities for procurement fraud, diversion of relief supplies, manipulation of beneficiary registers and financial mismanagement (Transparency International, 2021; OECD, 2023).

Increasingly, scholars argue that corruption should be viewed as a disaster risk multiplier because it diverts scarce resources from vulnerable populations, weakens institutional legitimacy and delays recovery. Governance failures occurring before disasters—such as poor land-use planning, weak regulatory enforcement and inadequate public financial management—also contribute to increased disaster vulnerability (UNODC, 2021; World Bank, 2022).

Information asymmetry represents one of the principal drivers of corruption during disasters. Fragmented databases, poor information sharing and weak monitoring systems limit oversight of procurement, logistics and financial management. Conversely, integrated digital technologies, including electronic procurement, blockchain, biometric verification and cloud-based information systems, improve transparency by creating reliable audit trails and enabling real-time monitoring of humanitarian resources (Bertot, Jaeger & Grimes, 2012; OECD, 2023).

Accordingly, recent literature advocates embedding anti-corruption safeguards within disaster governance through integrated information systems, transparent procurement, stakeholder participation and digital accountability rather than relying solely on post-disaster investigations and punitive measures (Transparency International, 2021; UNDP, 2022).

- *Disaster Information Governance in the SADC Region*

The effectiveness of disaster governance in the SADC region increasingly depends upon integrated information governance that supports coordination among governments, humanitarian organisations and regional institutions. Several member states have invested in early warning systems,

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meteorological monitoring, digital communication platforms and Geographic Information Systems to improve disaster preparedness and emergency response (SADC, 2022).

South Africa, Botswana, Namibia and Mauritius have established relatively advanced disaster information infrastructures that support coordinated decision-making and institutional accountability. Conversely, several lower-income member states continue to experience fragmented databases, limited interoperability, inadequate ICT infrastructure and inconsistent information-sharing mechanisms, constraining regional coordination during transboundary disasters (World Meteorological Organization, 2023; African Union Commission, 2022).

Experiences from Cyclones Idai, Kenneth, Ana and Freddy demonstrated that although forecasting capacity has improved significantly, weaknesses in institutional coordination, beneficiary management and information integration continue to undermine humanitarian effectiveness. Multiple agencies often maintain separate databases, creating duplication, delayed responses and limited oversight of disaster resources (UNDRR, 2022; World Bank, 2023).

Current scholarship therefore advocates regional information governance frameworks based on interoperable databases, open-data policies, digital procurement systems, cloud-based disaster platforms and collaborative governance arrangements capable of improving transparency, accountability and disaster resilience across SADC member states (OECD, 2023; SADC, 2022).

III. THEORETICAL FRAMEWORK

➢ *Information Systems Success Model (ISSM)*

The Information Systems Success Model (ISSM), developed by DeLone and McLean (1992) and refined in 2003, remains one of the most influential frameworks for evaluating organisational information systems. The model proposes that information systems create organisational value through six interrelated dimensions: system quality, information quality, service quality, system use, user satisfaction and net organisational benefits (DeLone & McLean, 2003). Rather than measuring technological success solely by system implementation, the ISSM emphasises the extent to which information systems improve organisational performance and decision-making.

Within disaster risk management (DRM), the ISSM provides a valuable framework for assessing disaster information systems that support hazard monitoring, early warning, beneficiary registration, logistics management, procurement, financial reporting and emergency coordination. High-quality information systems generate accurate, timely and reliable information that enhances situational awareness, facilitates evidence-based decisions and improves coordination among disaster management institutions. Conversely, fragmented or unreliable systems reduce operational effectiveness, delay humanitarian responses and weaken institutional accountability (Petter, DeLone & McLean, 2013).

The model is particularly relevant to corruption prevention because effective information systems create transparent audit trails, strengthen financial oversight and improve monitoring of procurement and relief distribution. Digital platforms incorporating electronic procurement, biometric verification, blockchain and integrated financial management systems significantly reduce opportunities for fraud, diversion of humanitarian assistance and manipulation of beneficiary databases. Consequently, the ISSM extends beyond technological performance by demonstrating how information quality contributes directly to transparency and good governance (OECD, 2023; Transparency International, 2021).

Despite these strengths, the ISSM primarily focuses on technological and organisational performance while giving limited attention to stakeholder relationships, institutional legitimacy and governance environments. These limitations justify integrating the model with broader governance theories capable of explaining collaborative decision-making and institutional behaviour.

➢ *Stakeholder Theory*

Stakeholder Theory, introduced by Freeman (1984), argues that organisational success depends on recognising and balancing the interests of all stakeholders affected by organisational decisions. Within public governance, stakeholders include governments, local authorities, humanitarian organisations, development partners, civil society, private sector organisations, academic institutions and local communities. The theory therefore provides a useful framework for understanding collaborative governance in disaster risk management.

Disaster management is inherently multi-sectoral because no single institution possesses sufficient resources or expertise to manage complex disasters independently. Effective disaster governance therefore depends upon information sharing, coordinated planning, resource mobilisation and collective accountability among diverse stakeholders. Collaborative governance enhances transparency by increasing public oversight, strengthening monitoring mechanisms and improving institutional legitimacy (Ansell & Gash, 2008).

Community participation represents a particularly important component of Stakeholder Theory. Contemporary disaster governance increasingly recognises disaster-affected communities as active participants rather than passive recipients of humanitarian assistance. Indigenous knowledge complements scientific forecasting, while community involvement improves hazard identification, beneficiary verification, monitoring of relief distribution and evaluation of recovery programmes. Similarly, civil society organisations and the media strengthen accountability by monitoring procurement processes, reporting irregularities and promoting transparency (Gaillard & Mercer, 2013; UNDP, 2022).

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However, Stakeholder Theory provides limited explanation of the technological systems required to support collaboration or the institutional structures that regulate stakeholder behaviour. Effective collaboration requires integrated information systems and supportive governance frameworks. Accordingly, Stakeholder Theory is strengthened when combined with the Information Systems Success Model and Institutional Theory.

➢ *Institutional Theory*

Institutional Theory explains how organisational behaviour is shaped by formal rules, regulatory frameworks, professional norms and societal expectations. Building on the work of Meyer and Rowan (1977) and DiMaggio and Powell (1983), the theory argues that organisations adopt governance structures and management practices to achieve legitimacy and conform to accepted institutional standards.

Within disaster risk management, Institutional Theory explains why governments establish disaster management authorities, adopt international disaster risk reduction frameworks and strengthen public sector accountability systems. National disaster legislation, procurement regulations, financial management frameworks and regional agreements provide the institutional environment within which disaster governance operates. Strong institutions promote transparency, clarify organisational responsibilities and strengthen coordination among disaster management stakeholders.

Institutional Theory is particularly relevant to corruption prevention because governance quality depends largely on the effectiveness of regulatory oversight, procurement systems, audit mechanisms and public financial management. Weak institutions characterised by fragmented mandates, political interference and inadequate regulatory enforcement increase opportunities for procurement fraud, diversion of humanitarian resources and weak accountability. Conversely, strong institutions supported by transparent governance systems reduce corruption risks and improve disaster resilience (World Bank, 2022; OECD, 2023).

Within the SADC region, Institutional Theory explains the convergence of disaster governance frameworks through regional commitments such as the Sendai Framework, the SADC Disaster Preparedness and Response Strategy and the African Union Programme of Action for Disaster Risk Reduction. Although member states have adopted similar legislative frameworks, differences in institutional capacity continue to influence disaster preparedness, stakeholder coordination and governance performance.

➢ *Integrated Theoretical Framework*

Individually, the Information Systems Success Model, Stakeholder Theory and Institutional Theory explain different dimensions of disaster governance. Collectively, however, they provide a comprehensive framework for understanding how technology, governance and institutional arrangements interact to improve disaster management and deter corruption.

The Information Systems Success Model explains how high-quality information systems improve disaster decision-making through accurate information, reliable digital platforms and effective service delivery. Stakeholder Theory explains who contributes to successful disaster governance by emphasising collaborative relationships among governments, humanitarian organisations, communities and development partners. Institutional Theory explains why governance systems function effectively by highlighting the influence of legislation, organisational norms, regulatory oversight and institutional legitimacy.

The integration of these theories creates a multidimensional governance framework in which information systems facilitate transparency, stakeholder collaboration strengthens accountability and institutional governance provides the regulatory environment necessary for sustainable implementation. Together, these dimensions reinforce one another: integrated information systems enable timely information sharing; stakeholder collaboration enhances oversight and public trust; while strong institutions ensure compliance with governance standards and minimise corruption opportunities.

Accordingly, this study argues that corruption-resistant disaster governance cannot be achieved through technological investment, stakeholder participation or institutional reform in isolation. Rather, resilient disaster management emerges from the interaction of these three governance dimensions. This integrated perspective forms the theoretical foundation of the proposed Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF) and provides the analytical basis for the comparative assessment of disaster governance across selected SADC member states.

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IV. CONCEPTUAL FRAMEWORK

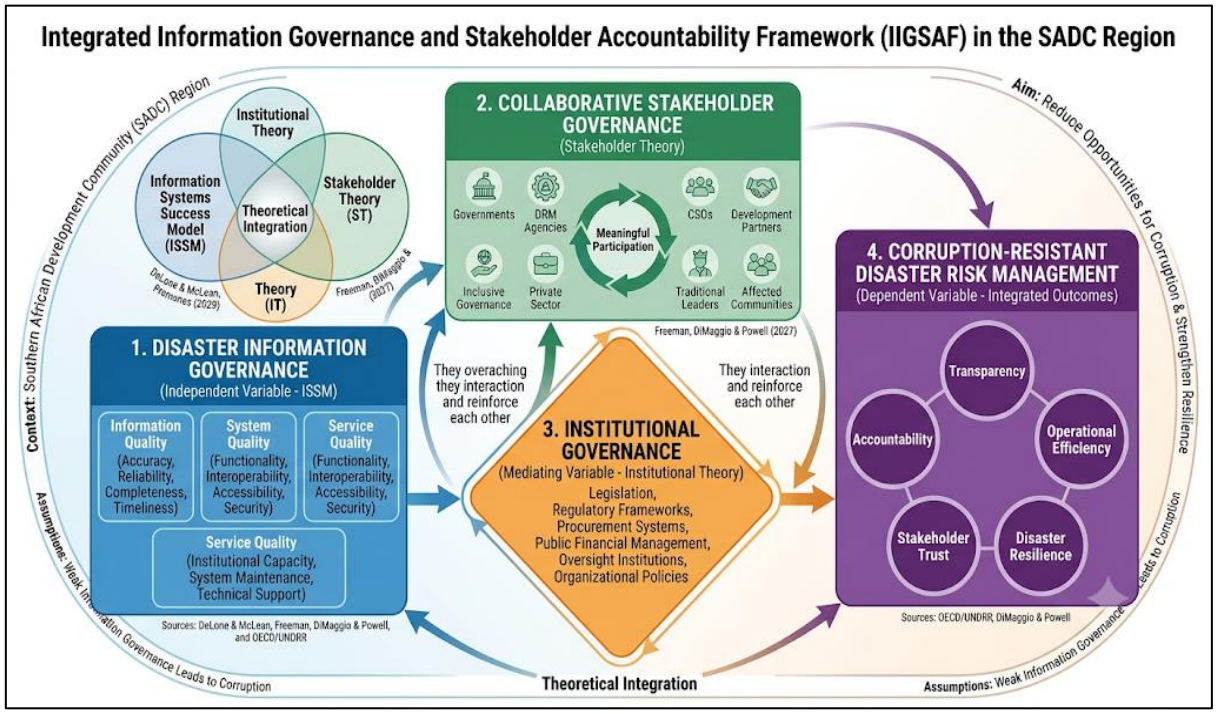

Fig 1 Conceptual Framework
Author Developed (2026)

The conceptual framework is developed from the integration of the Information Systems Success Model (ISSM), Stakeholder Theory (ST) and Institutional Theory (IT). It explains how disaster information governance can strengthen transparency, accountability and disaster resilience while reducing opportunities for corruption within disaster risk management (DRM) systems across the Southern African Development Community (SADC). The framework assumes that corruption is not merely a legal or ethical challenge but also a consequence of weak information governance, fragmented stakeholder coordination and inadequate institutional oversight. Consequently, improvements in these governance dimensions are expected to produce more transparent, accountable and resilient disaster management systems.

The independent variable is Disaster Information Governance, operationalised through the core dimensions of the Information Systems Success Model, namely information quality, system quality and service quality. Information quality refers to the accuracy, reliability, completeness and timeliness of disaster-related information used for planning and decision-making. System quality reflects the functionality, interoperability, accessibility and security of disaster information platforms, while service quality captures the effectiveness of technical support, institutional capacity and system maintenance. Together, these dimensions determine the extent to which disaster information systems generate reliable information that supports effective governance and evidence-based decision-making (DeLone & McLean, 2003).

The second component of the framework comprises collaborative stakeholder governance, derived from Stakeholder Theory. This dimension recognises that disaster governance is strengthened through meaningful participation of governments, disaster management agencies, humanitarian organisations, civil society organisations, development partners, the private sector, traditional leadership and disaster-affected communities. Effective stakeholder collaboration enhances information sharing, resource mobilisation, collective decision-making and public oversight while improving institutional legitimacy. Inclusive governance also promotes community participation, beneficiary verification and monitoring of disaster interventions, thereby reducing opportunities for political interference and misuse of humanitarian resources (Freeman, 1984; Ansell & Gash, 2008).

The framework further recognises institutional governance as a mediating variable. Institutional governance encompasses legislation, regulatory frameworks, procurement systems, public financial management, oversight institutions and organisational policies that regulate disaster management activities. Strong institutional environments strengthen compliance, improve coordination among disaster management actors and reinforce accountability mechanisms. Conversely, weak institutions characterised by fragmented mandates, poor regulatory enforcement and inadequate oversight undermine both technological investments and stakeholder collaboration. Institutional governance therefore mediates the relationship between disaster information governance, stakeholder participation and disaster management outcomes (DiMaggio & Powell, 1983; OECD, 2023).

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The dependent variable is Corruption-Resistant Disaster Risk Management, reflected through five measurable governance outcomes: transparency, accountability, operational efficiency, stakeholder trust and disaster resilience. Transparent information systems improve visibility over procurement, logistics and humanitarian resource allocation. Accountability is strengthened through reliable audit trails, financial reporting and performance monitoring. Operational efficiency is enhanced through coordinated decision-making, timely information sharing and integrated disaster response. Increased stakeholder trust promotes institutional legitimacy and sustained collaboration, while improved disaster resilience reflects the overall capacity of institutions and communities to anticipate, respond to and recover from disasters.

The framework proposes that high-quality disaster information systems alone are insufficient to produce effective disaster governance. Rather, information systems generate sustainable organisational benefits only when supported by collaborative stakeholder engagement and enabling institutional environments. Likewise, strong institutions cannot achieve desired outcomes without accurate information and effective stakeholder participation. Accordingly, the framework conceptualises disaster governance as the interaction of technological capability, collaborative governance and institutional effectiveness, each reinforcing the others to produce transparent and corruption-resistant disaster management systems.

Ultimately, the proposed Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF) positions information governance as the strategic foundation of resilient disaster management within the SADC region. By integrating digital information systems, collaborative stakeholder governance and institutional accountability into a single analytical model, the framework extends existing disaster governance literature and provides a practical basis for evaluating governance reforms aimed at improving transparency, strengthening accountability and reducing corruption throughout the disaster management cycle.

This conceptual framework is substantially more concise than the original while maintaining theoretical rigour and direct alignment with the three underpinning theories.

- *Comparative Analysis of Disaster Governance Frameworks in Selected SADC Countries*

Disaster governance across the Southern African Development Community (SADC) reflects a shared commitment to international and regional disaster risk reduction frameworks, including the Sendai Framework for Disaster Risk Reduction (2015–2030), the SADC Disaster Preparedness and Response Strategy, the African Union Programme of Action for Disaster Risk Reduction, and the 2030 Agenda for Sustainable Development. While these instruments promote integrated disaster governance, their implementation varies considerably among member states because of differences in institutional capacity, technological readiness, governance quality and financial resources. Consequently, disaster management effectiveness across the region is influenced less by policy availability than by the quality of information systems, stakeholder coordination and institutional accountability that support implementation (UNDRR, 2015; SADC, 2022).

A comparative assessment reveals that countries with stronger digital governance systems generally demonstrate higher levels of disaster preparedness and institutional coordination. South Africa has developed one of the region's most comprehensive disaster governance systems through the National Disaster Management Centre, integrating Geographic Information Systems (GIS), meteorological forecasting, digital communication platforms and electronic public administration systems. These technologies improve hazard monitoring, emergency coordination and resource management. However, experiences during the COVID-19 pandemic illustrated that technological capability alone cannot eliminate corruption risks, as emergency procurement irregularities highlighted the continued importance of institutional oversight and transparent governance (Auditor-General South Africa, 2021; OECD, 2023).

Botswana and Namibia demonstrate the benefits of proactive disaster governance centred on drought monitoring, climate information services and evidence-based planning. Both countries have invested in integrated early warning systems and relatively strong public financial management frameworks, enabling more coordinated responses to climate-related hazards. Their comparatively stable governance environments have also contributed to stronger institutional accountability and lower perceptions of public sector corruption than many regional counterparts. Nevertheless, both countries continue to face challenges related to long-term financing, technological interoperability and community participation, indicating that sustained institutional investment remains necessary to strengthen disaster resilience (African Development Bank, 2022; World Bank, 2023).

In contrast, Zimbabwe, Mozambique, Malawi, Madagascar and Zambia continue to experience significant governance constraints associated with recurrent climate-induced disasters, constrained fiscal resources and uneven institutional capacity. Although these countries have established national disaster management institutions and progressively aligned their policies with regional and international frameworks, disaster information systems often remain fragmented, inter-agency coordination is inconsistent and digital infrastructure is unevenly developed. These weaknesses limit evidence-based decision-making and reduce the effectiveness of humanitarian coordination, particularly during large-scale emergencies (UNDP, 2022; SADC, 2022).

Mozambique provides an important example of institutional learning following Cyclones Idai and Kenneth. Post-disaster reforms strengthened early warning systems, community preparedness programmes and cooperation with humanitarian partners. However, post-disaster assessments continued to identify weaknesses in beneficiary management, logistics coordination and information interoperability,

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demonstrating that institutional reforms require sustained investment in integrated information governance to achieve long-term effectiveness (World Meteorological Organization, 2023).

Zimbabwe has similarly strengthened its disaster governance architecture through legislative reforms, improved meteorological services and enhanced coordination by the Department of Civil Protection. Nevertheless, recurring droughts, cyclones and disease outbreaks continue to expose challenges relating to fragmented disaster databases, resource constraints and inconsistent stakeholder coordination. These experiences highlight the need for greater integration of digital information systems with institutional accountability mechanisms to improve transparency and operational efficiency.

Across the region, stakeholder participation remains an important determinant of disaster governance effectiveness. Countries that have institutionalised community-based disaster risk management generally demonstrate stronger beneficiary targeting, greater public trust and more effective coordination between government agencies and humanitarian organisations. Community participation facilitates hazard identification, vulnerability assessment and monitoring of relief distribution while strengthening social accountability. Conversely, exclusionary governance arrangements characterised by limited stakeholder engagement frequently result in duplication of interventions, political interference and reduced institutional legitimacy (UNDP, 2022; Ansell & Gash, 2008).

Information governance also emerges as a defining characteristic of successful disaster management systems. Countries with integrated information platforms, interoperable databases and digital communication technologies are better positioned to support real-time decision-making, transparent procurement and effective logistics coordination. In contrast, fragmented information environments constrain monitoring of disaster resources, delay humanitarian responses and increase opportunities for procurement irregularities, duplication of assistance and beneficiary manipulation. These findings reinforce the Information Systems Success Model by demonstrating that system quality and information quality directly influence governance performance (DeLone & McLean, 2003; OECD, 2023).

Institutional governance further explains observed differences across SADC member states. Strong legal frameworks, independent oversight institutions, transparent procurement systems and effective public financial management reinforce accountability and improve disaster governance outcomes. Conversely, weak institutional environments reduce the effectiveness of both technological investments and stakeholder collaboration. Institutional Theory therefore provides an important explanation for why countries implementing similar regional policies continue to achieve different disaster management outcomes.

The comparative analysis also demonstrates that corruption vulnerabilities are closely associated with governance weaknesses rather than disaster occurrence itself. Procurement fraud, diversion of humanitarian assistance, inconsistent beneficiary registration and weak financial oversight are more prevalent where information systems are fragmented, stakeholder participation is limited and institutional accountability mechanisms are weak. Conversely, countries characterised by integrated information systems, collaborative governance and effective institutional oversight exhibit greater transparency and lower corruption risks.

Overall, the comparative evidence supports the central proposition of this study: effective disaster governance depends on the interaction of high-quality information systems, collaborative stakeholder engagement and strong institutional governance. None of these dimensions is sufficient in isolation. Rather, technological capability, stakeholder participation and institutional accountability operate as complementary governance mechanisms that collectively strengthen transparency, improve disaster resilience and reduce corruption vulnerabilities. These findings provide the empirical and conceptual foundation for the proposed Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF) and inform the policy recommendations presented in the subsequent sections.

➢ *Summary of the Key Empirical Analysis*

Table 1 Summary of Comparative Findings on Disaster Governance Frameworks in Selected SADC Countries

Country/Theme	Information Systems	Stakeholder Collaboration	Institutional Governance	Key Governance Challenges	Overall Finding
South Africa	Advanced GIS, digital communication systems, integrated disaster management platforms and meteorological forecasting.	Strong intergovernmental coordination and established disaster management structures.	Comprehensive legislative and institutional framework with strong disaster management capacity.	Emergency procurement irregularities during COVID-19 highlighted accountability weaknesses.	Strong technological capacity improves disaster management but must be supported by robust oversight and anti-corruption mechanisms.

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Botswana	Integrated drought monitoring and climate information systems.	Effective coordination among government agencies and local authorities.	Stable governance and strong public financial management.	Long-term financing and technological interoperability remain challenges.	Proactive information governance enhances preparedness and accountability.
Namibia	Advanced drought early warning systems supported by remote sensing technologies.	Collaborative climate adaptation and community engagement initiatives.	Relatively strong governance and accountability institutions.	Limited digital integration and community participation require strengthening.	Evidence-based planning contributes to effective disaster governance.
Mozambique	Improved early warning systems following Cyclones Idai and Kenneth.	Enhanced collaboration with humanitarian organisations and communities.	Institutional reforms strengthened disaster preparedness.	Weak beneficiary management, logistics coordination and information interoperability.	Institutional learning has improved resilience, although integrated information governance remains incomplete.
Zimbabwe	Improved meteorological monitoring and disaster reporting systems.	Growing collaboration through the Department of Civil Protection and development partners.	Legislative reforms have strengthened disaster governance structures.	Fragmented databases, limited interoperability and resource constraints.	Greater integration of digital information systems is required to improve transparency and operational efficiency.
Malawi	Developing disaster information systems.	Community-based disaster risk management increasingly adopted.	Disaster governance structures continue to evolve.	Financial constraints, fragmented information systems and institutional capacity limitations.	Governance reforms require stronger digital and institutional support.
Madagascar	Limited digital disaster information infrastructure.	Strong humanitarian partnerships during emergencies.	Institutional reforms constrained by limited resources.	Weak information integration and dependence on external assistance.	Disaster resilience is constrained by institutional and technological limitations.
Zambia	Expanding early warning and climate information systems.	Increasing stakeholder participation in disaster preparedness.	Progressive policy reforms aligned with regional frameworks.	Weak digital infrastructure and coordination challenges.	Continued investment in integrated information governance is required.
Regional SADC Perspective	Wide variation in interoperability, digital maturity and information quality.	Increasing emphasis on regional collaboration and community participation.	Shared commitment to regional and international disaster governance frameworks.	Uneven institutional capacity, fragmented governance systems and inconsistent implementation.	Disaster governance effectiveness depends on integrating information systems, stakeholder collaboration and institutional accountability.

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Table 2 Cross-Cutting Governance Findings from the Comparative Analysis

Governance Dimension	Comparative Evidence	Implication for Disaster Governance
Information Systems Quality	Countries with integrated digital platforms demonstrate better disaster preparedness, coordination and resource management.	High-quality information systems improve transparency, decision-making and operational efficiency.
Stakeholder Collaboration	Inclusive stakeholder participation strengthens coordination, community ownership and public trust.	Collaborative governance enhances accountability and improves disaster response effectiveness.
Institutional Governance	Strong legal frameworks, oversight institutions and public financial management systems improve disaster governance performance.	Institutional effectiveness is essential for sustaining transparency and resilience.
Information Governance	Interoperable databases and integrated digital platforms reduce information asymmetry.	Information governance strengthens accountability and limits opportunities for corruption.
Corruption Vulnerability	Weak governance systems experience greater procurement fraud, beneficiary manipulation and resource diversion.	Corruption is primarily a governance failure rather than a consequence of disasters themselves.
Integrated Governance	Countries combining technology, stakeholder collaboration and strong institutions consistently perform better.	Sustainable disaster governance requires simultaneous investment in digital systems, stakeholder engagement and institutional strengthening.

V. PRESENTATION OF FINDINGS

The comparative analysis demonstrates that disaster governance effectiveness across the Southern African Development Community (SADC) is primarily influenced by three interrelated governance dimensions: disaster information systems, stakeholder collaboration, and institutional accountability. Although all selected countries have adopted disaster risk reduction policies aligned with the Sendai Framework for Disaster Risk Reduction (2015–2030), considerable differences remain in the implementation of integrated information systems, governance structures and anti-corruption mechanisms. These differences significantly influence disaster preparedness, emergency response effectiveness and institutional resilience.

➢ *Information Systems as Enablers of Disaster Governance*

The review indicates that countries possessing integrated disaster information systems consistently demonstrate greater operational efficiency during disaster preparedness and emergency response. South Africa, Botswana and Namibia have made substantial progress in integrating Geographic Information Systems (GIS), climate monitoring technologies, digital communication platforms and electronic information management systems into disaster governance. These technologies improve hazard monitoring, early warning dissemination, logistics coordination and evidence-based decision-making.

Conversely, several countries continue to experience fragmented databases, limited interoperability and inconsistent information-sharing mechanisms. These technological limitations delay humanitarian coordination, reduce transparency and constrain effective monitoring of disaster resources. The findings therefore confirm that information quality and system integration remain fundamental determinants of effective disaster governance.

➢ *Stakeholder Collaboration Strengthens Accountability*

The analysis further demonstrates that collaborative governance significantly improves disaster management effectiveness. Countries adopting community-based disaster risk management and multi-stakeholder coordination mechanisms generally achieve better beneficiary targeting, stronger institutional legitimacy and improved coordination among governments, humanitarian organisations and development partners.

Community participation also strengthens transparency through beneficiary verification, local monitoring and integration of indigenous knowledge into disaster preparedness. In contrast, fragmented stakeholder relationships frequently result in duplication of humanitarian assistance, weak coordination and reduced accountability.

➢ *Institutional Governance Influences Disaster Resilience*

Institutional governance emerged as another critical determinant of disaster management effectiveness. Countries characterised by stronger legislative frameworks, independent oversight institutions, transparent procurement systems and sound public financial management consistently demonstrate greater institutional resilience.

Although most SADC member states have adopted disaster management legislation and established dedicated disaster management institutions, considerable differences remain in regulatory enforcement, institutional capacity and governance maturity. These differences largely explain variations in disaster preparedness, response coordination and resource accountability across the region.

➢ *Information Governance Reduces Corruption Opportunities*

A consistent finding across the reviewed literature is that corruption vulnerabilities increase where disaster information systems remain fragmented and institutional oversight is weak. Procurement irregularities, diversion of humanitarian assistance, manipulation of beneficiary registers and inadequate financial reporting are more likely where information asymmetry exists.

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Conversely, integrated digital governance platforms—including electronic procurement systems, cloud-based databases, biometric beneficiary verification and digital financial management systems—strengthen transparency through improved auditability and real-time monitoring. The findings therefore suggest that corruption prevention should be embedded within disaster information governance rather than treated solely as a compliance or enforcement function.

- *Integrated Governance Produces Better Disaster Outcomes*

The comparative analysis indicates that no single governance component independently explains disaster management success. Rather, effective disaster governance results from the interaction of technological capability, collaborative stakeholder engagement and enabling institutional environments. Countries performing relatively well across these three dimensions consistently demonstrate stronger disaster preparedness, more efficient humanitarian coordination, greater accountability and lower corruption vulnerabilities.

These findings support the study's proposition that disaster information governance should be conceptualised as a multidimensional governance system in which information quality, stakeholder collaboration and institutional effectiveness reinforce one another to improve disaster resilience throughout the disaster management cycle.

Table 1 Summary of Comparative Findings

Governance Dimension	Key Findings	Implications for Disaster Governance
Disaster Information Systems	Integrated digital platforms improve coordination, monitoring and decision-making.	Strengthens transparency and operational efficiency.
Stakeholder Collaboration	Multi-stakeholder participation enhances coordination, legitimacy and beneficiary targeting.	Improves accountability and public trust.
Institutional Governance	Strong legal and regulatory systems reinforce disaster management performance.	Promotes institutional resilience and policy implementation.
Information Governance	Integrated databases and digital platforms reduce information asymmetry.	Minimises corruption opportunities.
Overall Governance Performance	Countries integrating technology, stakeholder collaboration and institutional accountability perform better.	Supports resilient and corruption-resistant disaster management.

VI. DISCUSSION OF FINDINGS

The findings demonstrate that the effectiveness of disaster risk management within the Southern African Development Community (SADC) is fundamentally a governance issue rather than solely a technological or humanitarian challenge. While all countries examined have established disaster management institutions and aligned national policies with international frameworks such as the Sendai Framework for Disaster Risk Reduction (2015–2030), considerable differences remain in governance outcomes because of variations in information systems maturity, stakeholder collaboration and institutional accountability. This finding supports contemporary disaster governance literature, which argues that resilience is determined by the interaction of technological, institutional and social capacities rather than by emergency response capability alone (UNDRR, 2015; OECD, 2023; World Bank, 2023).

The study further confirms the central proposition of the Information Systems Success Model that high-quality information systems generate organisational value through improved information quality, system reliability and enhanced decision-making (DeLone & McLean, 2003). Across the reviewed SADC countries, integrated disaster information systems consistently improved early warning dissemination, logistics coordination, resource allocation and operational efficiency. Conversely, fragmented information environments constrained evidence-based decision-making, delayed humanitarian interventions and weakened transparency. These findings are consistent with recent studies demonstrating that digital transformation has become a prerequisite for effective disaster governance because integrated information systems reduce information asymmetry and strengthen institutional accountability (Janssen et al., 2020; OECD, 2023). The results therefore extend the application of the ISSM beyond traditional organisational settings by demonstrating its relevance to disaster governance and corruption prevention.

The findings also reinforce the explanatory value of Stakeholder Theory by demonstrating that effective disaster management depends upon collaborative governance involving governments, humanitarian organisations, development partners, civil society organisations, local authorities and disaster-affected communities. Countries that institutionalised multi-stakeholder coordination generally achieved stronger beneficiary targeting, improved resource mobilisation and greater public trust than those characterised by fragmented institutional relationships. This supports Freeman's (1984) proposition that organisational success depends upon balancing stakeholder interests while also aligning with more recent collaborative governance literature emphasising participation, trust and shared accountability as essential determinants of public sector performance (Ansell & Gash, 2008; UNDP, 2022). The findings further demonstrate that community participation improves not only operational effectiveness but also transparency by strengthening beneficiary verification, local monitoring and social accountability throughout the disaster management cycle.

Institutional governance emerged as the critical enabling environment within which information systems and

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stakeholder collaboration operate. Although many SADC member states have adopted similar disaster management legislation and regional policy commitments, substantial differences remain in institutional effectiveness because of disparities in regulatory enforcement, organisational capacity, procurement governance and public financial management systems. These findings support Institutional Theory by demonstrating that organisational performance is strongly influenced by the quality of formal institutions, governance norms and regulatory environments (DiMaggio & Powell, 1983). Strong institutional arrangements provide the legal and administrative foundation necessary for integrated information systems and collaborative governance to produce sustainable organisational benefits. Conversely, weak institutions limit the effectiveness of technological investments and reduce stakeholder confidence in disaster governance processes.

An important contribution of this study is the demonstration that corruption should be conceptualised as an information governance failure rather than solely as a criminal justice or ethical issue. Procurement irregularities, diversion of humanitarian assistance, manipulation of beneficiary registers and weak financial accountability were consistently associated with fragmented information systems, limited transparency and inadequate institutional oversight rather than with disasters themselves. This finding supports recent international evidence advocating preventive governance approaches that embed transparency within digital information systems instead of relying exclusively on post-disaster investigations and enforcement mechanisms (Transparency International, 2021; OECD, 2023). Accordingly, integrated information governance provides a proactive strategy for reducing corruption opportunities while simultaneously improving operational effectiveness.

The study further demonstrates that investments in digital technologies alone are insufficient to improve disaster governance. While technologies such as Geographic Information Systems, artificial intelligence, blockchain, cloud computing and electronic procurement significantly enhance operational capability, their effectiveness depends upon stakeholder acceptance, institutional commitment and supportive regulatory frameworks. This finding confirms that disaster governance is fundamentally a socio-technical system in which technology, institutions and human actors interact continuously. Consequently, digital transformation initiatives that are not accompanied by organisational reform, stakeholder engagement and institutional strengthening are unlikely to achieve sustainable governance improvements.

The integration of the Information Systems Success Model, Stakeholder Theory and Institutional Theory therefore represents the principal theoretical contribution of this study. Individually, each theory explains only one dimension of disaster governance; however, their integration provides a comprehensive explanation of how technological capability, collaborative governance and institutional legitimacy jointly influence transparency, accountability and disaster resilience. The proposed Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF) extends existing disaster governance scholarship by positioning information governance as the central mechanism through which corruption can be prevented and institutional resilience strengthened. The framework therefore contributes both to disaster risk reduction literature and to broader debates on digital governance, public sector accountability and anti-corruption within developing regions.

VII. CONCLUSION

This study examined disaster risk management (DRM) within the Southern African Development Community (SADC) through the integrated perspectives of the Information Systems Success Model (ISSM), Stakeholder Theory (ST) and Institutional Theory (IT). The analysis demonstrates that effective disaster governance extends beyond emergency response capacity and depends fundamentally on the quality of information systems, collaborative stakeholder engagement and supportive institutional environments. These governance dimensions collectively determine the transparency, accountability and resilience of disaster management systems while influencing opportunities for corruption.

The comparative assessment further revealed that countries with integrated disaster information systems, interoperable digital platforms, inclusive stakeholder participation and stronger institutional accountability consistently achieve better disaster preparedness, more effective humanitarian coordination and greater public confidence than countries characterised by fragmented governance arrangements. Conversely, weak information systems, poor institutional coordination and limited oversight increase information asymmetry, reduce operational efficiency and create opportunities for procurement irregularities, diversion of humanitarian resources and weak financial accountability. These findings confirm that corruption is not simply a legal or ethical issue but a governance failure rooted in ineffective information management and institutional fragmentation.

A major contribution of this study is the development of the Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF). The framework advances disaster governance literature by integrating technological capability, collaborative governance and institutional accountability into a unified model for strengthening transparency and resilience. It also extends the application of the Information Systems Success Model beyond traditional organisational settings by demonstrating its relevance to disaster governance and corruption prevention. The framework therefore provides a practical and theoretically grounded approach for governments, disaster management agencies and regional organisations seeking to modernise disaster governance while embedding accountability within digital transformation initiatives.

Overall, the study concludes that resilient and corruption-resistant disaster governance cannot be achieved through technological investment, stakeholder participation or institutional reform in isolation. Sustainable improvements

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require the simultaneous strengthening of integrated information systems, collaborative stakeholder governance and effective institutional oversight. This integrated governance approach offers an important pathway for enhancing disaster resilience, protecting humanitarian resources and improving public sector accountability throughout the SADC region.

RECOMMENDATIONS

Based on the findings, the study makes the following recommendations:

- Strengthen Integrated Disaster Information Systems: SADC member states should invest in interoperable disaster information platforms that integrate hazard monitoring, beneficiary management, procurement, logistics and financial management into a single digital ecosystem. Such integration will improve information quality, operational coordination and evidence-based decision-making.
- Institutionalise Regional Information Governance Standards: The SADC Secretariat should promote common standards for disaster data management, interoperability, information sharing and digital reporting to improve regional coordination during transboundary disasters and humanitarian emergencies.
- Embed Transparency within Digital Governance: Governments should adopt electronic procurement systems, biometric beneficiary verification, blockchain-enabled transaction monitoring and digital audit platforms to strengthen transparency and minimise opportunities for corruption throughout the disaster management cycle.
- Strengthen Multi-Stakeholder Collaboration: National disaster management agencies should institutionalise partnerships among governments, humanitarian organisations, civil society, academia, the private sector and local communities. Inclusive participation will improve accountability, resource mobilisation and community ownership of disaster interventions.
- Enhance Institutional Capacity: Member states should strengthen disaster management institutions through continuous investment in technical skills, digital infrastructure, regulatory enforcement and public financial management systems. Institutional strengthening should accompany technological modernisation to ensure long-term sustainability.
- Promote Community-Centred Disaster Governance: Governments should integrate indigenous knowledge systems, community monitoring mechanisms and participatory decision-making into disaster governance to improve beneficiary verification, local accountability and public trust.
- Develop Regional Research and Innovation Partnerships: Universities, research institutions and disaster management agencies should collaborate in developing innovative digital governance solutions, including artificial intelligence, predictive analytics and geospatial technologies, to improve disaster preparedness and resilience across the region.

AREAS FOR FURTHER RESEARCH

Future studies should empirically validate the Integrated Information Governance and Stakeholder Accountability Framework (IIGSAF) using quantitative and mixed-methods approaches across multiple SADC countries. Comparative investigations examining the influence of artificial intelligence, blockchain technology, cloud-based disaster management systems and big data analytics on transparency and accountability would further strengthen understanding of digital disaster governance. Additional research should also explore citizen-centred accountability mechanisms, cross-border information governance and the long-term institutional impacts of digital transformation on disaster resilience in Africa and other disaster-prone regions.

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