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Monitoring and Evaluation Data Management Practices: Insights from African M&E Professionals

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ABSTRACT

This study offers a comprehensive examination of Monitoring and Evaluation (M&E) data management practices across the continent, drawing on the perspectives of 158 professionals from 16 African countries, with work experience spanning 32 countries on the continent. Using a mixed-methods approach, data were collected via an online survey disseminated through regional professional networks. Findings reveal widespread adoption of digital tools for data collection and storage, moderate use of statistical software, and growing awareness of data quality, access, and security. However, persistent challenges, such as limited integration across systems, weak metadata practices, underutilization of data for decision-making, and gaps in institutional capacity, undermine the effectiveness of M&E systems. Funding constraints, skills shortages, and technological limitations were identified as major barriers. Despite these issues, respondents offered practical recommendations to strengthen M&E data systems, including investments in digital infrastructure, capacity building, and the development of standardized protocols. The study provides timely insights to inform policy, enhance data-driven development, and foster a stronger M&E culture across Africa.

Keywords: Monitoring and Evaluation (M&E), Data Management, Africa, Data Quality, Digital Tools, Metadata, M&E Information Systems, Capacity Development

1.0 INTRODUCTION

Monitoring and Evaluation (M&E) systems have become indispensable for ensuring transparency, accountability, and adaptive learning in Africa's development landscape. As governments and development partners increasingly demand evidence for informed decision-making, the need for effective M&E data management systems has grown significantly. Yet,

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these systems often face structural weaknesses, including fragmented data flows, limited interoperability, and inconsistent quality control mechanisms (Lahey, 2015; African Union, 2019; CLEAR-AA, 2019; UNECA, 2025). These deficiencies undermine the credibility and utility of M&E data for policy and planning.

High-quality data is fundamental to effective monitoring and evaluation, as it facilitates the tracking of progress towards development goals such as the African Union's Agenda 2063 and the Sustainable Development Goals (SDGs). While many African countries have made notable progress in institutionalizing M&E systems, challenges related to data governance and utilization persist. Mapitsa and Churchill (2023) emphasize the need for governments to adapt to increasingly complex and unpredictable development contexts, underscoring the growing significance of robust monitoring systems. These systems must be capable of measuring what matters for adaptive management, which requires the capacity to (i) collect relevant data, (ii) analyse it effectively, and (iii) provide timely feedback to data producers and users. However, various studies, including that of Abrahams *et al* (2021); AfDB (2022); Masvaure & Fish (2022); and Nguliki (2024), indicate that numerous national M&E systems in Africa lack the necessary infrastructure and skilled personnel to manage large-scale, multi-sectoral data. Addressing these challenges calls for renewed investment in strengthening M&E data management capacities.

Digital innovations have significantly reshaped the Monitoring and Evaluation (M&E) landscape in Africa, particularly through the widespread adoption of tools such as KoboToolbox, ODK, DHIS2, and Power BI. These technologies have improved data collection efficiency, enabled real-time reporting, and strengthened data validation processes across numerous countries (Namara, 2024; World Bank, 2021; GIZ, 2022; GIZ, 2024). However, despite these advancements, persistent challenges remain—especially in rural and under-resourced areas—due to disparities in digital literacy, unreliable internet connectivity, and inadequate IT infrastructure. Additionally, the absence of harmonized metadata standards and data-sharing protocols limits system interoperability and hinders cross-sectoral integration. Metadata management and data utilization are frequently overlooked, which diminishes the practical utility of M&E findings. Damoulakis (2025) notes that errors and omissions in metadata exacerbate these issues, often resulting in asset misclassification, redundant data storage, and reduced trust in data reliability, ultimately undermining analytics efforts and operational effectiveness. Similarly, Nguliki (2024) highlights the need for more inclusive and standardized M&E systems to improve stakeholder coordination. Although digitization has enhanced efficiency and decision-making in many contexts, its adoption remains uneven across regions and institutions. This underscores the urgent need for targeted investments in digital infrastructure, capacity building, and governance frameworks (GIZ, 2024).

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Despite progress, substantial gaps persist in the institutionalization and operationalization of M&E data systems. According to Lahey (2015), there are problems with the quality of information currently generated by the M&E systems. These problems derive in part from fundamental problems with data in general and the need for national data development plans. Also, Kanyamuna et al (2019) found that in many African countries, the practice and commitment towards implementing functional M & E systems is noticeably on the low side. As such, several national M&E units lack formalized data protection policies or sustainable financing strategies. Additionally, donor dependency, political interference, and limited national ownership of M&E systems have hindered long-term system strengthening (World Bank, 2021). These issues have contributed to the underutilization of data, fragmented reporting, and weak feedback loops across various development sectors.

This study aims to examine the current state of M&E data management in Africa by exploring practices, capacities, and challenges experienced by professionals across the continent. Drawing on responses from 158 M&E practitioners working in diverse sectors and institutions, the research analyzes key aspects such as data collection, storage, security, integration, and utilization. The study's findings offer timely insights to inform policy recommendations, promote digital transformation in M&E systems, and support a more cohesive and context-responsive approach to evidence generation across Africa.

2.0 METHODOLOGY

This study adopted a mixed-methods design, integrating both quantitative and qualitative approaches to explore M&E data management practices across Africa. Data were collected using a structured online questionnaire developed in KoboToolbox and distributed through a regional WhatsApp network of African M&E professionals. A snowball sampling technique was employed, whereby initial participants were encouraged to share the survey with other professionals across the continent, thereby expanding geographic and institutional representation.

The questionnaire was structured into three main sections. The first section captured respondent profiles, including gender, nationality, countries of work experience, organizational affiliations, sectors of engagement, project involvement, seniority of positions held, and experience in M&E and data management. The second section focused on core M&E data management practices, encompassing data collection, storage, organization, quality assurance, security and privacy, processing and analysis, access and sharing, metadata management, integration, utilization, and data systems. The third section explored broader contextual factors, including challenges in M&E data management, overall system assessments, and respondents' recommendations for improvement. The instrument combined closed-ended items for quantitative analysis and open-ended questions to elicit explanatory insights.

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Data collection was conducted from January 9 to 19, 2025, yielding responses from 158 M&E professionals representing 16 countries, with cumulative work experience spanning 32 African nations. Quantitative data were analyzed using descriptive statistics in SPSS and Microsoft Excel, while qualitative responses were coded and thematically analyzed to enrich interpretation. Ethical principles were observed throughout the study, including informed consent, voluntary participation, anonymity, and confidentiality. All responses were aggregated to ensure that findings could not be traced to individual participants. The results are presented thematically by domain of M&E data management practice.

3.0 RESPONDENTS PROFILE

The credibility of these study findings is firmly anchored in the strong professional and geographical diversity of its 158 respondents. Representing 16 African countries and possessing work experience across more than 32 nations, the respondents offer a rich continental perspective on M&E practice. Their institutional affiliations span government agencies, international and local NGOs, donor-funded projects, academic institutions, and the private sector. This diversity ensures that the findings reflect the realities of M&E implementation across different operational contexts. Moreover, respondents reported experience in a wide range of sectors, including health (51%), education (49%), agriculture (32%), and environmental management (23%), demonstrating the multi-sectoral application of M&E frameworks across Africa's development landscape.

The professional capacity of the respondents further reinforces the integrity of the survey findings. A majority (86.1%) have directly worked on development projects or programs, and over 83% have held either senior or middle-level M&E positions, such as Director of M&E, Evaluation Consultant, or M&E Specialist. Additionally, 60.1% have more than five years of experience in M&E, and 64.6% report similar experience in data management tasks, including data entry, validation, storage, analysis, and visualization. This depth of experience affirms that the respondents possess both strategic and operational expertise, making them well-positioned to provide informed insights into M&E data management practices. As such, the integrity, relevance, and reliability of the study's findings are well-supported by the qualifications and breadth of experience represented within the respondent group.

Gender: The survey was completed by a total of 158 M&E professionals, with a strong male majority. Specifically, 119 respondents (75.3%) were male, while 39 respondents (24.7%) were female. This gender disparity highlights ongoing representation imbalances in the M&E sector across Africa, which may reflect broader challenges related to gender equity in professional development and leadership opportunities.

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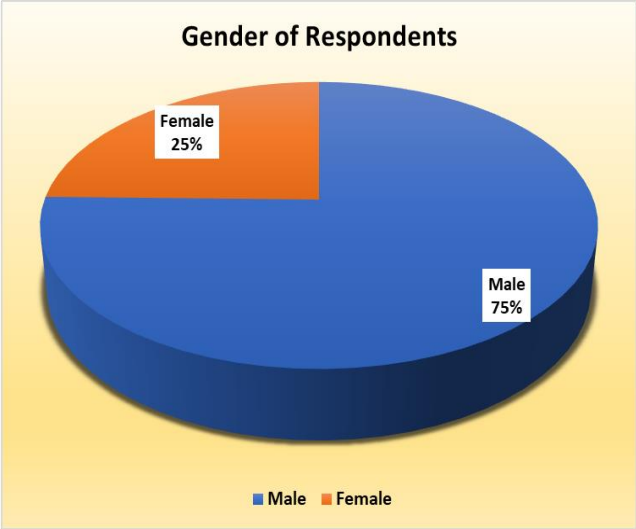
Figure 1: Gender Distribution of Study Respondents



Countries of Origin and Work Experience: Respondents were drawn from a wide geographical spectrum, reflecting the diversity of M&E professionals on the continent. Beyond their countries of origin, respondents reported work experience in a broad array of African countries. This demonstrates the transnational nature of M&E expertise in Africa, with many professionals bringing cross-country perspectives and experiences to their roles. Table 1 presents Respondents' Countries of Origin and countries of work experience in Africa. This continental reach underscores the wide applicability and interest in strengthening M&E data management across different contexts and institutional systems.

Table 1: Respondents' Countries of Origin and Work Experience

Respondents' Nationalities in Africa	Respondents' Countries of Work Experience in Africa	
1. Burkina Faso	1. Benin	17. Mozambique
2. Cameroon	2. Botswana	18. Niger
3. Congo DRC	3. Burkina Faso	19. Nigeria
4. Ethiopia	4. Burundi	20. Rwanda
5. Ghana	5. Cameroon	21. Senegal
6. Kenya	6. Congo DRC	22. Sierra Leone
7. Mali	7. Egypt	23. Somalia
8. Morocco	8. Equatorial Guinea	24. South Africa
9. Mozambique	9. Ethiopia	25. South Sudan
10. Niger	10. Gabon	26. Sudan
11. Nigeria	11. Ghana	27. Sao Tome
12. Rwanda	12. Guinea	28. Tanzania
13. Tanzania	13. Kenya	29. Tunisia

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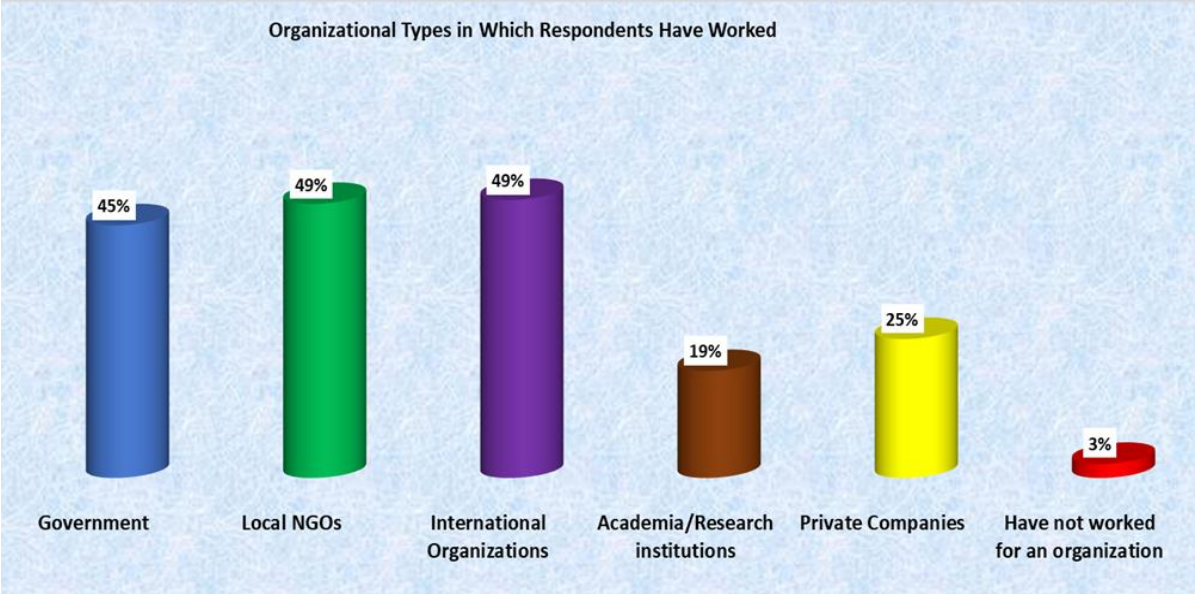
14. Uganda 15. Zambia 16. Zimbabwe	14. Malawi 15. Mali 16. Morocco	30. Uganda 31. Zambia 32. Zimbabwe

Type of organizations where respondents have worked: Respondents have worked across a diverse range of organizational settings, reflecting the broad application of M&E functions in different institutional contexts. 49% of respondents reported experience with local NGOs and an equal percentage with international organizations, such as donor-funded projects and UN agencies. 45% indicated having worked with government institutions, which often serve as key implementers or overseers of national M&E systems. Experience in the private sector was reported by 25%, while 19% had worked in academic or research institutions, suggesting some engagement in evidence generation and methodological development. Only 3% of respondents reported never having worked for any organization, indicating that nearly all participants have applied their M&E skills in structured institutional environments.

Figure 2: Organizational types in which respondents have worked



Sectors Worked in Across Africa: Based on the survey findings, respondents have worked in a wide range of sectors across Africa, demonstrating the breadth of Monitoring and Evaluation (M&E) practice on the continent. The most commonly reported sectors were health (51%) and education (49%), indicating strong M&E presence in social sectors where performance measurement and donor accountability are well established. These sectors benefit from

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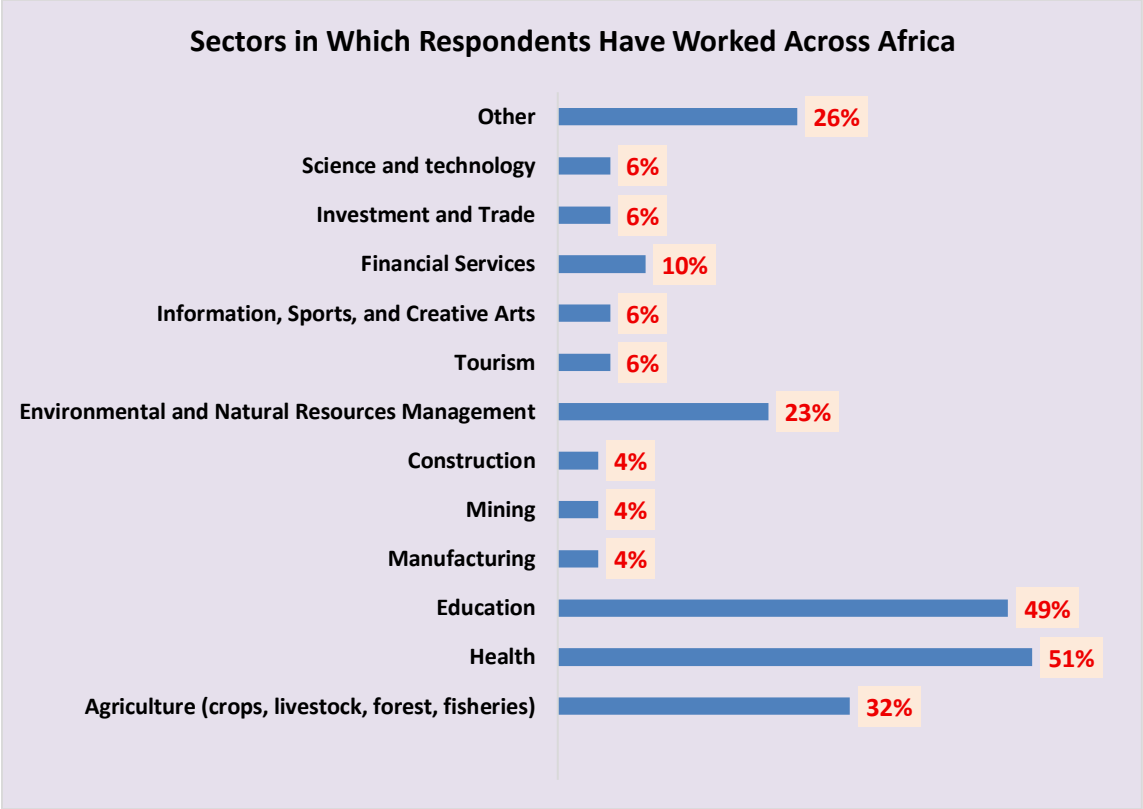
significant investments and structured M&E frameworks, which likely explains their prominence among respondents' experience.

Figure 3: Sectors in which respondents have worked across Africa



The agriculture sector, encompassing crops, livestock, forestry, and fisheries, was also significant, with 32% of respondents reporting experience in this area. This reflects the critical role of agriculture in rural development and food security, where M&E supports program implementation, impact assessment, and value chain improvements. Similarly, 23% of respondents have worked in environmental and natural resource management, signaling growing attention to climate change, conservation, and sustainability initiatives, often driven by international partnerships.

A notable 26% of respondents reported working in other sectors, which likely include cross-cutting areas such as governance, gender and inclusion, humanitarian assistance, ICT for development, and social protection. This diversity underscores the versatility of M&E professionals and the increasing demand for evidence-based decision-making beyond traditional development sectors.

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Meanwhile, some sectors saw relatively limited engagement. These include financial services (10%), and sectors such as tourism, information and creative arts, investment and trade, and science and technology, each with 6% of respondents. These findings suggest that while M&E roles are emerging in these areas, they remain underrepresented compared to core development sectors.

The lowest reported engagement was in manufacturing, mining, and construction, each cited by just 4% of respondents. This may reflect limited integration of M&E frameworks in these sectors or fewer development-funded projects that require rigorous monitoring and evaluation.

In summary, while M&E professionals in Africa are most active in health, education, and agriculture, their presence is gradually expanding into non-traditional and emerging sectors, reflecting the evolving landscape of development priorities and the growing appreciation for data-driven decision-making across the continent.

Experience in Projects or Programs: A majority of the respondents (136 individuals, or 86.1%) reported having worked in either projects, programs, or both, reflecting substantial hands-on experience in applying M&E processes within real-world implementation contexts. This project-based exposure is essential for understanding the practical dimensions of data collection, analysis, and utilization at both field and institutional levels. However, 13.9% (22 respondents) indicated they had not worked directly in such settings, which may suggest backgrounds in policy, academia, or support functions within M&E.

Highest Job Position Held: Respondents have held diverse positions within the M&E field, with the majority occupying senior and middle-level roles that involve strategic, technical, and supervisory responsibilities. Specifically, 43% (68 respondents) reported having held senior-level positions such as Director of M&E, Head of M&E Unit, or Evaluation Consultant, while 40.5% (64 respondents) indicated experience at the middle level, including roles like M&E Specialist, Project M&E Lead, or Data Manager. A smaller proportion, 14.6% (23 respondents), reported experience in low-level positions, and only 1.9% (3 respondents) indicated no prior role in M&E. This distribution highlights the significant leadership and operational expertise within the respondent group.

Experience in M&E Activities: The survey findings indicate that the majority of respondents possess substantial experience in M&E activities, with 60.1% (95 respondents) reporting over five years of practical engagement in the field. An additional 32.3% (51 respondents) have less than five years of experience, while only 7.6% (12 respondents) reported having no prior M&E experience. The range of experience includes designing M&E frameworks, developing indicators, conducting evaluations, managing performance-based systems, and facilitating

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capacity-building efforts. This depth and breadth of expertise among respondents enhance the credibility and relevance of the insights generated through the survey.

Experience in Data Management: In addition to their M&E experience, respondents demonstrated substantial involvement in data management activities. A significant majority, 64.6% (102 respondents), reported having more than five years of experience in data-related tasks such as data entry, validation, storage, cleaning, analysis, and visualization. Another 27.2% (43 respondents) have less than five years of experience, while 8.2% (13 respondents) indicated no prior involvement in data management. This widespread integration of data management into M&E roles highlights the growing emphasis on data quality, integrity, and governance as essential components of effective monitoring and evaluation systems.

4.0 M&E DATA MANAGEMENT FINDINGS

4.1 M&E Data Collection

The majority of respondents acknowledged the effective use of appropriate methods and tools for M&E data collection, including surveys, interviews, and observations. Notably, 41.8% strongly agreed and 48.1% agreed that these tools are being applied effectively, demonstrating a high level of confidence in current data collection practices. Many respondents emphasized the growing role of digital tools such as ODK and KoboCollect, which enhance efficiency and accuracy in the field. They also highlighted the importance of timely training, thoughtful tool design, and pretesting as critical components for minimizing errors and ensuring data validity. Stakeholder involvement in the tool development process was also cited as essential for improving both ownership and contextual relevance.

Despite these strengths, the implementation of measures to ensure data accuracy, reliability, and consistency during collection showed mixed results. Only 10.1% of respondents believed these measures were implemented to a very large extent, while 27.2% rated them to a large extent, and 25.9% to a moderate extent. However, a significant portion, 17.1% to a low extent and 14.6% to a very low extent, indicated gaps in quality assurance during data collection. These results suggest that while tools and methods are widely accepted and used, the robustness of quality control mechanisms varies considerably across organizations and contexts.

A minority of respondents also expressed concerns about operational challenges that hinder effective data collection. Issues such as limited internet connectivity, poor coordination, and inconsistent application of technology were commonly noted. Furthermore, some professionals highlighted the dependency on external funding to maintain digital data systems, which poses a risk to sustainability. These insights underline the need for enhanced institutional capacity

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building and greater local ownership to strengthen M&E data collection processes and reduce reliance on donor-driven approaches.

4.2 M&E Data Storage

The survey findings reveal that the majority of respondents have adopted digital storage systems for managing M&E data. Commonly used tools include Excel, Google Drive, and various cloud-based servers, which facilitate easier access, better organization, and more efficient sharing of data. In terms of security, password protection, server redundancy, and centralized storage systems were frequently cited as key features in place to safeguard data and promote orderly storage practices. These responses suggest that a significant portion of organizations have moved toward modernized, digital data environments.

However, when asked about the extent to which secure storage systems are in place, only 30 respondents (19%) indicated this applied to a very large extent, while 49 (31%) reported it to a large extent. Another 47 (30%) cited moderate implementation, with the remaining responses indicating lower levels of adoption. This variation is further reflected in the responses regarding backup and recovery mechanisms, only 18 respondents (11.4%) said these were in place to a very large extent, while 26 (16.5%) indicated a large extent. A significant number of participants (42 or 26.6%) cited moderate implementation, but a notable 63 respondents (39.9%) acknowledged only low or very low levels of backup and recovery capability. These figures point to major inconsistencies in how data storage is managed across institutions.

Concerns were raised particularly by respondents from smaller organizations and those operating in rural contexts, where data governance structures are weak and clear protocols for storage and backup are lacking. Some participants noted continued use of physical files and inconsistent digital backup practices, which undermines the long-term reliability and accessibility of M&E data. These insights indicate that while progress has been made in digitizing data storage, there remains a need for more standardized protocols, capacity strengthening, and investment in infrastructure to ensure data is not only stored but also protected and recoverable in the face of potential loss.

4.3 M&E Data Organization

The majority of respondents emphasized the importance of organizing M&E data in well-structured formats to improve accessibility, analysis, and reporting. Specifically, 25.3% stated that data is structured using databases, spreadsheets, or data warehouses to a very large extent, and 39.2% to a large extent, making up nearly two-thirds of all responses. Participants highlighted the use of naming conventions, coding systems, folder hierarchies, and standard templates as essential for systematic data management. The inclusion of data dictionaries was

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also noted as critical for maintaining consistency and ensuring data can be interpreted and used effectively by multiple stakeholders.

Despite these efforts, challenges in data organization persist. Regarding the categorization and tagging of data to facilitate retrieval and analysis, only 16.5% of respondents reported doing this to a very large extent, and 20.3% to a large extent. A considerable portion—21.5% moderate, 13.3% low, and 15.2% very low- reflects inconsistency in applying best practices for data categorization. Additionally, 13.3% of respondents were unsure about the extent of such practices within their organizations, suggesting possible gaps in awareness or documentation processes.

Several respondents attributed these shortcomings to limited staff capacity, lack of harmonized data systems, and ad hoc data management practices. Others pointed to broader systemic issues such as the absence of national standards and fragmentation across sectors, which hinder the development of coherent and interoperable data organization frameworks. These findings underscore the need for targeted capacity building, institutional standardization, and cross-sectoral coordination to improve the consistency and effectiveness of M&E data organization across the region.

4.4 M&E Data Quality Assurance

Most respondents emphasized the critical role of routine Data Quality Assurance (DQA) activities, including validation checks, data cleaning, and audits, as essential practices to uphold data accuracy, completeness, and consistency. According to the survey, 24.7% of respondents reported that these procedures are conducted to a very large extent, and 29.7% noted they occur to a large extent, with another 31% acknowledging moderate implementation. Participants also highlighted the need to institutionalize data quality standards, develop standard operating procedures (SOPs), and strengthen the capacity of field staff as foundational steps to ensuring reliable M&E data systems.

Despite these positive practices, a significant portion of respondents expressed concerns about inconsistencies in data quality assurance implementation. When asked about the application of data quality standards to maintain integrity and reliability, only 17.7% indicated this occurred to a very large extent, and 22.8% to a large extent. Alarmingly, a combined 31.7% of respondents rated data quality standard application as low or very low, and 12.7% were unsure, reflecting a lack of systematic application across many organizations. These findings suggest that while DQA is generally recognized as important, it is not uniformly enforced or resourced.

Respondents attributed these challenges to several underlying factors. Some pointed to the limited availability of funding, particularly in government-led or donor-dependent programs,

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which hinders the institutionalization of routine quality checks. Others cited inadequate feedback loops, insufficient training, and a prevailing perception that DQA is a compliance or policing function rather than a supportive process aimed at improving data use. These insights underscore the need for stronger organizational commitment, continuous staff development, and reframing of DQA as a constructive practice to enhance data integrity across M&E systems.

4.5 M&E Data Security and Privacy

Respondents overwhelmingly recognized the importance of implementing robust data security measures to protect sensitive M&E data. Tools such as encryption, access control mechanisms, and backup systems were commonly mentioned as essential safeguards, particularly when dealing with confidential information such as health records or beneficiary data. According to the survey, 30.4% of respondents reported that data protection measures are in place to a very large extent, and another 30.4% indicated to a large extent, while 27.2% cited moderate implementation. These responses highlight a growing institutional awareness of the need for strong technical and procedural safeguards to prevent unauthorized access, breaches, or data loss.

However, the extent to which organizations comply with data protection regulations presents a more varied picture. Only 15.8% of respondents stated that compliance is ensured to a very large extent, and 18.4% to a large extent. A further 21.5% reported moderate compliance, but nearly one-third (31%) of respondents rated compliance as either low or very low, with 13.3% unsure. These figures suggest that while some organizations have formal systems in place, others operate without clear data protection frameworks or lack the capacity to enforce compliance effectively.

A number of respondents raised specific concerns related to inadequate policies, weak enforcement mechanisms, and the use of public cloud platforms or shared devices, which increase vulnerability to data breaches. In some instances, participants shared experiences of unauthorized access or loss of confidential information, emphasizing the urgent need for stronger institutional policies, regular staff training, and greater adherence to national or international data protection regulations. These insights underscore the importance of integrating data security and privacy considerations into broader M&E systems to uphold ethical standards and protect sensitive information.

4.6 M&E Data Processing and Analysis

The majority of respondents affirmed the critical role of data processing and analysis in generating actionable insights for M&E. 29.7% reported that raw data is effectively transformed into meaningful insights to a very large extent, and 36.1% indicated this occurs to a large extent, suggesting widespread application of analysis techniques. Respondents emphasized the use of modern analytical tools such as SPSS, Stata, Power BI, and R to support deeper analysis, trend

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visualization, and evidence-based reporting. Many advocated for continued training and capacity building to strengthen skills in data interpretation, particularly for program learning and adaptive management.

Despite these strengths, the adoption of advanced analytical tools remains uneven. When asked about the use of statistical software, visualization tools, or machine learning algorithms, only 16.5% said these were used to a very large extent, and 19.6% to a large extent. A substantial portion of respondents (21.5%) reported moderate usage, while a combined 30.4% indicated low or very low usage, and 12% were unsure. These results highlight that many institutions still rely heavily on basic tools such as Excel and may lack access to more advanced software or trained personnel to fully leverage the potential of data analytics.

Several respondents also raised concerns about the quality and timeliness of data analysis, noting that in some cases, analysis is rushed to meet reporting deadlines, leading to superficial insights that are not sufficiently useful for decision-making. Others cited institutional capacity constraints and limited integration between data processing and program management units. These challenges underscore the need for organizations to invest in analytical capacity, adopt appropriate technologies, and create time and space for meaningful data use, thereby ensuring that M&E systems inform strategic planning and improve program effectiveness.

4.7 M&E Data Access and Sharing

The majority of respondents expressed strong support for broader access to M&E data within organizations, highlighting that sharing data with stakeholders, donors, and communities fosters transparency, accountability, and collective learning. Tools such as cloud storage, dashboards, and defined access protocols were widely cited as best practices that enable secure and efficient data sharing. According to the survey, 25.9% of respondents reported that permissions to control data access are set to a very large extent, and 37.3% to a large extent, demonstrating widespread institutional recognition of the need for structured data governance.

When it comes to actual data sharing, particularly with external stakeholders, responses were more mixed. Only 16.5% of respondents indicated that data is shared securely while maintaining confidentiality to a very large extent, and 19% to a large extent. A notable proportion (27.2%) described such sharing as occurring to a moderate extent, while 27.8% reported either low or very low levels of data sharing. This suggests that while internal access controls are generally in place, consistent mechanisms for secure and transparent data sharing with external audiences may be underdeveloped or inconsistently applied.

A smaller but significant group of respondents raised concerns about restrictive data access policies, lack of formal data sharing protocols, and fears of data misuse, all of which hinder open

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data practices. Some pointed out that only senior management or donors typically have access to M&E data, which can exclude field staff and implementing partners from meaningful participation in data use. These limitations not only reduce the collaborative value of M&E systems but may also undermine the potential for data-informed decision-making at all operational levels. The findings underscore the need for inclusive data access policies, greater transparency, and investment in secure data sharing infrastructure to maximize the utility of M&E data.

4.8 Metadata Management

A majority of respondents acknowledged the crucial role of metadata in enhancing data usability, transparency, and interpretation. Proper documentation of data attributes such as source, collection date, and definitions was reported as being practiced to a very large extent by 26.6% of respondents and to a large extent by 35.4%, demonstrating moderate adoption of metadata practices. Respondents highlighted best practices such as the use of metadata standards, data dictionaries, and staff training to ensure datasets are well-contextualized and reusable over time. These practices not only support consistent analysis but also make data easier to validate and share across stakeholders.

Despite this, metadata reliability and utilization remain inconsistent. While 38% of respondents agreed and 13.9% strongly agreed that metadata is reliable and appropriately used, a substantial portion expressed uncertainty or disagreement. Specifically, 22.8% were neutral, while 17.1% disagreed and 8.2% strongly disagreed. These responses suggest that although the importance of metadata is generally acknowledged, actual implementation is not yet standardized across organizations, and gaps in quality or consistency persist.

Some respondents noted that metadata management is poorly understood or under-prioritized, particularly at the field level. Issues such as the failure to document data collection contexts, lack of routine updates, and inadequate training were commonly cited challenges. As a result, datasets often become difficult to interpret, verify, or reuse, especially when key contextual details are missing. These findings underscore the need for stronger institutional emphasis on metadata governance, development of standard operating procedures, and continuous capacity building to improve the quality and utility of M&E data over time.

4.9 M&E Data Integration

Most respondents acknowledged the value of integrating data from various sources, both quantitative and qualitative, to enhance program insights, improve performance monitoring, and support evidence-based decision-making. According to the findings, 25.9% of respondents said that data is integrated to a very large extent, and 27.2% to a large extent, while another 25.9%

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noted moderate integration. Recommended practices included the development of data integration strategies, adoption of common data standards, and use of interoperable systems to ensure smooth integration across diverse platforms and partners.

When assessing the quality of the integrated data, 38.6% of respondents agreed, and 16.5% strongly agreed, that the combined datasets are generally reliable. However, a significant portion remained uncertain or skeptical, with 23.4% neutral, 14.6% disagreeing, and 7% strongly disagreeing. These responses highlight variability in the effectiveness of integration efforts, possibly due to inconsistencies in data formatting, quality, or contextual alignment between sources. Even when integration is attempted, the absence of shared standards and quality assurance mechanisms can undermine the reliability of the resulting datasets.

A smaller but notable group of respondents reported that data integration is infrequent or ineffective due to technological limitations, lack of staff capacity, or incompatible systems used by different partners. Persistent data silos, particularly between local organizations and international implementers, were cited as a barrier to harmonized reporting and joint learning. These challenges point to the need for investments in infrastructure, enhanced technical training, and the promotion of collaborative data governance frameworks that facilitate integration across organizational and sectoral boundaries.

4.10 M&E Data Utilization

The majority of respondents strongly emphasized that the utilization of M&E data is vital for evidence-based decision-making, program learning, and accountability. According to the survey, 38.6% indicated that data is used to a very large extent, and 27.8% to a large extent, while another 24.7% acknowledged moderate use. Respondents highlighted the importance of presenting data in user-friendly formats, engaging stakeholders in interpretation, and tailoring dissemination methods to the needs of diverse audiences. Data utilization was particularly evident in donor-funded programs, where reporting and strategic planning are closely tied to performance metrics, though application was noted to be less consistent in other sectors.

Despite these encouraging trends, several challenges continue to hinder effective data use. A notable number of respondents reported issues such as limited stakeholder engagement, political interference, and the absence of institutional feedback loops that would otherwise reinforce data use in decision-making. Some also mentioned that organizational cultures remain largely reactive, with data often being collected for compliance rather than learning or improvement. Furthermore, while 22.8% of respondents felt data is presented in formats that meet end-user needs to a very large extent, the combined 26.6% who rated presentation as low or very low,

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along with 8.9% unsure, suggests that many M&E outputs are still not optimally aligned with the needs of policymakers, practitioners, or communities.

Respondents called for greater investment in data literacy, particularly among non-technical audiences, and advocated for improved data visualization, simplified reporting tools, and regular stakeholder consultations to make M&E findings more accessible and actionable. Building a stronger culture of data use will require not only technical solutions but also sustained efforts in capacity building, leadership engagement, and embedding M&E practices within institutional planning processes. Ultimately, strengthening the uptake of M&E data will enhance its role as a driver of development effectiveness and organizational learning.

4.11 M&E Data Systems

A majority of respondents acknowledged the pivotal role that robust M&E data systems play in enhancing data quality, accessibility, and the overall efficiency of monitoring and evaluation processes. 24.7% of participants indicated that system performance is reviewed to a very large extent, and 26.6% to a large extent, suggesting that many organizations are actively engaged in maintaining and evaluating their data systems. Respondents emphasized the importance of regular system reviews, user training, and integration with other platforms to keep systems responsive to evolving programmatic and reporting needs. In settings where donor support is present, several respondents praised M&E systems for being systematic, functional, and well-maintained, thanks to consistent updates and infrastructure improvements.

Despite these strengths, challenges remain. 29.1% of respondents reported only moderate system reviews, and a combined 19.6% cited low or very low frequency of such evaluations. Similarly, while 16.5% indicated continuous improvements to align systems with changing needs occur to a very large extent, and 23.4% to a large extent, many others (20.9% low, 8.2% very low, and 8.2% unsure) suggested that system updates are irregular or insufficient. Respondents from smaller organizations and those without external funding frequently described M&E systems as outdated, underdeveloped, or lacking technical capacity, with some systems viewed as expensive to maintain or poorly adapted to project-specific requirements.

To address these issues, respondents called for increased investments, participatory system design, and regular performance reviews to ensure systems are secure, user-friendly, and adaptable. They also stressed the need to build local capacity for managing and customizing systems without overreliance on external consultants. Establishing standardized protocols, improving interoperability, and ensuring institutional ownership were cited as key to creating sustainable and responsive M&E data systems that can support long-term development goals.

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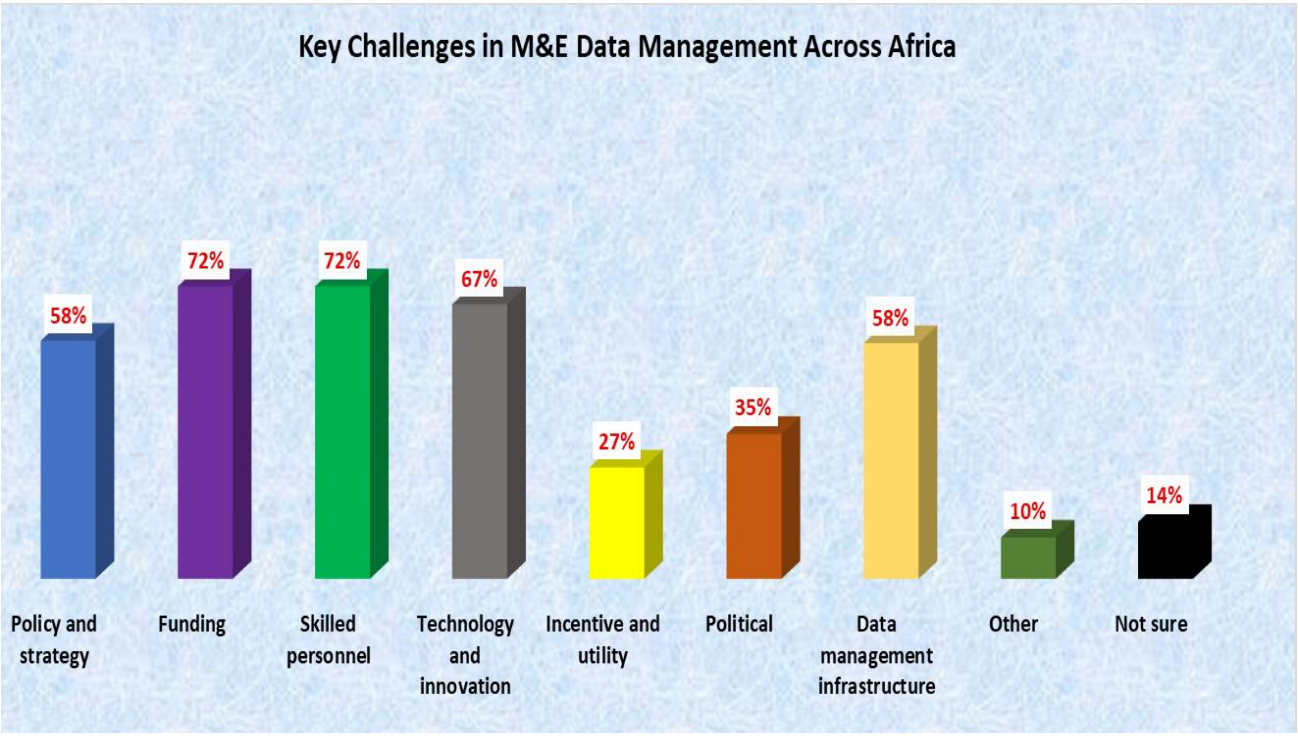
5.0 OTHER FINDINGS

5.1 Key Challenges in M&E Data Management Across Africa

The survey revealed several key challenges affecting M&E data management across Africa, with funding constraints and shortage of skilled personnel emerging as the most significant, each cited by 71.5% of respondents. These were closely followed by technology and innovation challenges at 67.1%, highlighting persistent limitations in digital infrastructure and system upgrades. Policy and strategy gaps were also a major concern, identified by 58.2% of participants, alongside challenges in data management infrastructure (57.6%), underscoring the need for stronger institutional frameworks and investment in foundational systems.

Other notable issues included political interference (35.4%) and incentive-related challenges (27.2%), which impact data use, staff motivation, and organizational learning. A smaller proportion cited miscellaneous challenges (10.1%) or were unsure (13.9%), reflecting variability in how barriers are perceived across contexts. These findings point to the need for a comprehensive approach that addresses structural, technical, and human capacity gaps in order to strengthen M&E data management systems across the continent.

Figure 4: Key challenges in M&E data management across Africa



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5.2 Practitioner Insights on the Performance of M&E Data Management in Africa

Respondents provided a generally positive assessment of M&E data management in Africa, with 31.6% rating it as good and another 31.6% as satisfactory, indicating that while progress has been made, there is still room for improvement. A further 22.8% rated the overall quality as excellent, reflecting confidence in systems where investments, capacity, and structures are relatively strong. These assessments suggest that many practitioners recognize ongoing improvements in data management practices, especially in well-resourced or donor-supported environments.

However, 12% of respondents rated M&E data management as poor, and 1.9% were unsure, pointing to disparities in quality across regions and institutions. These lower ratings likely reflect challenges such as inadequate infrastructure, limited skilled personnel, inconsistent standards, and weak institutional ownership identified elsewhere in the survey. Overall, while there is a solid foundation for M&E data management across Africa, sustained efforts are needed to address remaining gaps and ensure more consistent and high-quality practices continent-wide.

5.3 Recommended Interventions to Improve M&E Data Management

A majority of respondents emphasized the critical need for capacity building, adequate funding, and adoption of modern digital technologies to strengthen M&E data management. Training at all levels, ranging from field data collectors to M&E officers, was frequently cited as essential for ensuring data accuracy, quality assurance, and effective utilization. Many highlighted the importance of standardizing data collection tools, implementing robust data validation systems, and fostering institutional buy-in for continuous improvement of data processes. Respondents also called for the development of clear policies, guidelines, and data management plans, coupled with investments in infrastructure, data security, and integrated systems to promote transparency, accountability, and real-time decision-making.

On the other hand, a significant number of participants raised concerns about political interference, low awareness, lack of professional recognition, and fragmented systems, especially in sectors like health where multiple data platforms coexist without integration. Some emphasized the need to depoliticize data, promote ethical use, and empower M&E professionals to lead data processes independently. Others suggested that academic institutions incorporate practical data management content into curricula. A few also proposed more stakeholder engagement, community feedback mechanisms, and centralized M&E units across government sectors to ensure sustainable and well-coordinated M&E systems.

5.4 Participant Feedback on the Study

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The majority of respondents expressed highly positive views about the survey, describing it as informative, well-structured, and relevant to the current needs of M&E professionals across Africa. Many appreciated its clarity, comprehensiveness, and alignment with practical realities in data management. They noted that the questions were concise, easy to understand, and reflective of real-world M&E challenges. Several participants emphasized that the survey would contribute significantly to strengthening M&E systems and practices and called for the findings to be shared widely with stakeholders for action and learning.

However, a minority highlighted areas for improvement, such as the length of the survey and the repetitive nature of some questions. A few respondents suggested the need for sector-specific customization, more emphasis on actionable feedback, and greater inclusivity across different M&E disciplines. Some recommended simplifying the questionnaire to reduce respondent fatigue, and others emphasized the importance of follow-up actions, including training, dissemination of findings, and advocacy to promote data use culture within government and non-government institutions.

References

Abrahams, M., Etta, F., Tarsilla, M. & Wotela, K. (2021). Evidence-based decision-making in the era of big data, African Evaluation Journal 9(1), a602. https://doi.org/10.4102/aej.v9i1.602

AfDB (2022). The future of impact evaluation in Africa, Evaluation Matters, A Magazine on Development Evaluation, Volume 1, 2022

African Union (2019). Continental Results Framework: Monitoring and Reporting on the Implementation of the Women, Peace and Security Agenda in Africa (2018 - 2028), Addis Ababa.

CLEAR-AA (2019). Monitoring and Evaluation in Five African Countries. The University of Witwatersrand. Johannesburg.

Damoulakis, N. (2025). The Organizational Impact from Metadata Mismanagement, Orases.

GIZ (2022). Evaluation Report 2022 Digitalisation for Development. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn

GIZ (2024). Harmonised and Inclusive Digital and Data Policies in Africa. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn.

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Kanyamuna, V., Kotzé, D. A. & Phiri, M. (2019). "Monitoring and Evaluation Systems: The Missing Strand in the African Transformational Development Agenda." World Journal of Social Sciences and Humanities, vol. 5, no. 3 (2019): 160-175. doi: 10.12691/wjssh-5-3-6.

Lahey, R. (2015). Devising an Appropriate Strategy for Capacity Building of a National Monitoring and Evaluation System: Lessons from Selected African Countries. Poverty Global Practice of the World Bank Group

Mapitsa, C. & Churchill, C. (2023). Monitoring Systems in Africa, African Sun Media, SUN PReSS imprint, Stellenbosch, South Africa

Masvaure, S. & Fish, T.E. (2022). Strengthening and measuring monitoring and evaluation capacity in selected African programmes, African Evaluation Journal 10(1), a635. https://doi.org/10.4102/aej.v10i1.635

Namara, R. B. (2024). Effectiveness of Remote Monitoring and Evaluation by Development Agencies during COVID Pandemic: A Case of IFAD Supervision/Implementation Missions in Uganda, Rwanda and Kenya. Open Journal of Social Sciences, 12, 202-218. https://doi.org/10.4236/jss.2024.1212013

Nguliki, I.M. (2024). Exploring Factors Affecting the Utilization of Monitoring and Evaluation Data in Decision-Making and Accountability: Perspectives from Monitoring and Evaluation Professionals in Tanzania. International Journal of Social Science & Economic Research, ISSN: 2455-8834, Volume 9, Issue 9 September 2024

UNECA (2025), Africa Regional Forum on Sustainable Development, Report on the sub-theme of partnerships for the goals of the 2030 Agenda and Agenda 2063, Kampala

World Bank (2021). World Development Report 2021: Data for Better Lives. Washington, DC: World Bank. doi:10.1596/978-1-4648-1600-0. License: Creative Commons Attribution CC BY 3.0 IGO

List of Acronyms and Abbreviations

AfDB	African Development Bank
AfrEA	African Evaluation Association
CGMETT	Community Group Monitoring and Evaluation Tracking Tool
CBNRM	Community-Based Natural Resource Management
DHIS2	District Health Information Software, Version 2
DRC	Democratic Republic of the Congo
DUCE	Dar es Salaam University College of Education
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit

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ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
ODK	Open Data Kit
SDGs	Sustainable Development Goals
SOPs	Standard Operating Procedures
SPSS	Statistical Package for the Social Sciences
UN	United Nations
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
WFP	World Food Programme
WMO	World Meteorological Organization

Author Profile

Dr. Isaack Michael Nguliki is an accomplished Tanzanian Monitoring and Evaluation (M&E) expert with over 15 years of experience in the design, implementation, and evaluation of projects and programs across Africa. A member of the Tanzania Evaluation Association (TanEA), Dr. Nguliki has led or contributed to over 50 M&E assignments, serving as lead expert in 95% of them, across countries including Tanzania, Zambia, Rwanda, Kenya, Eritrea, and Malawi. He was part of the team of experts that evaluated the Tanzania Development Vision (TDV 2025) and the National Five-Year Development Plan (2021/22–2025/26).

His diverse portfolio includes collaborations with government institutions, national and international NGOs, and five United Nations agencies (UNDP, FAO, IFAD, WFP, and WMO), as well as development programs funded by the governments of Japan, Germany, Canada, Belgium, and the United Kingdom. Dr. Nguliki is the Managing Director of DERICH Consulting Limited (www.derich.co.tz), a premier M&E consultancy firm based in Dar es Salaam, Tanzania. He also serves as a part-time Lecturer in the Master of Arts in Development Evaluation program at the Dar es Salaam University College of Education (DUCE), where he contributes to capacity development in M&E.

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Monitoring and Evaluation Publications by Dr. Isaack Nguliki

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i. ***Nguliki, I. M. (2024).*** Exploring Factors Affecting the Utilization of Monitoring and Evaluation Data in Decision-Making and Accountability: Perspectives from Monitoring and Evaluation Professionals in Tanzania. International Journal of Social Science & Economic Research, ISSN: 2455-8834, Volume 9, Issue 9 September 2024

ii. ***Nguliki, I. M. (2024).*** An Illustration of Double Counting and Under-Counting in Monitoring and Evaluation Using the Mkulima Project. International Journal of Social Science & Economic Research, ISSN: 2455-8834, Volume 9, Issue 9 September 2024

iii. *Almas F. M., Francis M,* ***Isaack M. N****, Miriam M. (****2024****)* Swahili wisdom for shaping development evaluation practices, African Evaluation Journal, Vol 12, No 2 a738.\, DOI: https://doi.org/10.4102/aej.v12i2.738

iv. ***Nguliki, I. M. (2018).*** Monitoring and Evaluation of Gender Indicators: Field Experience in Development Projects in Tanzania, International Journal of Research in Economics and Social Sciences, ISSN: 2249-7382, Vol. 8 Issue 3, March 2018, pp. 84-89

v. ***Nguliki, I. M. (2018).*** Using the Mchumi Approach in Assessing Monitoring and Evaluation Data in Development Projects, International Journal of Research in Economics and Social Sciences, ISSN: 2249-7382, Vol. 8 Issue 3, March 2018, pp. 97-102

vi. ***Nguliki, I. M. (2018).*** Overcoming Double Counting and Under Counting Errors in Monitoring and Evaluation: Field Experience in Development Projects in Tanzania, International Journal of Research in Economics and Social Sciences, ISSN: 2249-7382, Vol. 8 Issue 3, March 2018, pp. 90-96

vii. ***Nguliki, I. M. (2018).*** Monitoring and Evaluation Challenges in Development Projects in Tanzania, International Journal of Research in Social Sciences, ISSN: 2249-2496, Vol.8 Issue 4, April 2018, pp. 361-374

viii. ***Nguliki, I. M. (2018).*** Monitoring and Evaluation: Experience from smallholder farmers training feedback in Tanzania, International Journal of Research in Social Sciences, ISSN: 2249-2496, Vol.8 Issue 4, April 2018, pp. 375-381

ix. ***Nguliki, I. M. (2018).*** Community-Based Monitoring and Evaluation: An application of CGMETT tool in Assessing CBNRM project in Tanzania, International Journal of Research in Social Sciences, ISSN: 2249-2496, Vol.8 Issue 4, April 2018, pp. 382- 388

