
Investigating Barriers to Effective Reporting of Sustainable Development Goals by Government Institutions in Kenya

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Abstract: The purpose of this study was to investigate the barriers to effective reporting of sustainable development goals (SDGs) in Kenya, with the primary focus being environmental reporting using the National Environment Management Authority (NEMA) as a reference point. The objectives were to determine challenges when reporting environmental statistics, and propose recommendations to enhance effective reporting of environmental statistics by NEMA. The study was anchored on accountability and sustainability theories. Descriptive design was adopted, and the study population was drawn from NEMA, State Department of Planning in Kenya, and the United Nations Environment Programme. The study sampled 98 respondents using purposive sampling strategy where 91 filled and returned self-administered questionnaires that were subjected to analysis. The generated data was analyzed using the Statistical Package for the Social Sciences (SPSS), version 25. The results showed that there was a positive significant moderate linear relationship between effective reporting of SDGs and NEMA's institutional capacity, M&E Framework, and enabling environment. However, environmental governance was not a significant predictor. The study concluded that organizations need enhanced technology for data acquisition, clear M&E structures, and continuous institutional capacity building to address changing reporting environment and policy needs. The study recommends bridging of existing knowledge gaps in the sector through research and partnership, organizational and individual capacity building, establishment of innovation/science centers, data driven governance, policy coherence, and environmental advocacy.

Keywords: Effective Reporting, Institutional Capacity, Monitoring and Evaluation, Environmental Governance, Enabling Environment, SDGs, NEMA

1. Introduction

Reporting process in any programme is an integral part of the implementation cycle and more so, in the attainment of the set goals and objectives [17]. The reporting process involves collection of data, its analysis into consumable information that guides the progress and the attainment of overall results [6]. With the launch of the sustainable development goals (SDGs) in 2015 that were adopted by countries worldwide, the need for their reporting remains a very critical aspect if at all this ambitious undertaking is to be accomplished. Reporting for the SDGs is country based and requires member countries to integrate the right reporting mechanisms from project implementation level to sectorial and national level all the way to the United Nations

Statistical Division.

The United Nations (UN) score card on the SDGs has indicated that accountability for many of the environment related indicators is still lacking, mostly due to weak reporting structures and lack of data on the indicators. Challenges have marred the reporting process and yet there is not enough research on the root causes that are inhibiting effective reporting, more so, for environmental data. For this reason, this study investigated barriers in reporting of SDGs by government institutions in Kenya with a focus on environmental reporting by the National Environment Management Authority (NEMA) headquartered in Nairobi County, Kenya.

Human activities have been linked to increasing environmental degradation, necessitating more accountability for sustainable development [10]. Natural resources are

universal and exist as physical phenomenon that aren't constrained by the physical boundaries put in place under the political structures [25]. Environmental accountability in the face of increasing calls for sustainable development is critical and an emerging universal requirement [2].

The SDGs, adopted by the UN and partner countries in 2015 placed so much emphasis on the development and tracking of the environment, borrowing heavily from lessons learned from the implementation and evaluation of the Millennium Development Goals [18]. Through the development of dedicated channels for the development and tracking of Environmental statistics, there is notable progress that has been made [20]. This alone indicates that there lies an opportunity to come to the realization of the intended goals of sustainable development. However, a lot is still pending [21], and urgent attention is required. Accountability for progress on initiatives and proper channels of reporting are necessary, but they lack in many fronts [4]. Major policy works are still non-existent since they depend mostly on the quality and adequacy of Environmental Statistics. To inform policies, communicate progress, effective reporting is thus very critical. Reporting is a crucial part of any programme or project success since it guides efficient control and coordination of people, processes, and technologies [3].

For reporting to be effective, it should run side by side with monitoring and evaluation (M&E) and anchored in the continuous and periodic collection and analysis of project data to aid in the collection of facts for learning purposes and decision making [19]. Through M&E processes, raw data are widely acquired and made available to the various stakeholders, but it is the efficiency in reporting that guides the quality of information [5]. The people who consume this data should also be keen on the information they need for the reporting process to be effective. This is because when the capacity to supply M&E information is high, but capacity on the part of decision-makers to demand quality evidence is low, supply and demand are mismatched [5] and this again, beats the logic of investing heavily on the whole monitoring and reporting process.

While Kenya has quite advanced in systems for data acquisition as compared to other countries in the region, it still lags behind when compared to the first world countries [24] pointed out that accountability for progress on initiatives and proper channels of reporting are very important on all development spectrums, but are lacking in many fronts [4]. Besides and despite a lot of research being carried out on the on-going implementation of the SDGs, there is still insufficient information across the board in environmental issue. Major policy works are still missing as they are dependent on the availability of quality, adequate and timely environmental data. The barriers and root causes of effective reporting are still largely unknown [22]. This presents a gap that require to be identified and sealed if at all the SDGs' dream is to be attained in the country [21].

The SDGs will only remain beautiful writings on the wall if concrete actions are not directed upon them. For good decisions to be effected towards attaining the SGDs, there is need for accessible, reliable and adequate data which has

been flagged out as missing in Kenya. Therefore, this study endeavored to investigate the barriers experienced in reporting processes of environmental dimensions of the SDGs and based on the study findings, suggest recommendations to inform policy and practice on how to enhance effective reporting on SDGs and in particular, environmental reporting in Kenya and beyond.

2. Literature Review

2.1. Theoretical Framework

The study is based on two theories, accountability theory and the sustainability theory of development. The theory of accountability was originally developed by Tet lock, Lerner, and colleagues and has for a long period of time been effectively applied in organizational research. This theory underlines that being accountable on one's behaviors to other parties' causes one to consider and feel accountable for the process by which decisions and judgments have been reached. In turn, this perceived need to account for a decision-making process and outcome increases the likelihood that one will think deeply and systematically about one's procedural behaviors [12].

The second theory that informed this study was the sustainability theory of development that provides a picture of an economy and society that goes through positive transformations yielding enough for the current population while still safeguarding resources for the future. Sustainability theory was first developed in 1972 after a report: 'limits of growth' was published by the international think tanks of Rome [9]. Another report, commonly known as the Brundtland Report, followed in the year 1987, providing a clearer definition of what sustainability is. The Brundtland report heavily linked sustainability with development, while over emphasizing on the human life at the expense of other lives. It however, lay stable foundation for the Rio Conference (1992) that went beyond the trio aspects of sustainability which are social, economic, and environmental, towards adopting broader perspectives informing policy works across more social sciences including, law, political science, sociology, theology and even psychology [7].

2.2. Empirical Review

Institutional Capacity, Monitoring and Evaluation Framework, Environmental Governance, and Enabling Environment were indicated to be key factors to consider for effective reporting of SDGs.

Mugo and Oleche conducted a study to find out the impact of monitoring and evaluation of development projects on economic growth in Kenya. From their study, they established that, while the M&E system has improved with decentralization of the accountability in line with new two-tier governance system in Kenya, monitoring and feedback system is still one area that has not received the deserved attention [1]. The study further established that tracking the development progress in time and accurately can be achieved

if an integrated nationwide M&E system is established. The absence of an M&E framework negatively affects the effectiveness of public service delivery which then constrains the acceleration of economic development in Kenya and the overall wellbeing of the citizens [14]. As a conclusion, Mugo and Oleche called for an establishment of factors that influence the implementation of the M&E of development projects in Kenya so as to have a timely establishment of a guide which would inform the M&E functions and limitation and the necessary policy development.

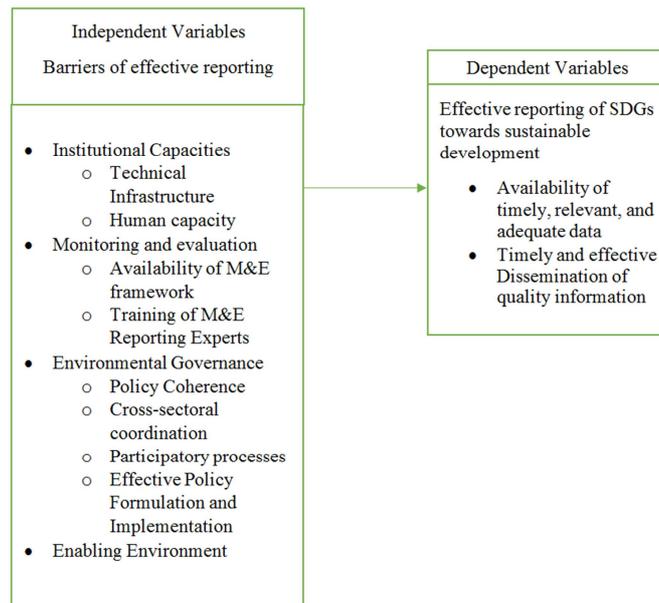
Environmental governance featured as one factor that affect the reporting process. Amidst competing interests at national and global levels, one unifying factor should be the universal agreements in pursuit of the common set of sustainable development goals [16]. To achieve these goals, however, governance at the specific levels plays one of the heaviest roles [5]. Gibson terms governance and sustainability as two siblings, with an enjoined history and parentage [8]. Perhaps, the interlinkage between these two is still one of the most understudied but while this may be the case, most of the existing literature establishes interconnectivity between these two variables. In the July 2012, UN General Assembly member states reaffirmed good governance as a foundation for development. Kenya has been highlighted as one of 42 countries in Africa which have enacted framework environmental laws but flagged out a big disjoint between the policy works and their implementation. In addition, the findings and indicated that Kenya lacked elaborative legislative framework with instruments that could significantly contribute to the sustainable environmental framework at least up until the Rio Conference. Mireri and Letema highlighted that environmental legislation faces a number of challenges among them the unavailability of policies on environmental management and weak capacity for implementation, tracking and reporting of environmental data [13].

Institutional Capacity plays a critical role as a factor in ensuring smooth flow of data or lack thereof. According to both UNDP and the United Nations Disaster Risk Reduction Offices (UNISDR) institutional capacity, it is the institution’s capability to plan and implement a set of socio-economic objectives and goals, through knowledge, skills, systems, and institutions. A key contribution of institution’s capacity is the Individuals’ skill set and performance [23]. Individual factors include the employees’ understanding of the mission, skill set that are reflective of the job requirements, available training opportunities incentives and even their motivation to perform and take on new tasks [23]. The performance of the organisations is also a measure of its capacity especially its management capacity. Further, organisational networking capacity, more so, the ability to co-operate with other organisations and its ability to adapt to merging policy works are key factors on its institutional capacity.

While organisations, do not exist in isolation, the enabling environment is critical for effective reporting. This being the case, individuals, institutions and/or network need to be entrenched in the existing wider public sector setting such as the sector policy work, laws, and regulations [23]. Further, the study outlined political priorities, policies, regulatory frames, public administration, fiscal frame, and accountability are also factors outside the organisation that contribute one way or another to an organization’s institutional capacity. It is, therefore, important for the institutions within the enabling environment ensure they understand the challenges and solutions as they build on the policy works [1].

2.3. Conceptual Framework

Figure 1 shows the conceptual framework which shows how the independent variables relate with the dependent variable.



Source: Author (2023)

Figure 1. Conceptual Framework.

The conceptual framework guides the investigation of the existing barriers of effective reporting of the environmental dimensions of the SDGs in reference to NEMA. Barriers to effective reporting which constitute the independent variables, can result to inefficiencies in the realization of SDG goals (dependent variable) in any specific sector.

3. Methodology

The current study made use of a descriptive design method and accommodated both the qualitative and quantitative research methodologies. Descriptive design enabled the researcher to gather data that describes the SDG reporting patterns, examine events aimed at discovering causal relationship. The population of this study comprised all the staff members of NEMA who were 250 in number working in Nairobi area [15], all the 450 staff members at UNEP [22] and also 38 people that worked in the state Department for Planning at the Government of Kenya [11]. In total, the population of this study adds up to 738 people. Based on purposive sampling strategy, the researcher selected 98 respondents. 75 were involved with data collection, analysis and dissemination of environmental data at NEMA. At UNEP, 9 were from the SDG unit at UNEP and 14 were from the state department for planning dealing with SDG focal points responsible for coordinating SDG efforts with the line ministries. Data was collected through questionnaires and in-depth interviews given to key informants. Data was then keyed in and analysed using SPSS version 25. Data was summarized using both descriptive and inferential methods. Descriptive statistics included mean and standard deviations while Pearson's correlation coefficients together with regression method were used to find out how Barriers of effective reporting affected Effective reporting of SDGs towards sustainable development.

The regression model equation was as follows:

$$Y = \beta_0 + \sum_0^n \beta_i x_i + \varepsilon$$

Where Y – Effective reporting of SDGs;

β_0 - a constant term;

β_i - regression coefficient for the barriers to effective reporting (Institutional Capacity (IC), Monitoring and

Evaluation Framework (M&E), Environmental Governance (EG), and Enabling Environment (EE));

X_i - independent variables (Barriers of effective reporting);

ε - regression error.

4. Results

The study had a response rate of 92.8% which was excellent and sufficient to facilitate statistical analysis (Baruch and Holtom, 2008). Majority, 80.2%, were from NEMA, being the main organization under investigation followed by those in the State Department of Planning (13.2%) while 6.6% were from UNEP. Involving these three organisations enhanced better understanding of the reporting process and reduced bias in the study findings.

The study aimed at investigating the effect of barriers of reporting on effective reporting of sustainable development goals (SDGs) in Kenya. The barriers were on Institutional Capacity (IC), Monitoring and Evaluation Framework (M&E), Environmental Governance (EG), and Enabling Environment (EE) which acted as the independent variables. Effective reporting of SDGs towards sustainable development was the response or dependent variable.

First, the study summarized the information using mean and standard deviation descriptive statistics. The data was collected using a 5-point likert scale with 1 being strongly disagree and 5 as strongly agree. A standard deviation of 1 and above showed great variance in the respondents' responses while a value below 1 showed a narrow variability in the responses. Therefore a lower value showed existence of the barrier hence negatively affecting reporting of SDGs.

On average, the respondents moderately agreed that in their institution, there was institutional capacity (M=2.98, SD=0.565), a monitoring and evaluation framework (M=3.68, SD=0.417), environmental governance (M=3.20, SD=0.432) and an enabling environment (M=3.22, SD=0.358). In addition, the respondents moderately agreed that in their institution there was effective reporting of SDGs towards sustainable development.

Table 1. Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
IC	91	2.00	4.00	2.9824	.56462
M&E	91	2.00	4.50	3.6758	.41749
EG	91	2.50	4.30	3.2038	.43206
EE	91	2.60	3.80	3.2154	.35806
ER	91	2.50	4.75	3.7005	.42035

4.1. Correlation Analysis

The research conducted correlation to establish the bilateral relationship between the barriers of reporting Institutional Capacity (IC), Monitoring and Evaluation Framework (M&E), Environmental Governance (EG), and Enabling Environment (EE)) and effective reporting of SDGs towards sustainable development.

Table 2. Correlation Analysis.

		IC	M&E	EG	EE	ER
IC	Pearson Correlation	1	-.439**	.735**	.142	.263*
	Sig. (2-tailed)		.000	.000	.179	.012
	N		91	91	91	91
M&E	Pearson Correlation		1	-.109	.216*	.327**
	Sig. (2-tailed)			.306	.040	.002
	N			91	91	91
EG	Pearson Correlation			1	.376**	.353**
	Sig. (2-tailed)				.000	.001
	N				91	91
EE	Pearson Correlation				1	.352**
	Sig. (2-tailed)					.001
	N					91
ER	Pearson Correlation					1
	Sig. (2-tailed)					
	N					

According to these findings, there was a positive significant moderate linear relationship between ER of SDGs and NEMA's IC, $r = 0.263$; $p = 0.012$; M&E, $r = 0.327$; $p = 0.002$; EG, $r = 0.353$; $p = 0.001$; EE, $r = 0.352$; $p = 0.001$; This was indicated by significant p-values of less than 0.05 at 95% confidence level. This implied that barriers of ER of SDGs were positively related to ER of SDGs.

4.2. Regression Analysis

A linear regression was performed with Institutional Capacity (IC), Monitoring and Evaluation Framework (M&E), Environmental Governance (EG), and Enabling Environment (EE) as the independent variables and effective reporting of SDGs towards sustainable development as the response or dependent variable. The model first established whether there was a statistically significant relationship between the barriers of reporting and effective reporting of

SDGs towards sustainable development after which a predictive model was established.

It was found that the barriers of Institutional Capacity, Monitoring and Evaluation Framework, Environmental Governance, and Enabling Environment collectively explained 34.2% of any variation occurring in effective reporting of SDGs towards sustainable development. This was indicated by a coefficient of determination value of 0.342 ($R^2=0.342$).

The ANOVA results showed the significance of the combined model in predicting effective reporting of SDGs. It was found that the model was statistically significant indicating that the model with barriers of effective reporting as the independent variables were of importance while explaining effective reporting of SDGs towards sustainable development, $F=11.168$, $p<0.05$ at 5% level of significance.

Table 3. Regression analysis predicting effective reporting of SDGs ($N=91$).

	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta (β)		
(Constant)	.215	.526		0.409	.683
IC	.326	.114	.438	2.862	.005
M&E	.486	.107	.482	4.544	.000
EG	.015	.142	.016	0.108	.915
EE	.211	.116	.180	2.024	.022

Note: Constant = 0.215, $F(4,86)=11.168***$, $p<0.05$, $R^2 = 0.342$

The following regression equation was extracted:

$$ER = 0.215 + 0.326 IC + 0.486 M\&E + 0.015EG + 0.211 EE$$

Where: ER – effective reporting of SDGs,

IC - Institutional Capacity,

M&E - Monitoring and Evaluation Framework,

EG - Environmental Governance, and

EE - Enabling Environment.

At 5% level of significance, Institutional Capacity, Monitoring and Evaluation Framework (M&E), and Enabling Environment (EE) were found to significantly affect effective reporting of SDGs towards sustainable development, $p<0.05$. However, Environmental Governance (EG) was found not to

be a significant predictor of effective reporting of SDGs, $p>0.05$.

4.3. Discussion

The main aim of the study was to investigate how barriers to effective reporting affect effective reporting of sustainable development goals (SDGs) in Kenya. Based on literature, Institutional Capacity, Monitoring and Evaluation Framework, Environmental Governance, and Enabling Environment were identified as the barriers to effective reporting. From the findings, reporting barriers of institutional capacity, monitoring and evaluation, and the enabling study indicated a direct contributing ability to

effective reporting. There was a positive significant relationship between effective reporting of SDGs (ER) and NEMA's Institutional Capacity (IC), $t = 2.862$; $p < 0.05$; Monitoring and Evaluation Framework (M&E), $t = 4.544$; $p < 0.05$; and Enabling Environment (EE), $t = 2.024$; $p < 0.05$. However, Environmental Governance (EG), $t = 0.108$, $p > 0.05$, was not a significant factor affecting effective reporting of SDGs. It was also observed that the barrier of Monitoring and evaluation framework ($\beta = 0.482$) affected effective reporting of SDGs more followed by that of Institutional Capacity ($\beta = 0.438$) followed by Enabling Environment ($\beta = 0.180$) and the least significant was Environmental Governance ($\beta = 0.016$).

From the findings there is great need to deal with the barriers of effective reporting so as to achieve effective reporting of SDGs towards sustainable development. These findings collaborate with the study by Mugo and Oleche (2015) which revealed that tracking the development progress in time and accurately can be achieved if an integrated nationwide M&E system is established. The absence of an M&E framework, inadequate institutional capacity and also an enabling environment can negatively affect the effectiveness of public service delivery which then constrains the acceleration of economic development in Kenya and the overall well-being of the citizens. Further, these findings echo what the 2019 report on Measuring Progress Report termed as substantial limitations to the monitoring of the environmental issues such as low development in national capacities in the partner countries, deficiency in agreed upon methodologies, limitations in data integrations and reporting burdens at the national and sub-national levels [21].

5. Conclusion

Based on the findings of this study, the researcher concluded as follows:

For SDGs and more so, the environmental dimensions of the SDGs to be achieved, there is great need to enhance the institutional capacities of the organisations involved in driving the process. Key barriers that lie within the institutional capacity, monitoring and evaluation, governance and enabling environment contributes significantly to the inefficiencies in data acquisition, processing, and dissemination. Building technical infrastructures and capacity development of human resources is key in strengthening institutional capacity. While NEMA has made significant achievements in putting in place the right technical capacity in its role as lead environmental agency in Kenya, it can thrive even better if all players in the sector ensured that there is continuous application of principals of good governance, proper resource allocation within their policy frameworks, transparency, and accountability.

This study also concludes that to address the barriers within the management and reporting in the environment sector, an enabling environment from the government, the UN bodies, development partners is very important both at

policy formulations, resource mobilization but more importantly in continuous learning and establishment of best practices. It is therefore as important a factor, for the organisations within the enabling environment continue learning on how to provide a more enabling environment to promote the delivery of environment management functions.

Further, the study concludes that partnership is key to achieving goals within an environment that is constrained by resources. Further, political will and governance structures coupled with nationwide monitoring and evaluation framework would greatly enhance the management and reporting structures in the environmental sector. Environmental issues need to be encompassed in all development agenda as it cuts across all development issues. While Kenya has made strides in SDGs implementation and reporting, a lot is still desired within the whole ecosystem of environmental sector in addressing the barriers that have been identified in this study.

Lastly, the study suggested that there needs to be bridging of existing knowledge gaps in the sector through research and partnership, organizational and individual capacity building, establishment of innovation/science centers, data driven governance, policy coherence, and environmental advocacy.

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