

# Development of a Local Government Service Delivery Framework in Zambia: A Case of the Lusaka City Council, Ndola City Council and Kafue Town Council Roads and Storm Drain Department

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**Abstract:-** The main aim of this study was to establish a framework to improve the service delivery on the maintenance of roads and storm drains in Lusaka by establishing the factors that impact the quality of service delivery and how these can be implemented by the Roads and Storm Drain Department on maintenance. The study included data collection and analysis of two additional councils such as Ndola City Council and Kafue Town Council to further substantiate the findings. The study considered four factors which included service quality as the dependent variable; and financing factors, administrative factors and institutional capacity as independent variables. The study made use of secondary data which was collected using a semi-structured questionnaire and followed a mixed methods research design. Data analysis was done using descriptive analysis and mean and standard deviation analysis for quantitative data alongside qualitative data analysis. In order to ensure an inclusive approach to improve the timely provision of road and storm drain maintenance in the bid to ensure improved service delivery, the study argues that first and foremost, stakeholder engagement should be prioritized. Matters should be considered on merit and based on urgency. The study further notes that locality and having the right logistics in terms of equipment and manpower available so the timeliness is a constrained factor. However, this can only be achieved given the adoption of a deliberate systematic and approved framework on roads and storm drain maintenance. The study further outlines that the framework should ensure to avoid tedious processes but should ensure to maintain high integrity of the processes through transparency and accountability. The study further finds that there is need for a clearly defined source of funding for matters relevant to road and storm drain maintenance, having a dedicated fund and should further have an emergency fund available solely for the purposes of roads and storm drain maintenance.

**Keywords:-** Service Delivery, Roads, Storm Drains, Maintenance, Local Councils.

## I. INTRODUCTION

### ➤ Introduction

In ensuring economic progress for a country and a locality, the Government through different branches aside from other measures improve infrastructure to champion the development agenda. This infrastructure development includes roads and storm drains that aside from added scenic beauty, further economic development by fostering business continuity. On a smaller scale, the local government are used as a form of decentralization of development and championing the national agenda. The local government is ideally defined as the authority to set and carry out policy in a region within a country that is smaller than the entire country [3]. The local government is part of the Executive wing of Government.

### ➤ Background

Zambia's local government system is organized into districts, each of which is controlled by a local authority. Local governance is to be carried out through substructures, according to the constitution, yet legislation to implement this provision has yet to be implemented. Local governance is divided into one tier. There are currently 103 councils — four city councils, 15 municipal councils, and 84 district councils — that govern local governments. City councils, on the other hand, are generally located in places with higher populations, whilst municipal councils handle suburban areas. Rural districts have their own district councils. All councils have the same legal authority and mandates. In terms of the relationship between the levels of government, the constitution recognizes local governments' right to manage their own affairs, stating that a local authority is responsible for administering the district, overseeing district programs and projects, making by-laws, and performing other prescribed functions. However, the constitution leaves many areas of local administration to national legislation, such as financial management and supervision of local bodies, allowing the national government to effectively dominate local government [23]. The constitution mandates that each local government develop a stable financial foundation with sustainable and predictable revenue sources. The government is required to make funds to local governments for services such as water

and sanitation, primary healthcare, fire protection, roads, municipal police, primary education, and agricultural support under Section 45 of the Local Government Act [23].

In order to ensure good maintenance of infrastructure by the local councils, there is a need for good service delivery quality. Mohamed and Ikinya [13] in their study outlined that service delivery quality can be established based on affordability, accessibility, timeliness and reliability of public service provision. However, there are several factors that have been researched and proposed by several scholars. Manaf, et al. [12] and Kalonda and Govender [8] found that the lack of facilities, improper maintenance, and the lack of programs and facilities for disabled people limit the quality of local government service delivery, but adequate staff training and greater citizen empowerment enhances the quality. Schoute, et al. [22] in their paper considered among other factors, the impact of politics on the quality of service delivery and how financial capacity has the effect of improving service quality. Moloto, et al [14] also argued based on their study that politics does play a significant role. The study by Sani, et al [21] outlined that the successful development of maintenance culture in local government requires leadership, communication, teamwork, training and education, policy, strategy and work planning and involvement. Mohamed and Ikinya [13] in their paper highlighted four variables that encompassed four factors each that have been highlighted in literature, and therefore considered local government accountability, transparency, equity and participation, in how they impact the quality of service delivery.

The public service delivery by the Council through the Engineering Department has the mandate to provide services on the roads and drainages. An example can be given of Lusaka City Council (LCC), who are responsible for the construction, maintenance and management of roads and drainage infrastructure in Lusaka [11]. Therefore, in order to achieve this mandate, there is need for planning, designing, implementation, supervision and management of roads and drainage related projects. The local councils also further coordinate with several other stakeholders on roads and drainage related projects such as the Central Government, Government Agencies and other supporting partners. The Government Agencies include the Road Development Agency (RDA), Road Transport and Safety Agency (RTSA), National Road Fund Agency (NFRA) and the National Council for Construction (NCC) [11]. As outlined, support is also provided by non-Governmental Organisations (NGOs) like Programme Urban Self Help (PUSH) and CARE and other cooperating partners that include Japan International Cooperation Agency (JICA), United Nations Development Programme (UNDP) and German Technical Cooperation (GTZ).

Despite having a vast linkage of stakeholders as has been outlined, the local councils face several challenges in its execution of statutory functions. This therefore is shown through poor service provision. The most prominent of the challenges encountered by the council include the lack of Transport and Equipment and cash flow challenges [11]. The challenges due to the lack of transport are worrying as the

councils such as LCC have a seemingly large fleet of motor vehicles available. However, the LCC is outlined to still need more vehicles to be able to cope with the expanded work requirements. It is argued that councils need more vehicles in all the inspectorate sections, road maintenance, revenue collection and other support units which include procurement and police sections. On the equipment lacking, it is noteworthy to outline graders, excavators, tipper trucks, rollers, water bowsers, front end loaders for road and drainage maintenance. Further, the lack of technological hardware and software has been outlined to inhibit the facilitation of effective planning, implementation, monitoring and management of projects [11]. On the cash flow challenges, it has been outlined that this results in the local council's failure to meet all the demands for service delivery and effective and efficient operations. This has been attributed to local councils struggling to raise resources for expansion and effective maintenance of roads and including the replacement of vandalized road infrastructure [10].

#### ➤ *Statement of the Problem*

Several studies have been done on the relation between the local government councils and service delivery in Zambia. Studies such as by Kabwe [7], Mulenga and Mulenga [16], Longa [9] and Mwamba [18] have looked at different aspects of service delivery but considered it in its totality and not focusing on a specific service such as road and storm drain maintenance. It has been highlighted that Lusaka city has continued to face challenges in the state of infrastructure such as roads and storm drains, with a contributing major cause being the neglect of maintenance. This challenge extends to not only to Lusaka and other urban areas, but the entire country as 780 kilometres of roads have been outlined to have so far been rehabilitated and have since been handed over for maintenance under the Zambia Improved Rural Connectivity Project (ZIRCP) [19]. They further add that seven works contracts accounting for US\$ 62.8 million have been said to be currently running as at March 2022. The deterioration of public infrastructure to this extent is retrogressive given its importance in ensuring a decent life for citizens and furthering the National development agenda which goes against the Vision 2030 [5].

In the bid to further the National development agenda, the City of Lusaka has seen a major facelift in 2021 with regards to the road network through the Lusaka Decongestion Project (LDP) aimed at the reduction of traffic in the capital city amounting to US\$389 million [26]. Further, storm drains in Lusaka through the Millennium Challenge have undergone rehabilitation and the extension of infrastructure and institutional capacity through the Water Supply, Sanitation and Drainage Project at a cost of US\$354 million from 2013 to 2018. Hence, it is evident that there has been continued investment into improving the public road and drainage network in Lusaka. However, little is outlined on the preventive maintenance to secure this investment and ensure its sustainability based on the functionality of the department [10]. Therefore, this study aims to establish a framework on how to improve the service delivery on the maintenance of roads and storm drains in Lusaka. The factors that are considered to have an impact on the service delivery of local

government are financing factors as highlighted by Schoute, et al. [22], Moloto, et al [14] and Mulenga and Mulenga [16]; administrative factors as outlined by Sani, et al [21], Kalonda and Govender [8] and Mwamba [18]; and institutional capacity factors as advocated by Muthui [17] Mohamed and Ikinya [13], and Manaf, et al. [12].

#### ➤ *Research Aim*

The main aim of this study is to establish a framework to improve the service delivery on the maintenance of roads and storm drains in Lusaka.

#### ➤ *Specific Objectives*

- To establish the current approach used in the provision of services with regards to road and storm drain maintenance in Lusaka City by the Lusaka City Council.
- To determine the factors that impact the service delivery of the road and storm drain maintenance in Lusaka by the Council.
- To propose an inclusive approach to improve the timely provision of road and storm drain maintenance in order to improve service delivery.

#### ➤ *Research Questions*

- What is the current approach used in the provision of services with regards to road and storm drain maintenance in Lusaka City by the Lusaka City Council?
- What various factors impact the service delivery of the road and storm drain maintenance in Lusaka by the Lusaka City Council?
- What inclusive approach can be implemented to improve the service delivery of road and storm drain maintenance in Lusaka City by the Lusaka City Council?

## II. MATERIALS AND METHODS EASE OF USE

#### ➤ *Research Design*

The study made use of a mixed approach of both quantitative and qualitative data. A research design is a predetermined plan/ approach used to conduct a research study to scrutinize particular testable research questions of interest to the study. This study made use of a qualitative and a quantitative research design. The choice of using a qualitative and quantitative research is premised on the assertion that the data considered was of both a qualitative and quantitative nature.

#### ➤ *Study Area or Site*

The study area/ or site included the departments from three (3) councils, namely Ndola City Council, Lusaka City Council and Kafue Municipal Council who are responsible for the maintenance of roads and storm drains in their respective towns/ cities. Due to limited resources, the study considered two large councils, namely Lusaka City Council and Ndola City Council as they were likely to face different challenges due to their geographical locations. The study further considered Kafue Tow Council to verify the findings against a town council.

#### ➤ *Study Population and Sampling*

The study population included the employees/ officers from the three (3) councils, namely Ndola City Council, Lusaka City Council and Kafue Municipal Council who are responsible for the maintenance of roads and storm drains in their respective towns/ cities. Purposive sampling was used to ascertain the minimum sample to be used in the responses to the questionnaires administered to the officers in the unit. The population for the key informant questionnaires administered was the heads of the department in the three councils.

#### • *Study Sample*

In order to ensure that the sample used in the study is representative of the whole population, the study proposed to make use of the Taro Yamane formula:

$$n = \frac{N}{(1 + Ne^2)}$$

Where, n indicated the corrected sample size, N indicates the population of the study and highlights the Margin of error (Which at a 95 percent confidence level represents a 0.05 level of significance, which is the allowable error). Determinant on the total number of officers in the respective units/ departments, this formula was used to ascertain the minimum number of questionnaires to be distributed. The officers selected are ideal as they are responsible for the implementation of the current framework being used by the respective councils. Key informant questionnaires were administered to the departmental/ unit heads who will also be considered in the selected sample.

The study found the population of officers in the three (3) councils responsible for the maintenance of road and storm drains were an approximate total of 30, based on the inquiries of the councils. Taking into consideration  $N = 30$  and  $e = 0.05$ ; the calculations find the prescribed sample to be a minimum of 27.91 people. The study therefore sought a sample of 30.

#### ➤ *Sampling Technique*

The sampling technique used in the study was purposive sampling with the minimum sample size to be used in the study to be determined using the Taro Yamane formula.

#### ➤ *Data Collection Instruments*

Data collection for the purpose of this study was done using an administered semi-structured and structured questionnaire that was distributed to the heads of departments and the council officers in the department of interest, respectively. The study aimed to interview the entire population which was found to be a challenge. The key informant questionnaires were given to the department/ unit heads.

The structured questionnaire had three (3) sections that included demographic attributes of the respondents, the main body that outlines questions relevant to ascertaining the objectives of the study and a section for comments from the respondents. The main body was designed with questions designed on a 5-point Linkert scale. All the respondents of the

questionnaire were subjected to the same type of questions which were measured using an ordinal scale and where, 1 = strongly disagree, 2= disagree, 3 = neutral, 4 =agree and 5 = strongly agree.

➤ *Data Analysis*

In order to understand the various variables in their study and their relation to the quality of the service delivery in the maintenance of roads and storm drains by the departments responsible for roads and storm drain department, the study made use of descriptive analysis and mean and standard deviation analysis for quantitative data and qualitative analysis using the Statistical Package for Social Sciences (SPSS). The study made use descriptive analysis to establish the frequency of responses.

**III. RESULTS**

➤ *Introduction*

This chapter outlines the results from the data analysis. The chapter considers the demographic variables relevant to the study and further presents the data based on the themes of the specific research objectives.

➤ *Demographic Factors*

Table 1 Gender of Respondents

		Gender of Respondent			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	16	80.0	80.0	80.0
	Female	4	20.0	20.0	100.0
Total		20	100.0	100.0	

Source: Author

The study sought to establish the gender of the respondents. The study found that 80 percent of the respondents were male while 20 percent of the respondents were female.

Table 2 Positions held by Respondents

		Position held			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Management	11	55.0	55.0	55.0
	Operations	9	45.0	45.0	100.0
Total		20	100.0	100.0	

Source: Author

The study sought to establish the positions held by the respondents in the respective councils. The study finds that 55 percent indicated management while 45 percent indicated operations.

Table 3 Years of Service in the Council

		Years in Service			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 2 years	4	20.0	20.0	20.0
	2 to 3 years	4	20.0	20.0	40.0
	4 to 5 years	6	30.0	30.0	70.0
	More than 5 years	6	30.0	30.0	100.0
Total		20	100.0	100.0	

Source: Author

The study sought to establish the years of service in the council served by the respondents. The study found that the highest response of 30 percent indicated more than 5 years and 4 to 5 years respectively. This was followed by the respondents that indicated to have served for 2 to 3 years and less than 2 years who outlined 20 percent respectively.

- The current approach used in the provision of services with regards to road and storm drain maintenance

The researcher asked if the Council has a framework in place on road and storm drain maintenance:

- **Response:** There is no structured framework attributed to maintenance or even a systematic approach to come up with improved infrastructure that suits a particular catchment area but the council solely relies on its day to day civic duties delivered to the people upon request.
- **Response:** The local authority does not have a structured framework so in most instances it will rely on contracts issued out to contractors to help in the implementation as well as helping the council through consultants on how a drainage or road framework can be contrived.

- *The factors that impact the service delivery of the road and storm drain maintenance.*

➤ *Mean and Standard Deviation Analysis*

Based on the Literature review, the study found that three types of factors impact service delivery of councils, and this includes financing factors, administrative factors and institutional capacity.

The study therefore made use of five-point Likert scale was used and is considered an interval scale. The mean being a significant variable to consider. A reading from 1 to 1.8 outlines strongly disagree; a mean from 1.81 to 2.60 indicates disagree; a mean from 2.61 to 3.40 indicates neutral; a mean of 3.41 to 4.20 highlights agree while a mean from 4.21 to 5 indicates strongly agree.

➤ *Quality of Service*

**Table 4 Mean and Std Deviation Analysis on Quality of Service**

Rank	Statement	Mean	Std. Deviation
1	The department implements a strategy for improving quality of services provided to the public on road and storm drain department	4.4000	.68056
2	The council takes the maintenance of roads and storm drains as a priority	3.9000	1.07115
3	The Council provides good service delivery to the general public on roads and storm drain maintenance	3.9000	1.25237
4	Citizens have access to the Council on road and storm drain maintenance	3.9000	1.16529
5	The Council staff provide timely services to the public on road and storm drain maintenance	3.6000	.94032
6	The fees charged to public services are affordable even to lower income households	3.5000	1.23544

Source Author

Based on the findings in the table above, the study finds that the respondents agreed with the assertions on the quality of service and strongly agreed with the assertions on quality of service. This outlines an intention to ensure good service is delivered by the councils with regards to road and storm drain maintenance.

➤ *Financing Factors*

**Table 5 Mean and Standard Deviation Analysis of Financing Factors**

Rank	Statement	Mean	Std. Deviation
1	The department is involved in the budgeting process	4.5000	.68825
2	Funds allocated are strictly used for the intended purpose	3.9000	1.25237
3	There is timely disbursement of funding for maintenance projects	3.2000	1.00525
4	There is sufficient fund allocation according to maintenance projects due	2.8000	1.36111
5	The council is able to raise sufficient funds to manage and maintain storm drains and roads	2.2000	1.10501
6	Funds are readily available to respond to reports of roads and storm drains that require maintenance	1.7000	.65695

Source: Author

The study results from the table above on the financing factors outline that the respondents agree that the department participates in the budgeting process of the council and that the funds allocated are strictly used for the intended purpose.

The respondents outline that they are unsure on whether there is timely disbursement of funding for maintenance projects and on whether there is sufficient fund allocation according to maintenance projects due.

The findings further outline that the respondents disagree that the council is able to raise sufficient funds to manage and maintain storm drains and roads and further strongly disagrees that the funds are readily available to respond to reports of roads and storm drains that require maintenance.

➤ *Administrative Factors*

**Table 6 Mean and Standard Deviation Analysis of Administrative Factors**

Rank	Statement	Mean	Std. Deviation
1	The structure of leadership and interactions ensure good service delivery on maintenance	3.4000	1.23117
2	There are good policies to ensure good service delivery in the department	3.4000	1.31389
3	The performance management system ensures good service delivery of maintenance projects in the department	3.2000	1.19649
4	The administrative processes support timely maintenance of roads and storm drains	2.7000	1.12858
5	The administrative processes allow for quick acquisition of resources used in road and storm drain maintenance	2.5000	.82717
6	The administrative processes do not affect response to emergency maintenance requirements	2.1000	.85224
7	There is no political interference in the administration of maintenance projects	1.6000	.50262

Source: Author

On the administrative factors, the study finds that the respondents are largely unsure on whether the structure of leadership and interactions ensure good service delivery on maintenance; on whether there are good policies to ensure good service delivery in the department; on whether the performance management system ensures good service delivery of maintenance projects in the department; and on whether the administrative processes support timely maintenance of roads and storm drains.

The respondents outlined they disagreed that the administrative processes allow for quick acquisition of resources used in road and storm drain maintenance and that the administrative processes do not affect response to emergency maintenance requirements.

The respondents strongly disagreed that there is no political interference in the administration of maintenance projects.

➤ *Institutional Capacity*

**Table 7 Mean and Standard Deviation Analysis of Institutional Capacity**

Rank	Statement	Mean	Std. Deviation
1	There are sufficient officers available to respond to road and storm drain maintenance requests	4.2000	1.43637
2	There is constant stakeholder engagement of the public in maintenance works	4.1000	.85224
3	The workforce in the department has sufficient skill and training to ensure good service delivery on maintenance projects	3.7000	1.65752
4	The department is well staffed	3.7000	1.45458
5	There is accountability and transparency in the execution of maintenance projects in the department	3.4000	1.39170
6	There is sufficient infrastructure and equipment available to the department to engage in maintenance projects	3.1000	1.41049

Source: Author

On the institutional capacity of the councils, the respondents agreed that there are sufficient officers available to respond to road and storm drain maintenance requests; that there is constant stakeholder engagement of the public in maintenance works; that the workforce in the department has sufficient skill and training to ensure good service delivery on maintenance projects; that the department is well staffed; and that there is accountability and transparency in the execution of maintenance projects in the department.

The respondents were unsure on whether there is sufficient infrastructure and equipment available to the department to engage in maintenance projects.

#### ➤ Qualitative Analysis

The researcher asked how the current financing of the Council impacts the quality-of-service delivery on road and storm drain maintenance?

- Response: The current financing of the council is highly favourable with an increase in constituency development funds CDF to help in not only financing such attempts but also the increase in procuring knowledge as well as expertise in these aspects to help in the frame implementation process.
  - Response: The council has seen in an increase in funding of initiatives through CDF.
  - The researcher asked how the current administrative procedures affect the quality-of-service delivery on road and storm drain maintenance?
  - Response: The administrative processes tends to be quite cumbersome in most cases because of the many signatories and departments the requisition passes through to get to service delivery level.
  - The researcher asked how the institutional capacity of the department impact these quality-of-service delivery on storm drains and road maintenance? (This is in relation to infrastructure, equipment, skillset of officers, stakeholder engagement etc)
  - Response: Institutional capacity is a key factor amongst others in the that these processes ideally must be done completely by the council so as an example in an event that manpower is not sufficient the council is forced to outsource labour thereby undermining the council's potential to do the implementation autonomously.
- An inclusive approach to improve the timely provision of road and storm drain maintenance to improve service delivery.

The researcher asked for a comment on how the quality-of-service delivery on the maintenance of roads and storm drains is reflected in the following factors:

- Accessibility of members of the public to the department
- Response: People's accessibility is quite open and is taken as readily available as is provided by the Council in this regard service delivery is quite easily accessed and service provision is taken quite seriously and promptly.
- Timeliness of service delivery
- Response: A number of factors affect timeliness of service delivery such as locality and having the right logistics in

terms of equipment and manpower available, so the timeliness is a constrained factor.

- Fees charged by the department on road and storm drain maintenance:
  - Response: No fees are charged on the general public as this is solely the local authority's obligation that such infrastructure be constructed, maintained, and kept functioning for their serviceable time.
  - Implementation strategy of the framework/ plan on road and storm drain maintenance.
- ✓ Response: The local authority does not have a structured framework so in most instances it will rely on contracts issued out to contractors to help in the implementation as well as helping the council through consultants on how a drainage or road framework can be contrived

## IV. DISCUSSION

### ➤ Introduction

The previous section outlined the findings of the data analysis. This section builds on the research by considering the findings of the study and provides a discussion of the findings of the study in accordance with the research objectives and literature review.

### ➤ Objective 1:

The current approach used in the provision of services with regards to road and storm drain maintenance

The study findings have shown that there is no structured framework attributed to maintenance or even a systematic approach to come up with improved infrastructure that suits a particular catchment area. It has found however that the council solely relies on its day to day civic duties delivered to the people upon request. It is noted that the local authorities do not have a structured framework so in most instances it will rely on contracts issued out to contractors to help in the implementation as well as helping the council through consultants on how a drainage or road framework can be contrived.

It is asserted that providing services for maintaining roads and storm drains in local councils entails a thorough and varied strategy designed to guarantee the security, effectiveness, and durability of crucial infrastructure. This is so that local governments can improve the quality of life for their inhabitants by managing and maintaining the roads and storm drains under their authority [15]. As a result, local governments must take a proactive approach to the provision of services for maintaining roads and storm drains. This proactive strategy includes assessment, planning, budgeting, regular inspections, preventative and reactive maintenance, community involvement, and technology developments [1]. The objective is to maintain safe and effective transportation networks while considering community needs and environmental sustainability. Therefore, to maintain and improve these vital infrastructure elements, proper financing and strategic planning are necessary.

➤ *Objective 2:*

The factors that impact the service delivery of the road and storm drain maintenance

The study considered, based on the literature reviewed, three types of factors that impact service delivery of councils and they include financing factors, administrative factors and institutional capacity. The study findings have shown that based on the findings in the table on the quality of service, the study finds that the respondents agreed and strongly agreed with the assertions on quality of service. This outlines the intention to ensure good service is delivered by the councils with regards to road and storm drain maintenance.

• *Financing Factors*

The study results further showed that the financing factors outline that the respondents agree that the department participates in the budgeting process of the council and that the funds allocated are strictly used for the intended purpose. However, the respondents outline that they are unsure on whether there is timely disbursement of funding for maintenance projects and on whether there is sufficient fund allocation according to maintenance projects due. The findings further outline that the respondents disagree that the council is able to raise sufficient funds to manage and maintain storm drains and roads and further strongly disagrees that the funds are readily available to respond to reports of roads and storm drains that require maintenance. The study show that the current financing of the council is highly favourable with an increase in constituency development funds CDF to help in not only financing such attempts at maintenance but also the increase in procuring knowledge as well as expertise in these aspects to help in the frame implementation process.

Based on their evaluation and planning, local councils distribute funds for maintaining roads and storm drains. To ensure that important repairs and upgrades can be completed as soon as possible and successfully, adequate money is essential [2]. The World Road Association [27] noted in their paper that previous research has shown that, over the course of a road project's lifespan, maintenance investments through the annual maintenance cost are between 2 and 3 percent of the project's initial investment for a major paved road and between 5 and 6 percent for an unpaved rural road. Therefore, it may be claimed that a lack of maintenance eventually results in the loss of benefits to society, even though the expense of proper maintenance is minimal in comparison to the entire expense. It has been added the Government through the increased CDF allocation per constituency has since increased means of financing aside from the traditional means of financing which include collection of revenue in the form of property tax, personal levy, rent, fees and charges [4].

• *Administrative factors*

On the administrative factors, the study finds that the respondents are largely unsure on whether the structure of leadership and interactions ensures good service delivery on maintenance; on whether there are good policies to ensure good service delivery in the department; on whether the performance management system ensures good service

delivery of maintenance projects in the department; and on whether the administrative processes support timely maintenance of roads and storm drains. The respondents outlined that they disagreed that the administrative processes allow for quick acquisition of resources used in road and storm drain maintenance and that the administrative processes do not affect response to emergency maintenance requirements. The respondents further strongly disagreed that there is no political interference in the administration of maintenance projects, indicating that there is a presence of political interference. The findings further outline that on the administrative processes that they tend to be quite cumbersome in most cases because of the many signatories and departments the requisition passes through in order to get to service delivery level.

On the plus side, bureaucracy may give decision-making and implementation procedures structure and uniformity. It creates clear roles, duties, and procedures to make sure that maintenance-related tasks are completed methodically. Because they involve documentation and reporting at various phases of maintenance projects, bureaucratic systems can also aid in accountability and transparency [25]. It is argued, however, that bureaucracy can also bring about a number of difficulties, such as red tape and delays, impact budget allocation and approvals, which may be subject to political or administrative constraints resulting in inadequate funding for maintenance projects, inflexibility to changing circumstances, and finally, bureaucratic structures may allocate resources based on administrative priorities rather than the most urgent needs of the community, leading to inefficiency. In order to improve service delivery while still upholding accountability and openness, it is stated that administrative procedures should be streamlined, responsiveness should be given top priority, and budget allocation should correspond to actual infrastructure needs [6]. It's crucial for local councils to continuously evaluate and refine their bureaucratic systems to better serve their communities and ensure the effective maintenance of critical infrastructure [20]. Furthermore, Schoute, et al [22] outlined the impact of political interference in service delivery as it skews service delivery to meet a political objective as opposed to the immediate needs of the local government in service delivery. Mwamba [18] advocated generally for better administrative actions to enhance service delivery of local government councils in Zambia.

• *Institutional Capacity*

On the institutional capacity of the councils, the respondents agreed that there are sufficient officers available to respond to road and storm drain maintenance requests; that there is constant stakeholder engagement of the public in maintenance works; that the workforce in the department has sufficient skill and training to ensure good service delivery on maintenance projects; that the department is well staffed; and that there is accountability and transparency in the execution of maintenance projects in the department. However, the findings show that the respondents were unsure on whether there is sufficient infrastructure and equipment available to the department to engage in maintenance projects. Institutional capacity has been argued by the respondents to

be a key factor amongst others in that these processes ideally have to be done completely by the council. An example was further provided in which it was argued that in an event that manpower is not sufficient, the council is forced to outsource labour which has been argued to undermine the council's potential to do the implementation autonomously.

In accordance with the study's findings, local municipalities may elect to hire specialized contractors to perform maintenance duties. These contracts are often selected through a competitive bidding procedure, which ensures effectiveness and high-performance criteria. In these instances, it has been argued that this is done to provide support to the limited and overworked staff, acquire expertise for given projects and lastly to also have access to certain machinery that the councils may not have for specialized works [24]. It should also be mentioned that many councils have incorporated technology, like as asset management software and geographic information systems (GIS), to streamline maintenance work [2]. These tools are said to facilitate data gathering, asset tracking, and decision-making. Various scholars such as Manaf, et al. [12], Sani, et al [21] and Longa [9] highlighted the importance of competent staff and the sufficiency of equipment and facilities to ensure good service delivery, indicating their vital importance.

➤ *Objective 3:*

An inclusive approach to improve the timely provision of road and storm drain maintenance in order to improve service delivery.

The study has noted that people's accessibility is quite open and is taken as readily available as is provided by the Council in this regard service delivery is quite easily accessed and service provision is taken quite seriously and promptly. Furthermore, regarding the timeliness of service delivery, the study finds that a number of factors affect timeliness of service delivery such as locality and having the right logistics in terms of equipment and manpower available, so the timeliness is a constrained factor. The study findings further note that no fees are charged on the general public as the maintenance of roads and storm drains is solely the local authority's obligation that such infrastructure be constructed, maintained and kept functioning for their serviceable time. The results have further outlined that the local authority does not have a structured framework so in most instances it will rely on contracts issued out to contractors to help in the implementation as well as helping the council through consultants on how a drainage or road framework can be contrived.

In order to improve service delivery, it is believed that assessment and planning are essential components of a comprehensive strategy to enhance the timely provision of road and storm drain maintenance [6]. It should be emphasized that a complete evaluation of the current road and storm drain infrastructure usually kicks off the procedure. This evaluation reveals areas that require maintenance, upgrades, or repairs. Councils develop an extensive maintenance and repair plan that specifies the extent of work, financial requirements, and schedule based on this

assessment. Budget Allocation is yet another crucial factor. The local governments give funds for repairing roads and storm drains based on their evaluation and planning. To ensure that necessary repairs and upgrades can be made quickly and efficiently, adequate money is consequently essential. Regular Inspections are another factor that helps. It is asserted that regular inspections are carried out to keep tabs on the state of the roads and storm drains. These inspections aid in finding problems like erosion, drainage obstructions, cracks, and potholes. Early discovery, it is believed, enables proactive maintenance as opposed to expensive, reactive repairs.

It is important to prioritize planned maintenance as another factor. It is mentioned that a crucial element of the strategy is preventive maintenance. It is stated that in order to increase the lifespan of infrastructure and decrease the likelihood of serious problems, regular actions like road resurfacing, crack sealing, and storm drain cleaning are necessary. The proposed approach should also give priority to emergency response. There is a case to be made for local councils to keep a quick reaction team on hand to handle unanticipated catastrophes like road washouts, sinkholes, or heavy storms. This guarantees the preservation of resident safety and prompt restoration of vital infrastructure. An emergency fund that should be easily accessible further supports this.

Community interaction has also been identified by this study as a crucial feature. According to the study's findings, the council has been provided access to a range of stakeholders on issues relating to the upkeep of roads and storm drains. It is mentioned that local councils frequently interact with the community to solicit opinions and address issues regarding the upkeep of roads and storm drains. This, it is said, helps prioritize projects and guarantees that the requirements of the population are considered when making decisions. The study's conclusions have led to the contracting and outsourcing of labour and knowledge as another factor. Local councils may decide to hire specialized contractors to handle maintenance tasks. These contracts are normally chosen through a competitive bidding process, which guarantees efficiency and high standards of performance. In order to streamline maintenance operations and take environmental concerns into account, it is further stated that local governments should take technological breakthroughs like Geographic Information Systems (GIS) and asset management software into consideration [2].

➤ *Proposed framework on road and storm drain maintenance in the local councils.*

• *Rationale*

The proposed framework is premised on the challenge of poor road and storm drain maintenance by local councils. It has been noted and outlined in this study that one major challenge that is faced by several councils is the maintenance of various infrastructure under the care of the councils. This study notes that one such challenge is due to poor maintenance of roads and storm drains. The study has shown that the council have the will and the technical ability to



maintain the local roads and storm drains, however this is not being done efficiently. It has therefore resulted in the degradation of this infrastructure, despite large sums of money used to ensure that this infrastructure is made available. Th road and storm drain infrastructure have been shown to positively contribute to the standard of living and also to the economic aspects of the community and the country at large. Therefore, there is need to secure and lengthen the life-span of this key infrastructure. This therefore provides the initial challenge that creates the need for this framework.

• *The framework*

- ✓ Step 1: The first stage in the framework is to do an assessment on the state or extent of the implementation of road and storm drain maintenance within their jurisdiction. This assessment is to establish if there is poor implementation of road and storm drain maintenance. If the assessment does show that there is poor implementation, there is need to go to step 2.
- ✓ Step 2: After the realization of the lack of good implementation of maintenance on road and storm drain, there is need to make a deliberate and focussed effort to create a dedicated structured framework on the

maintenance of roads and storm drains and its implementation.

- ✓ Step 3: Literature review from this study has outlined three (3) important factors, these include Administration, Institutional capacity and Financing factors. These factors must be included in establishing the framework.
- ✓ Step 4: There is need to ensure the framework is clear and shared with all the officers so that they may take ownership and understand the process. Further, this document should be available for the public to ensure accountability and understand procedure.
- ✓ Step 5: There is a further important need to ensure a continuous process of improvement through monitoring and evaluation (M&E) of the process to ensure that expectations and objectives are met. This is important as changes can be made to make the framework more beneficial.
- ✓ Step 6: After doing an M&E assessment, if it is discovered that changes are required to improve the implementation of the maintenance of roads and storm drains, the identified short-comings should be made in line with the 3 identified factors in the framework at Step 3.

The proposed framework is outlined in Figure 1 below.

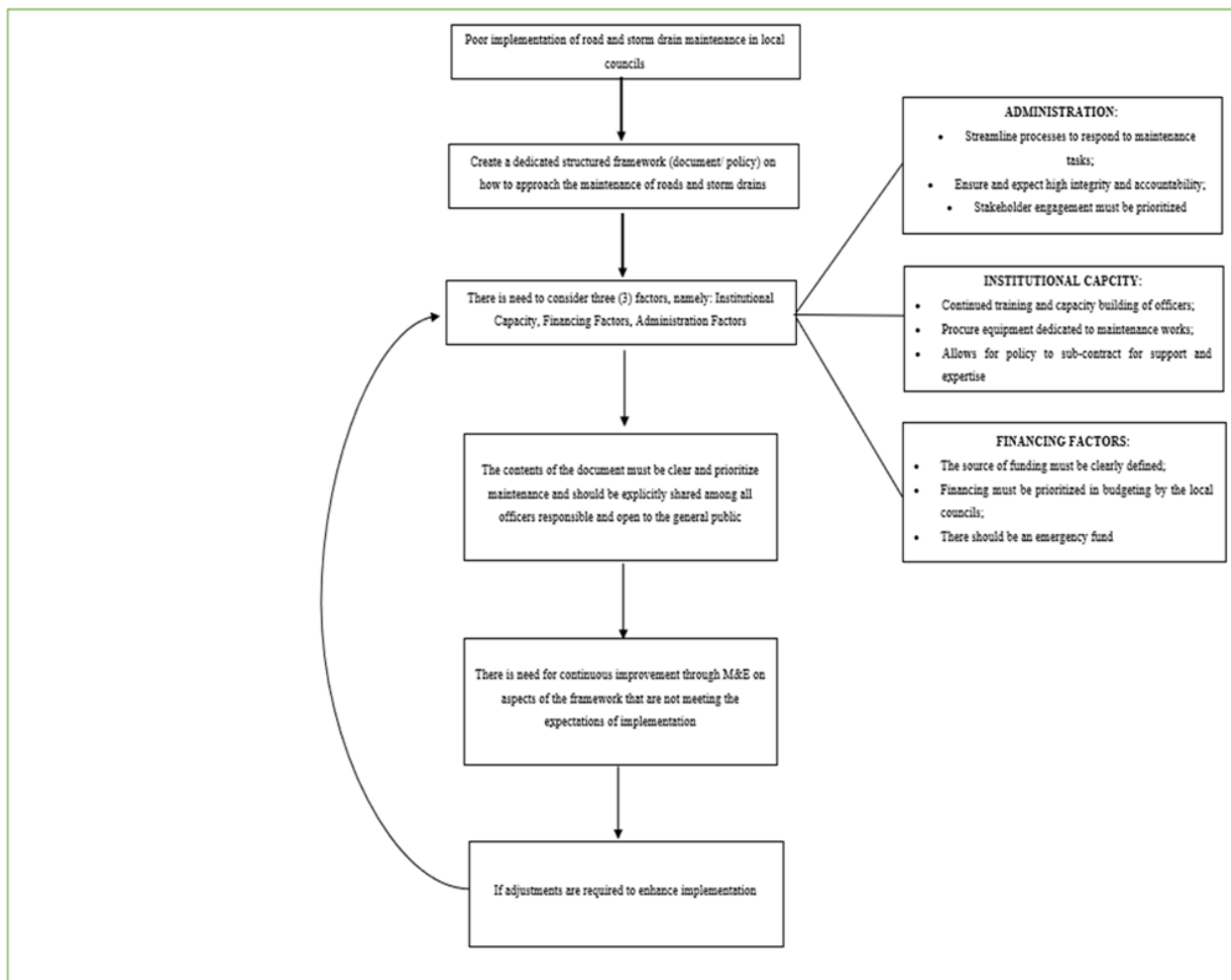


Fig 1: Proposed Framework for Road and Storm Drain Maintenance  
Source: Author

## V. CONCLUSION AND RECOMMENDATIONS

### ➤ Introduction

This section outlines the conclusion of the study in accordance with the discussion and makes recommendations which are derived from the conclusion and the study findings

### ➤ Summary of Key Findings

The study findings have shown that there is no structured framework attributed to maintenance or even a systematic approach to come up with improved infrastructure that suits a particular catchment area. It has found however that the council solely relies on its day to day civic duties delivered to the people upon request. It is noted that the local authorities do not have a structured framework so in most instances it will rely on contracts issued out to contractors to help in the implementation as well as helping the council through consultants on how a drainage or road framework can be contrived.

The study results further showed that the financing factors outline that the respondents agree that the department participates in the budgeting process of the council and that the funds allocated are strictly used for the intended purpose. However, the respondents outline that they are unsure on whether there is timely disbursement of funding for maintenance projects and on whether there is sufficient fund allocation according to maintenance projects due. The findings further outline that the respondents disagree that the council is able to raise sufficient funds to manage and maintain storm drains and roads and further strongly disagrees that the funds are readily available to respond to reports of roads and storm drains that require maintenance. The study shows that the current financing of the council is highly favourable with an increase in constituency development funds CDF to help in not only financing such attempts at maintenance but also the increase in procuring knowledge as well as expertise in these aspects to help in the frame implementation process.

On the administrative factors, the study finds that the respondents are largely unsure on whether the structure of leadership and interactions ensures good service delivery on maintenance; on whether there are good policies to ensure good service delivery in the department; on whether the performance management system ensures good service delivery of maintenance projects in the department; and on whether the administrative processes support timely maintenance of roads and storm drains. The respondents outlined that they disagreed that the administrative processes allow for quick acquisition of resources used in road and storm drain maintenance and that the administrative processes do not affect response to emergency maintenance requirements. The respondents further strongly disagreed that there is no political interference in the administration of maintenance projects, indicating that there is a presence of political interference. The findings further outline that on the administrative processes that they tend to be quite cumbersome in most cases because of the many signatories and departments the requisition passes through in order to get to service delivery level.

On the institutional capacity of the councils, the respondents agreed that there are sufficient officers available to respond to road and storm drain maintenance requests; that there is constant stakeholder engagement of the public in maintenance works; that the workforce in the department has sufficient skill and training to ensure good service delivery on maintenance projects; that the department is well staffed; and that there is accountability and transparency in the execution of maintenance projects in the department. However, the findings show that the respondents were unsure on whether there is sufficient infrastructure and equipment available to the department to engage in maintenance projects. Institutional capacity has been argued by the respondents to be a key factor amongst others in that these processes ideally have to be done completely by the council. An example was further provided in which it was argued that in an event that manpower is not sufficient, the council is forced to outsource labour which has been argued to undermine the council's potential to do the implementation autonomously.

### ➤ Implications (body of knowledge, practice, etc)

The study therefore adds to the body of knowledge on road and storm drain maintenance in local councils. The finding of a lack of structured framework on the maintenance of roads and storm drains outlines the need for policy makers to deliberately ensure that local councils prioritize ensuring that a policy/ framework is made a priority. This is important as it will ensure that the investment is secured and that the standard of living and economic retention from the usage of the infrastructure is maximised. This will also ensure the council is autonomous in their operations. The findings of the study on the financing factors to be considered in the framework outline the importance of ensuring that resources are readily available through adequate and timely disbursement of funding. On administration, the study notes that policy makers should ensure that bureaucratic processes are streamlined to ensure a quick and timely response to maintenance needs. Therefore, policies and frameworks that are created should be lean and only focus on essential and progressive processes. Furthermore, the findings indicate that policy should ensure that all public policies and frameworks should be easily accessible by the public. The study further outlines the need for policy makers to streamline the procurement policies and procedures that will, while ensure integrity of the process, shorten and enhance procurement of both human and physical capital to ensure efficiency.

### ➤ Conclusion

The study sought to answer three research questions, which were:

- What is the current approach used in the provision of services with regards to road and storm drain maintenance in Lusaka City by the Lusaka City Council?
- What various factors impact the service delivery of the road and storm drain maintenance in Lusaka by the Lusaka City Council?
- What inclusive approach can be implemented to improve the service delivery of road and storm drain maintenance in Lusaka City by the Lusaka City Council?

The study has shown that there is need for a dedicated structured framework for the purposes of road and storm drain maintenance in the local councils. This is because the current approach relies more on a reaction strategy as opposed to sustained maintenance efforts. This could be avoided by having a dedicated framework in place. The paper has argued that the essence of this structured framework is to provide timely and efficient service delivery regarding roads and storm drain maintenance as this will avoid deterioration of essential road and storm drain infrastructure and will also further the benefits derived from this infrastructure to the community over a longer period of time.

The study considered, based on the literature reviewed, three types of factors that impact service delivery of councils which include financing factors, administrative factors and their institutional capacity. The study finds that there is need for the framework to ensure enhanced information dissemination among the members of the department in charge of maintenance with regards to the financing processes and the available sources of revenue to finance the said projects. The framework should therefore have a clearly defined source of funding for matters relevant to road and storm drain maintenance, having a dedicated fund and should further have an emergency fund available solely for the purposes of roads and storm drain maintenance. Furthermore, the study notes that CDF has cushioned the financing factors of roads and storm drain maintenance.

With regards to the administrative and bureaucratic approaches, the framework should ensure to avoid tedious processes but should ensure to maintain high integrity of the processes through transparency and accountability. There is need for all officers responsible to be aware of the administrative processes that must be followed in order to ensure timely response to road and storm drain queries. Furthermore, the framework should avoid taking into consideration any political elements that might compromise the integrity of processes. On the institutional capacity, the councils reviewed outline that they have sufficiently skilled officers for the tasks regarding roads and storm drain maintenance. However, the study advocates for there to be a deliberate move to have equipment dedicated to this maintenance and further a policy imbedded in the framework that allows for sub-contracting certain jobs to qualified contractors in the bid to provide both support and expertise.

In order to ensure an inclusive approach to improve the timely provision of road and storm drain maintenance in the bid to ensure improved service delivery, the study argues that first and foremost, stakeholder engagement should be prioritized. Matters should be considered on merit and based on urgency. The study further notes that locality and having the right logistics in terms of equipment and manpower available so the timeliness is a constrained factor. However, this can only be achieved given the adoption of a deliberate systematic and approved framework on roads and storm drain maintenance.

#### ➤ *Limitations*

The study faced a challenge in collecting data from the entire set of respondents from the sample due to the busy schedule of the council officers.

#### ➤ *Recommendations*

- Central Government – There is need for Central Government to acknowledge the importance of continued routine and preventive maintenance to secure the huge investments in roads and storm drains. Therefore, Central Government should ensure legislature advocates for policy that guides and prioritizes the activity and its financing.
- Local Government – There is need for local councils to ensure that road and storm drain maintenance is accounted for in the budgeting processes.
- General public – The general public must ensure to in a timely manner report any damage observed on roads and storm drains to the local council. Furthermore, they should also provide suggestions to the local councils on ways to improve vigilance and maintenance.

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