

# Analysing the Compliance of the National Solid Waste Management Related Legislations in Selected Local Government Authorities in Tanzania

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## Abstract

*This study assesses the extent of compliance to the Solid Waste Management Legislations in Tanzania. It is motivated by the fact that more than 15 years have passed since the enactment of some solid waste management related legislations but still on average less than 50% of the generated waste is effectively collected. This study was conducted in selected local Government Authorities in Tanzania. The study guided by legislation requirement for improved waste management services which include coordination roles, waste minimization systems, refuse collection charges availability of waste transfer stations, availability of proper storage containers, and presence of recycling and composting initiatives. The research methodology involved a purposefully selection of 5 local Government authorities of Ilala, Kinondoni, Moshi, Arusha and Dodoma. Questionnaires, different types of observations, in-depth interviews and documentary review formed the research data collection techniques. The study used descriptive analyses for its variable analysis. The findings show that despite having good legislations the compliance level for the Government institutions, private entities and individuals was found to be very poor. To this end the study recommends; Development of the enforcement guideline, National Environmental Management Council take a lead role in driving environmental policy and waste management legislations, Establishment of environmental enforcement unit, establishment of Mobile Environmental tribunals, Promotion of civil society and Individuals engagement, Promoting clarity and understanding of the environmental legislations, Establishment of waste management authority, Minimizing bureaucracy and streamlining legal procedures, Enhancing social network, Capacity Building. It is expected that, the study findings can inform policy makers and enforcement agents on the relevancy of enhancing enforcement strategies for effective waste management in the country.*

**Keywords:** Waste, solid waste, waste management, compliance, local government authority

## INTRODUCTION

Urbanization has become the common phenomenon all over the World. The trend shows that there is a substantial population increase in urban areas over the years [1]. For example, In Tanzania statistical trend indicates that proportion of the population living in urban areas is ever-increasing. According to the *International Growth Centre report of 2014*, [2] the urbanization rate increased from 5% in 1967 to 13% in 1978 and from 21% in 1988 to 29.1% in 2012 [3]. Although, there is generally an unequivocal positive correlation between urbanization and economic development and growth, this does not appear to be the case in Africa including Tanzania [4]. Urbanization in Africa over the past 45 years has been accompanied by sluggish economic growth [5]. Overwhelmed by a plethora of problems many urban areas failed to effectively address the challenges associated with urbanization including management of the generated waste.

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Consequently, in many developing countries including Tanzania only less than 50 per cent of the generated waste is collected and effectively disposed [6].

Moreover, the public awareness programs can improve the attitude to responsible waste management and economic factors can strongly influence the processes and practices selected in managing solid waste particularly by the waste management industry; on the other hand enforcement of environmental standards through legislations can strongly influence effective waste management service provision [7].

In Tanzania the National legislations governing solid waste management include; The Environmental Management Act; [8] the Local Government (Urban Authorities) Act, [9] Tanzania; The Public Health Act; [10] The Public Procurement Act, [11] The Public Procurement Act Regulations [12], and The Environmental Management (Solid waste management) Regulations [13].

The above legislations provide for the provisions which aim to enhance effective waste management services provisions through effective coordination, waste minimization practice, waste charges collection, availability of waste transfer stations, the use waste storage containers and the presence of waste composting and recycling initiatives.

Therefore, it is the interest of this study to assess the extent of compliance of these national legislations in Ilala, Kinondoni, Moshi, Arusha and Dodoma Local Government Authorities based on the requirements of these legislations.

## **OBJECTIVE**

The study aimed at assessing the extent to which the national solid waste management related legislations complied with in selected local Government Authorities in Tanzania.

## **LITERATURE REVIEW**

### **The Experience of Compliance on Waste Management Legislations in Botswana**

#### ***Ineffective Control of Waste Littering***

The Waste Management Act [14] has regulations related to illegal waste littering and dumping through specified penalties. However, according to Mmereki [15] this is not being effectively enforced by the city council which results in increased amount of wastes being dumped in common places. Additionally, Mmereki [16] says that, the Gaborone City Council does not have strict monitoring towards issues concerning waste.

#### ***Inadequate Waste Segregation Practice***

Further, this was also reiterated by Vijayakumar [17] when claimed that there was no source separation of the waste generated in Gaborone. People often tend to dispose their waste by dumping all types of waste into the same waste bin (ibid). This claimed to make it difficult for the recycling companies or the city council to separate the waste into their respective categories. However, this observed to be contrary to the Waste Management Act, PART III (6)(o) which requires waste to be separated. While in Botswana, it is claimed that the practice mixed collection and disposal due to the lack fully waste segregation at source practice [18]. Further to that, Mmereki there are no waste minimization measures in Botswana which consequently failed to safeguard the environment, public health and safety.

#### ***The presence of Waste Storage Containers***

Botswana is characterized by Lack of rigorous enforcement of local regulation and consistent policies [19]. For example, PART VII Section (30) of the Botswana's Waste Management Act empowered local Government Authority to require owner of the premise to place the waste for collection in receptacles which shall be of a kind and number as may be specified in the notice.

### **The Experience of Compliance on Waste Management Legislations in Malaysia**

#### ***Inadequate Commitment among Stakeholders***

The commitment among the stakeholders is crucially required to achieve effective policy implementation. In the context of Malaysia, the commitment among the stakeholders with regard to solid waste management policy is weak [20]. According to Abas there is one-sided commitment by government on the implementation of waste management policy. Hence, commitment from the civilian, private sector and institutional is highly required to achieve effective policy implementation (ibid). For example, private sector can be at the fore front in the implementation of the source reduction policy through the strong commitment in the manufacturing process. This can be done through resource reduction by using fewer or less raw material for production, designing the products that are more durable or last longer and relying on the recyclables packaging material [21]. Moreover, the failure of 3R (Reduce, Reuse and Recycle) policy implementation in Malaysia since 2000 was associated with weak commitment from the households [22].

### ***Poor Implementation of the Decentralization Policy***

Malaysian government has employed a good governance concept in solid waste management through decentralization and involving the civil citizen in decision making [23]. However, the result from the good governance practice by the Malaysian government is not what has been expected on the ground (Abas, 2014). Most of the study has shown that there is a huge gap between the official aim of the solid waste management policy and the actual practices on the ground (ibid).

### ***Ineffectiveness in Monitoring and Enforcement***

In the context of solid waste management in Malaysia, there is a policy and Acts that beautifully structured to improve its solid waste management. For instance, the Act 672 [24] has been enacted since 2007, however is only officially implemented in 2011 [25]. There is little impact of the Act 672 and Act 673 [26] on the solid waste management in Malaysia when compared to the actual aims of the policy [27]. The rate of citizens' compliance of the policy also claimed to be very low [28]. Neglect of social dimension.

In Malaysia, the social dimension in policy implementation has been neglected [29]. The solid waste management policy in Malaysia has been implemented based on technical dimension which is focus on the technologies and the system [30]. Jones *et all* insist that, the Social dimension which involving social trust, capacity building, and social perception during policy implementation have been neglected [31].

## **RESULTS AND DISCUSSION**

As it has been stipulated in the abstract, the following category provides some of the requirements of waste management services which, guided by the legislation in order to establish the extent of which the local authorities comply with the National Solid Waste Management in Tanzania. These include coordination role, waste minimization systems, refuse collection charge collection, availability of waste transfer stations, availability of proper storage containers, and presence of recycling and composting initiatives.

### **Adequate Coordination Role**

Adequate coordination role includes coordination of all waste management services in Local Government authorities as stipulated in the local Government (Urban Authority) Act [32] section 55 (g)). The Ilala Municipal Council observed to play a leading role in the coordination of waste management service provision. This includes supervision of the waste collection contractors as well coordinating the tendering process for waste collection services. Also, the council was observed and reported during the interview to be involved in the enforcement and awareness creation. The council found to work with waste collection service providers to sanction penalties to defaulters through the established mobile court. Again, the Ilala Municipal Council found to coordinate the efforts of other development partners to enhance better waste management service provision. For example, the council observed to work with a Palladium group on the Institutional for Inclusive Development Project to

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facilitate private waste collection service providers to improve customers' data base through introduction of property tagging system.

Same as Ilala Municipality, Kinondoni Municipal Council found to play a leading role in the management of solid waste as prescribed by The Local Government (Urban Authority Act. The council was supposed to play a role in the coordination of waste management service provision, including contract management for the service offered by private service providers and the overall supervision of waste management services. During the interviews with service providers and municipal environmental officer it was also indicated that the council was involved in the enforcement through the established ward tribunals in the 12 Wards.

Like Ilala and Kinondoni Municipalities, the Arusha City Council found to play a protagonist role in the management of solid waste in line with The Local Government (Urban Authority Act. The Council was reported by City Environmental officer, Muriet Damp Manager, Waste collection service providers and Ward and *Mtaa* executive officers play a role in the organization of waste management service provision including managing the contract that entered by the City Council with service providers; The Council reported by Municipal Waste environmental officer to have a mandatory role of coordinating waste management tendering process and ensuring distribution of waste collection service providers in several Wards within the City. Additionally, for effective service provision the Council observed to be highly engaging in the supervision of services offered by waste collection contractors. The council played a key role in the management of solid waste contracts with waste management service providers. The council also, involved in the management of waste collection charges through provision of Point of Sale Machines (POS) to the service providers who are also involved in the collection of waste charges.

Unlike Ilala, Kinondoni, and Arusha, in Moshi Municipality there is no involvement of waste collection service provision of private sector. The Municipal headquarter coordinate and supervise waste management services that decentralized to the Ward and *Mtaa* level. Each ward was assigned to a member of the Waste Management Team who will be responsible to report on a daily basis the Waste Management status at a particular Ward to a management meeting.

As indicated in The Environmental Management Act, 2004, the Council witnessed to play a leading role in the management of solid waste in the Municipality [33]. During the interviews with waste management officers in Moshi Municipality, Ward and *Mtaa* executive officers it was found that the council directly involved in waste collection; management of the damp site and control of the revenue collected from waste collection charges. Also, the council found to be involved in the enforcement of waste related legislations as well as managing the tendering process for recruitment of the companies responsible for the provision of waste charges collection services.

While in Dodoma City, the Council, found to be involved in the coordination, supervision and enforcement of waste management services as prescribed on The Local Government (Urban Authority) Act. The Council is supposed to manage the tendering process for the provision of waste collection services in the Central Business District. Also, the Council was observed to be involved in the coordination of waste collection services by CBOs at the periphery Wards. This includes managing the collection of waste deposited by the CBOs at the Skip Buckets provided by the City Council in every Ward. The council was also observed to be involved in the management of the landfill. Figure 1 bellow shows the municipal skip loader collection, waste deposited by CBOs at the collection point.

### **Waste Minimization Initiatives Practice**

The Environmental Management Act, [34] and Public Health Act [35] and Environmental (Solid waste Management) Regulations [36] require local Government authorities to ensure the presence of waste minimization systems in their areas of jurisdiction. The public Health Act clearly stipulates that, "For ensuring minimization of solid wastes, the Authority shall prescribe for (a) the separation at source, of different types or kinds of waste or garbage; and (b) standards to guide the type, size, shape, colour

and other specifications for waste containers used. However, there were no any waste minimizations initiatives observed or reported that spearheaded by the council. While responding on the extent of waste minimization practice in the Municipality; 10 (100%) of the respondents who include Municipal environmental officers, ward executive officers and waste collection service providers all declared the absence of the waste minimization practice. The collection-to-disposal was the commonly observed practice.



**Figure 1.** City council skip loader collecting waste from skip bucket disposed by CBOs.

In Kinondoni, the Municipal Council was found poorly in performance as required by the Environmental Management Act; [37] and Environmental (Solid Waste Management) Regulations [38] to in force local government authorities to ensure waste minimization in the areas of jurisdiction. During the interviews with Municipal environmental officers, ward executive officers and waste collection service providers it was declared that there was no waste minimization strategy practiced in the Municipality. “The predominant waste management mode in the municipality is the collection, transportation and disposal,” added Mr. Kitururu (Municipal Environmental officer)” during the interview.

Same as Arusha, the Environmental Management Act and Environmental (Solid Waste Management) Regulations requires local government authorities including Arusha City council to ensure the presence of waste minimization activities in their areas of jurisdiction. However, while enquiring about the availability of waste minimization activities; 10(100%) of the key informant respondents declared the absence of any waste minimization strategy or initiative in the City. All the collected waste observed to be collected by service providers for the final disposal on the Muriet landfill site. All respondents have indicated that most of the sorting has been conducted informally by waste scavengers on dustbins and at Muriet landfill site. Figure 2 below shows the sorting of waste by scavengers at Muriet Landfill site, at Arusha.



**Figure 2.** Muriet landfill site in Arusha City.

According to The Environmental Management Act [39] and Public Health Act [40] require local government authorities including Moshi Municipal council to ensure the generated waste minimized before final disposal. However, while enquiring about the availability of waste minimization practices; both officials and ward executive officers of Moshi municipality declared the absence of formal waste minimization initiatives. All the collected waste observed to be collected by service providers for the final disposal to the disposal site. The sorting activities were found to take place at the dump site as indicated in Figure 3 below.



**Figure 3.** Sorted waste on dump site in Moshi municipality.

The role of local Government authorities ensuring the availability of waste minimization initiatives in their areas of jurisdiction was stated in The Environmental Management Act and Public Health Act; In Dodoma Municipality, there were no any waste minimization initiatives observed or reported during the interviews. The collection –to-disposal all the collected waste observed to be collected by service providers for the final disposal to the disposal site.

With respect to enforcement of The Environmental Management (Solid Waste Management) Regulations, the Dodoma City council was found to be very ineffective. For example, contrary to the

requirement of the regulations there were no observed or reported waste segregation at source practices. The collected waste found to be taken to the Chidaya landfill site without prior processing as it was supposed to take place at transfer station. The collection-to-disposal was the common practice. This reported to increase the waste management cost to the service provider working a Central Business District. The Council was found to charge Tshs10 per kilogram of the waste dumped at Chidaya landfill site. The presence of waste separation initiatives would have reduced the cost incurred by the service provider. The Dodoma council also, incurred higher cost of the number of trips made in the transportation of skipping bucket from the collection point. The waste minimization initiatives such as reducing, composting and recycling would have reduced the number of trips made by skipping loader to transport waste from collection point to the Chidaya landfill site. The city indicated during the interviews with key informant respondents to lack waste sorting schemes as prescribed by Solid waste management regulations.

### **Waste Collection Charges**

Section 73(2) of the Public Health Act, 2009 [41] requires Local Government Authorities to charge waste collection fees. In Ilala municipality this role observed to be delegated to waste collection service providers. However, the rate of collection was observed to be high in the Central business district compared to other parts of the Municipality. The Central Business District which makes nearly 28% of the total Municipal Wards collects 80 to 90%. The rest of the Wards which makes 68% of the total Wards collect less than 50% of the required waste collection charges.

Additional to that, the Public Health Act requires Local Government Authorities to establish by-laws for facilitating the collection of refuse collection charges. Despite the enforcement and the powers granted to the local authorities to establish by-laws in order to facilitate the process, Kinondoni Municipal was found to be ineffective in the collection of the waste charges. During the interviews it was indicated by municipal environmental officer that the collection rate of waste collection charges to be less than 40%. According to Mr. Kitururu (The municipal environmental office) the refuse collection charges are effectively collected in high income neighborhoods of Masaki, Oyster Bay and some parts of Mikocheni, Mr. Kitururu has added that. "In higher income neighborhoods the collection rate has reached 90 per cent and that why those areas attract more service providers". However, in reality it was observed that higher income neighborhoods make less than 20% of the total municipal Wards.

Moreover, while enquiring on the performance on the collection of Refuse Collection Charges; Arusha City environmental officer has indicated that the collection rate ranges from 60 to 70%. However, the rate of collection was indicated to be higher in the Central Business District compared to other parts of the city.

In Moshi Municipality, the interviews with key informant respondents which include Municipal director, Municipal environmental officer, Municipal treasurer, Ward and *Mtaa* executive officers the council observed to effectively collect the refuse collection charges through the contracted fee collector's company. It was reported during the interviews that the council collect 80 to 90% of the refuse charges. The Kati Ward which comprises much of the business premises reported to have a collection rate of up to 95%.

### **Waste Transfer Stations**

Section 118 (2), [42] section 73 (4), [43] and section 19 [44] entrusted the local Government authorities with the role of establishing waste transfer stations in their areas of jurisdiction. However, the study found that no transfer station established in the Municipalities. The common observed practice was collected to direct disposal at Pugu damp site. This found to encourage improper disposal practice especially by informal service providers as shown in Figure 4 below.



**Figure 4.** Above shows the improper solid waste disposal at Msimbazi River in Vingunguti Ward, at Dar es Salaam.

Contrary to the requirement of the Public health Act, and Environmental (Solid Waste Management) Regulations there was no waste transfer station observed or reported to be designated by the councils. For instance, the Ilala Municipal environmental officer declared that the council has never designated area as a waste transfer station. The common observed practice was collection-to-directly disposal at the Pugu Kinyamwezi dump site. This observed to increase the waste management cost to the municipality as well as encouraging the improper solid waste disposal as indicated in Figure 5 below.



**Figure 5.** Improper solid waste disposal along the Road in Mwenge Area.

As it has been provided in the Public health Act, and Environmental (Solid Waste Management) Regulations of 2009, and the local Government Authorities have a role to design waste transfer stations. Yet, Arusha City Council while enquired on the enforcement of this legislation, 10(100%) of the respondents have indicated the nonexistence of waste transfer station in the City. Instead of transfer stations, it was highlighted by the municipal environmental officer the presence of collection points in some Wards in the City. The collection points claimed to be used by service providers in areas where waste collection trucks cannot easily maneuver the streets due to the high degree of informal development.

In spite of the fact that the aforementioned legislations grant powers to the Local authority, the Moshi Municipal Council found to lack areas designated as waste transfer stations. However, the Council was found to have several skip bucket containers at the marketplace and Bus stand.

On the other hand, the Dodoma City Council managed to design a temporary storage of waste has taken for the final disposal. Normally in waste transfer station waste processed for retrieving useful resources before final disposal. While enquiring on the enforcement of this legislation 10 (100%) of the key informant respondents have indicated that the council lack areas designated as waste transfer stations. However, it was reiterated that the Council has several skip bucket containers at several Wards where CBOs deposited the collected waste. The skip bucket served as collection points. Figure 6 showed skip bucket containers in the City.



**Figure 6.** Skip bucket serve as collection point in Dodoma City.

### **Proper Waste Storage Containers**

The Public Health Act [45] requires local Government authorities to determine appropriate methods for sorting and storage of the wastes. Also, The Public Health Act [46] requires waste generators to have covered containers for waste storage in their premises However; in Ilala Municipal all respondents during the focus group discussion have indicated that less than 20% of the households were using covered containers for waste storage. It was highlighted that, at Ilala sacs where the common storage equipment used at households. The business premises were found to be using a combination of waste covered containers and sacs as indicated in Figure 7.

Although the Public Health Act, [47] and Environmental (Solid Waste management) Regulations [48] entrusted local Government authority with the role of ensuring the availability of the covered waste storage containers for households and business premises; direct observation in Kinondoni Municipal with Municipal officials, Ward and *Mtaa* officers and waste collection service providers this was found to be poorly enforced. All respondents during the focus group discussion have indicated that less than 20% of the households were using covered containers for waste storage. Sacks were the common observed waste storage containers, especially in middle- and low-income neighborhoods as shown in Figure 8.



**Figure 7.** Waste storage containers at business premises.



**Figure 8.** Sacks as waste storage containers in Tandale Ward.

However, it was highlighted that about 90% of the households in high income neighborhoods of Masaki, Oyster Bay and Mikocheni have covered containers in their premises. In the case of business premises, waste collection service providers have indicated that 80 to 95% have covered waste storage containers.

While in Arusha municipality enquiring on the presence of covered waste storage containers in the households and business premises; 10 (100%) of the key informant respondents which include Ward executive officers, *Mtaa* executive officers, Municipal Environmental officers and waste collection

service providers have indicated that 80 to 90% of the households were not using covered containers for the storage of the generated waste. This is contrary to The Public Health Act. However, during the focus group discussion it was emphasized that about 95% of the business premises at the Kati Ward have covered containers in their premises.

Contrary to the requirement of the Public Health Act, Moshi Municipality declared by both Municipal officials and Ward and *Mtaa* executive officers that there were limited covered containers for waste storage at most of the households in the municipality. This was also, observed during the site visits to various streets in the Municipality. The common observed storage containers were sacks.

Similar to that, the Public Health Act requires Local Government Authorities including Dodoma City Council to ensure that households and business premises equipped with covered containers for waste storage. However, direct observations as well as the interviews with key informant respondents it was found that most households were using sacks as waste storage containers as shown in Figure 9. However, the case was observed to be different at the Central Business District where containers of different standards were observed to be used. Nevertheless, contrary to the requirement of the Act most of the containers were observed to lack covers.



**Figure 9.** Sacks as waste storage containers at Makole Wards.

### **Recycling and Composting Practice and Initiatives**

The Environmental Management Act indicate that “the generation of waste be minimized, wherever practicable, waste should, in order of priority, be reused, recycled, recovered and disposed of safely in a manner that avoids creating adverse effects or if this is not practicable, is least likely to cause adverse effects” [49].

However, this study found that no recycling initiatives spearheaded by the Ilala municipal council exist. The only, observed initiative was a small-scale briquette making from waste at Vingunguti Ward by waste collection service provider. In kinondoni Municipality, the practice of recycling and initiatives composition as stipulated by the Environmental Management Act was found to be poorly enforced. For example, while The Environmental Management Act require the generation of waste be minimized, wherever practicable, waste should, in order of priority, be reused, recycled, recovered and disposed of safely in a manner that avoids creating adverse effects or if this is not practicable, is least likely to cause adverse effects. However, none of these were observed to be formally coordinated by Municipal Council. The existed recycling initiative was found to be dominated by the informal sector.

Moreover, in Arusha all respondents during the interviews have indicated the absence of operational waste composting practices in the municipality. However, the Municipal environmental officer has indicated the council is in the final stage of completing the construction of composting facilities sponsored by Germany Government in Mabwepande area.

With regards to The Environmental Management (Solid waste management) Regulations, require integration of waste recovery with recycling and designation of waste composting sites; the council was found to neither have a formal waste recovery scheme nor formal composting practice. All respondents at Moshi municipal, Ward and *Mtaa* level indicated that the collected waste taken to the dump site without any sorting practices. This was also, highlighted during interviews to be attributed to the lack of waste transfer stations. The available bucket containers found to be used as collection point were observed to be less friendly for sorting practice.

## **CONCLUSION**

Tanzania like many other developing countries in the World have developed legislations that are intended to give positive impact on waste management practice. However, the adoption of these legislations has not been matched by an equal effort to provide mechanism and strategies for effective implementation. As a result, the compliance level for all stakeholders including Government, Private sectors and individuals proven to be very low.

## **RECOMMENDATION**

### **Development of the Enforcement Guideline**

As of current there is no consistency in the administration and enforcement of various environmental legislations in the Country. For example, the local Government (Urban Authority) Act, 1982 and Local Government (District Authority) Act, are expected to be enforced by local Government authorities; Environmental Management Act, expected to be enforced by National Environmental Management Council (NEMC); Public Health Act, expected to be enforced by Ministry of Health Community Development Gender Children and Elderly (MoHCDGEC); Environmental Management (Solid Waste Management) Regulations of 2009 expected to be enforced by NEMC and Environmental Management (Hazardous waste Management) Regulations, 2019 expected to be enforce by NEMC. Such multidisciplinary institutional involvement requires a guideline for harmonizing enforcement while offsetting duplication of resources.

The guideline should outline the enforcement structure on the main three categories which are administrative enforcement, civil enforcement and criminal enforcement. The guideline should also highlight institutional coordination and collaboration; information sharing and knowledge management; tools equipment and training; inspection and monitoring; awareness and public engagement for all three categories of enforcement. The guideline must also provide the scope of administrative, civil and criminal enforcement.

### **National Environmental Management Council (NEMC) Take a Lead Role in Driving Environmental Policy and Waste Management Legislations**

NEMC should play a leading protagonist role in the enforcement of waste management related legislations. The local Government authorities observed to be inadequately complied with solid waste management related legislations. The National Environmental Management Council should ensure all Local Government Authorities (LGAs) in the Country comply to the existing legislations including carrying a periodic waste management studies, designate areas for waste transfer stations, ensuring waste sorting and separation practiced at source minimized and other waste management strategies for reducing amount of waste taken to the dump sites such as reduce, re-use and recycling is well practiced.

### **Establishment of Environmental Enforcement Unit**

Currently, Tanzania lack environmental enforcement unit which denied enough manpower in dealing with environmental issues including waste management. The established auxiliary police unit under legal section in some local Government authorities found to be inadequate in addressing challenges

associated with environmental issues. The Government should establish environmental enforcement unit at NEMC and local Government authorities. The unit should be equipped with special police force specialized on the enforcement of environmental issues. For example, a special environmental police unit in Uganda has been formed under the Ministry of Water and Environment. That has enhanced enforcement of environmental laws by enabling swifter responses to criminal acts and by shortening the prosecution process.

### **Establishment of Mobile Environmental Tribunals**

The Government should make a priority to establish mobile environmental tribunals. Every local Government authority should have a mobile tribunal working on daily basis. The supply of magistrate at these tribunals should be reliable for enhancing consistency and thus positive impact to the society. The tribunal should also, be equipped with necessary facilities for effective implementation.

### **Promotion of Civil Society and Individuals Engagement**

The legislations should empower the civil society and individuals to access the established environmental tribunals for pressing charges against the environmental culprits. The tribunals' administration must be trained to cooperate with civil society and individuals reporting cases of environmental offences. This will broaden the enforcement base and enhance citizen responsibilities in environmental management.

### **Establishment of the Waste Management Authority**

For effective enforcement of waste management legislations, the government should think in a long run to establish waste Management Authority. With responsible waste management authority, it will be easy to monitor and evaluate the performance of the authority based on waste management services. Unlike the current status where local Government authorities' performances are measured on several parameters including education, revenue collection, general health issues etc. The Waste management authority will provide the opportunity to employ enough manpower and expertise and technology for effective service provision.

### **Promoting Clarity and Understanding of the Environmental Legislations**

One of the fundamentals of good legislations is on how communicated to and understood by those stakeholders most affected by them. Legal clarity contributes to compliance, reduces the possibility of arbitrary interpretation of the law by government officials and facilitates the task of the judiciary. The clarity can be achieved by: raising awareness about the regulatory framework where the general public will understand the legislations especially on their rights and responsibilities; Ensuring a participatory approach in the implementation of the legislations as it was seen in Moshi Municipality where residents involved in the abduction of the environmental polluters. This will promote transparency, reduce the potential for corruption, ensure greater equity, minimize the undue influence of privileged groups and encourage parties to follow legal requirements.

### **Minimizing Bureaucracy and Streamlining Legal Procedures**

Decentralization of resources and responsibilities is very vital for effective enforcement of the waste management legislations. Moshi municipality has been proven to be the best model on this. The Municipality allowed Ward offices to manage the finances and law enforcement. This has empowered the Ward level to hire militia as well as cooperating with general public on the enforcement. Decentralization of the resources and responsibilities in Moshi has enabled the Ward level administration to act timely on the course of enforcing the environmental legislations. Centralization of the enforcement processes will discourage the general public participation due to the bureaucratic procedures especially when there is involvement of commission provision from the culprits. However, this must be accompanied by transparent systems to enable the tracking of expenditure for enhancing public trust. Trust and fairness are significant influence in citizen's behaviour to comply the environmental legislations.

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