

# The Nature of Administrative Process, Challenges and Possible Solutions in Waste Disposal and Pollution Prevention Policies in Eldoret Municipality-Kenya

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**Abstract:** With the unexpected increase in population globally, especially in Sub Saharan Africa, waste management has been crucial for good health, good environment and aesthetics urban centers. This paper seeks to examine the nature of administrative processes, challenges and possible solutions to waste disposal management and pollution policies in Eldoret municipality in Kenya. The paper will be guided by the following objectives: To establish the nature of administrative process in waste disposal and pollution policy implementation and to find out the challenges and possible solutions facing waste disposal and pollution policy implementation. The paper will adopt a qualitative approach by getting response from the stakeholders through interviews and questionnaires, the respondents were chosen through purposive sampling technique. The geographical scope of the study was Eldoret municipality while the time scope covered the period 2012-2015. The findings were: Administrative process that exists in Eldoret includes both administrative politics such as mayoral office and councilors and administrative policy making such as rule-making and law enforcement. Challenges include: Waste from hospitals and industries are disposed of as untreated waste, the lack of adequate transport vessels and vehicles, low participation of households, management problems and operational problems. Possible solutions include: provision of large bins for all the residential areas and collection should be made compulsory, mass public emancipation, garbage pails should be provided and placed at strategic points open spaces, decentralize solid waste collection and disposal, necessity for a better solid waste management. This paper makes a conclusion that solid waste management is on decline due to inadequacy of modern equipment's, financial misappropriation and bribery and corruption among the municipal employees. In order to adequately solve these not only in Eldoret-Kenya but in all urban centers facing such problems, the strategies employed by private sectors should be adopted and all other stakeholders in the waste management so as to make the whole system more proactive.

**Key words:** Municipal council, waste disposal, waste management, pollution, environment, policy.

## I. INTRODUCTION

Waste management systems are providing consideration to environmental issues over economic costs in the decision making process. The concerns of waste management in relation to the environment are twofold: the conservation of

resources and pollution and deterioration of renewable. The conservation of resources is more or less an old concern of waste management in relation to the environment while pollution of the environment is the recent concerns of waste management in relation to the environment (McDougall *et al.*, 2008).

Modern city centers consume a great deal of resources including energy, water, food and raw materials, resulting to large quantities of waste products. The success with which a city can manage these wastes is one indicator of the ability of the organizations within the city to harmonize their efforts to solve major urban environmental problems (Middleton, 1995). There is no single best solution to waste disposal, but a wide range of possibilities exist. Solid waste management is at the core of urban environmental problems.

Municipal solid waste management (MSWM) encompasses the functions of collection, transfer, resource recovery, recycling, and treatment. The primary target of MSWM is to protect the health of the population, promote environmental quality, develop sustainability, and provide support to economic productivity. To meet these goals, sustainable solid waste management systems must be embraced fully by local authorities in collaboration with both the public and private sectors. Although in developing countries the quantity of solid waste generated in urban areas is low compared to industrialized countries, the MSWM still remains inadequate (Van Dijk, 2006).

In any country, administrative process plays a crucial role in implementation of public policies. The term administrative process is used to designate the movement or operation of the administrative system over time. The focus here is some objects of the administrative process that seem especially to the consequences for the implementation on that and impact of policy. These include administrative organization, administrative politics and administrative policy making (Matrix, 1993).

In administrative organization, those seeking to influence the nature of public policy often show much concern over the particular agency or type of agency that will administer a

given policy. Most public policies are not self-storage hence if they can be carried into effect; responsibility for their implementation must be assigned either to an existing agency established for this purpose. The creation of new agencies is usually handled by the legislature for example, NEMA. The effect has been to give a sharper focus to the administration of environmental policies Jr. (1999:321)

1.2 Statement of the problem

Throughout the years the major concern of waste management has been changing. Health and safety were major concerns; therefore, waste management has been prioritizing and minimizing health risks (UNEP, 2002).

In modern political systems, public policies are primarily implemented by a complex of administrative agencies, whereby such agencies perform most of the day- to- day work of government and thus affect the citizens more directly in their actions than any other government unit. Administrative agencies often operate under broad and ambiguous a statutory mandate that leaves them with much discretion to decide what should and should not be done. Such statutory mandates are in effect directives to the agencies involved to go out and make some policy (Kotz, 1969)

Administrative process and challenges related to waste disposal and pollution prevention policy does exist in Eldoret Municipality. This paper therefore seeks to investigate the nature of the administrative process and challenges and highlight possible solutions.

1.3 Justification of the study

This project is very useful to the county government and the national government. To the county government: They will deliver their mandate under schedule 4 of the constitution of Kenya 2010 - which outlines responsibilities of the county governments, which one of them is to ensure a clean environment which in this case is Eldoret Municipality. The national government therefore will benefit from aesthetic of the town, less emergencies from preventable solid waste related illnesses like cholera, at large as well as attraction of investors to the town among other benefits.

II. METHODOLOGY

The paper will adopt a qualitative approach by getting response from the stakeholders through questionnaires and observation, the respondents were chosen through purposive sampling technique.

2.1 Scope

Eldoret is a town is found in Western Kenya along Kenya-Uganda road and it is the administrative Centre of Uasin Gishu County. It lies southwards of the Cherangani Hills, the local elevation varies from approximately 2100 meters above sea level at the airport to more than 2700 Meters above sea level in nearby areas.

The population of Eldoret is 252,061 as per 2009 census, and currently the 5th largest in Kenya. It is located approximately 300 KM North West of Nairobi on the Trans African highway and 65 KM North of the equator. It measures about 172 km square and made up of 14 administrative wards. Majority of population is concentrated in Huruma, Kamukunji, Langas, Kapsoya and Munyaka residential estates (<http://www.eldoretmunicipal.ac.ke>).

The name Eldoret is based on the Maasai word "eldore" meaning "stony river" because the bed of the nearby Sosiani River is very stony. The white settlers decided to call it Eldoret to make it easier for them to pronounce. At the start of the colonial era, the area was previously occupied by the Sirikwa, the Maasai and later the Nandi (Akivaga et. al, 1988).

In 1908, fifty eight families of Afrikaans-speaking South African settlers "trekked" to the Uasin Gishu plateau from Nakuru after a tour from South Africa by sea and by rail from Mombasa. They were followed by sixty more families in 1911 and more later. Eldoret was established in the midpoint of the farms they created (Akivaga et. al, 1988).

The official town site of Eldoret itself started in 1910 with a Post Office on what was known to the white settlers as "Farm 64", "64" or "Sisibo" to the locals because, at that time it was (sixty four) 64 miles from the newly built Uganda Railway railhead at Kibigori. Willy van Aardt owned the agricultural farm. The Central Lounge in Eldoret town is all that remains of Willy's farm .When the governor decided to establish an administrative hub; the Post Office was renamed from "64" with the official town name as "Eldoret" in 1912. Becoming an administrative hub caused an enormous increase in trade within the prospective city. A bank and several infrastructures were established (Akivaga et. al, 1988).

2.2 The nature of administrative process

The research showed that the respondents who knew the nature of administrative process in environmental policy implementation were 64.5% while the respondents who said it never existed were 35.5% as shown in Figure 1.

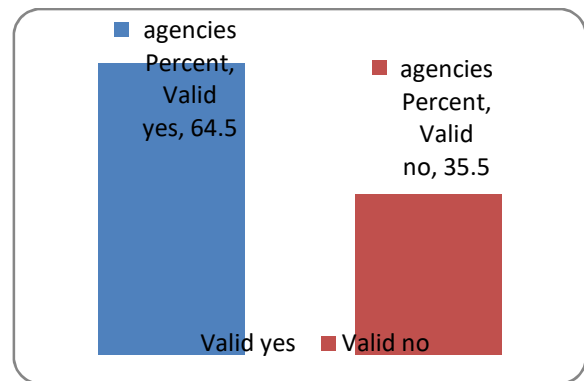


Figure 1: Administrative Process

Source: Field data, 2012

The research found that the administrative process that exists in Eldoret includes both administrative politics and administrative policy making. In administrative politics, the area is affected by the political context in which it operates at the municipality led by the mayoral office and several councilors that make up the committee. The presence of administrative politics can affect or influence several decisions making and also its implementation. Before they are passed they discuss relevant regulations to govern the environment and other departments in the municipality.

Administrative policy making is also another administrative process available within Eldoret Municipal council. In this case the municipality’s hierarchy is what affects the free flow of ideas and the movement of the information both downward and upward. Those at the bottom may neglect to forward some information to the top office because they may fear that it contradicts the official municipal’s policy or antagonize the superiors.

The research observed that 64.5% of the respondents agreed that administrative processes exist in the following ways:

**Rule-making:** In this case a rule is an agency’s statement of general applicability and future effect that concerns the right of private parties that has the force and effect of law. This law states how an agency will act in certain matters as in the case of environmental policies in Eldoret, rule-making can be seen in the sense that the defaulters must face some penalties for the violation of these policies. Eldoret in exercising their rule making powers, this is because of the legislation delegating powers to it.

**Law enforcement:** These administrative processes in Eldoret may also make their policies perform through their general law enforcement activities. The municipality through the method enforces vigorously their policies to ensure that the public and everyone abide by them. The municipality’s enforcement activity depends on the attitudes and the officials and on the other hand also the enforcement techniques such as availability of council security to monitor those who dump in unwanted receptacles, they are arrested and arraigned in the court to face charges of breaking these policies.

*2.3 Challenges facing the implementation of waste disposal and pollution policies in Eldoret*

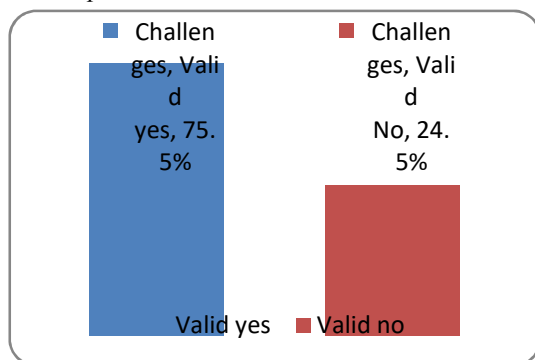


Figure 2: Challenges to Waste Disposal and Pollution Prevention  
Source: Field data, 2012

The research observed that 75.5% of the respondents agreed that there are challenges to waste disposal and pollution prevention policies in Eldoret municipality while 24.5% disagreed.

From the 75.5% of the respondents, the investigation revealed that careless disposal of the waste pose a great management problem. Due to the lack of or inadequacy of garbage pails, the masses have resorted to the habit of disposing solid waste in public places, waterways, road sides. These have posed a great risk to health hazards and public nuisance. To worsen the situation, even at collecting sites, the masses dispose the waste outside the collection bin which further aggravates the problem by not only making the place untidy but also adds an additional costs in hiring more labour collect and put the garbage in the bin. Furthermore, due to the lack of sanitary facilities, garbage heaps are often mixed with human waste which only further exasperate the waste management problem. Street children pose another problem of scattering the waste searching for food thus creating another work burden for the municipality to clear up the mess.

Waste from hospitals and industries are disposed of untreated waste, and this pose a great danger not only to the environment but also to human health as safety precautions are neither maintained nor adhered to. Environmental Impact Assessment (EIA) reports defining how their waste is to be disposed by industries are required by the government to be submitted but this seems not to be the norm. Due to this misnomer municipal waste is often composed of industrial and hazardous wastes in raw state which could then easily contaminate water sources or pose environmental threat to the residents.

Another major stumbling block faced in solid waste management by the municipality is the lack of and inadequate modern transport vessels. The transport vessels in place are not only few in number but old and in poor working condition. This adds enormously to maintenance burdens, due to the lack of spare parts. This hindrance results in irregular collection of the garbage at best and over accumulation at transfer sites, which further contributes to aesthetic and scavenging problems. More often, the few vehicles available are diverted by the municipal chiefs to other uses not related to garbage collection.

**Low participation of households:** From the research findings estate representatives revealed that households may not participate in waste management programs because they may view solid waste management as a low priority. They may be unwilling to participate in collection systems or in keeping public spaces clean, or they are unwilling to pay for service. The investigation revealed that community provisions for education, is often key to overcoming the best counter to these barriers. Community-based solutions can use preliminary research and input from the community to generate a list of desired services, appropriate motivation for both households

and servants, and systems for streets cleaning and other public places.

**Managerial problems:** From staff responses, the research showed that, problems with traditional waste management schemes include ineffective, inefficient, or unrepresentative management, as well as lack of community accountability to the community.

**Operational problems:** The research revealed that, with poor motivation operators are poorly motivated, due to inadequate low salaries, low status and poor working conditions, operator motivation can be low, and public service may become can often be unreliable. Finding adequate space for waste facilities and equipment is another potential operational issue. Sound CBM can addresses motivational problems by involving operators in decision-making, using special group incentives, and, in some cases, by granting exemptions from municipal taxes. Operators can be officially introduced to households and provided with identity cards to improve operator status. Space problems can be resolved by lobbying municipalities and local leaders, as well and conducting media campaigns in the neighborhood.

**Financial difficulties:** In this investigation, public and private management plans often face financial difficulties caused by corruption and bribery compounded by the inability to pay for service in low-income neighborhoods.

**Lack of municipal cooperation:** During an interview with the estate representatives, it was found that if waste collection between the municipal government and private operators is poorly coordinated, the community may lose interest in trying to improve the waste situation. Extending service, mobilizing communities to persuade the municipality for assistance, involving local authorities, and structuring formal and informal opportunities for cooperation all improve municipal performance and community support for waste management plans and programs.

#### *2.4 Possible solutions to the problems facing waste disposal and pollution policies in Eldoret*

From the 75.5% of the respondents who agreed on challenges, they proposed the following possible solutions:

Eldoret should provide the large waste bins for all the residential areas and collection could be made mandatory, and should be charged monthly for garbage collection. The fee could be included to the electricity or water bill after the Eldoret Municipal Council has signed a mutual agreement with either of the two organizations for this purpose. Such practice has tried and proved working in some state. For instance, in countries like Ghana the municipal council has been mandated with the responsibility to sale electricity and water. In Kenya, like Ghana garbage collection fee can be included on the water bill (Nyakaana, 1995), but this method has a challenge in that those without piped water and electricity will not pay the garbage fee. Industries and other establishments that produce hazardous products (for example,

alkaline, and Ni-Cd batteries, products containing cadmium or mercury and motor oils) an extra additional fee in terms of taxes should be imposed on them which would be kept on a specific separate account and used exclusively for collection, treatment, and/or destruction. This action is aimed at a means to provide an incentive for the general population to switch to less harmful products and it will in turn influence industries to provide substitutes. Decreasing the use of hazardous products will in turn lead to improvement in the quality of the city waste, allowing them to be more easily utilized as compost or as a soil conditioner and this will in turn contribute to a minimization in hazardous waste volume. Hospitals/clinics should pay full cost penalty or set up incarcerators.

The door to door garbage collection is aimed at introducing an integrated method of garbage collection where it is sorted from source before disposal. In this method, the sorting of waste is done at the source by providing separate collection bins: one for wet waste and one for dry waste/ kitchen waste/recycled and non-compost waste. The dry waste bin is sent to the separation site from where the separated materials are sent to the manufacturer for recycling. The non-recycled materials will be deposited at the sanitary landfill site. The wet waste is dried and sorted into rejects and waste for making compost. This method of solid waste management helps by making better use of solid waste, keeping the environment healthy, and it creates employment for the waste pickers.

Need for public emancipation about the importance to dispose garbage carefully. This can be done through the mass media, local administration, NGOs, schools, etc. These programs should address the need of effective (planned) solid waste disposal as a panacea to proper environmental management. Emphasis should be placed on the need to conserve the environment since it is a requirement for successful socio-economic development.

### III. FINDINGS

The investigation from the staff responses revealed that waste baskets (small and medium in size) should be placed at the vantage points along the streets, parks and open spaces so that careless littering can be minimized and eventually eliminated in the long run. Such bins should have inscriptions on them on the need to keep the city clean, for instance, Keep Eldoret Clean. These baskets should be regularly emptied to avoid spillage and attracting rodents and vultures. People will have to be emancipated on how to use them properly and on the importance of disposing every piece of waste into such collecting points.

The research also revealed that, attempts should be made to devolve solid waste collection and disposal within the Eldoret Municipal Council and other urban centers by providing and managing the landfill sites. This could be done in the same manner as the case for public toilets. Payment could be collected for every trip required, or tenders could be awarded for cleaning a specific area and the Municipality through the

Local Councils (LCs) would see to it that cleanliness is maintained as per agreement. The collection of garbage from the waste bins suggested earlier should be the first thing to be privatized for experimental purposes.

In Eldoret, just like other urban centers in Kenya, there is need for a better solid waste management. The research revealed that this need to be done in order to strengthen the existing institutional capacity by equipping it with current collection and transportation facilities like compactor trucks, containers and mechanical sweepers.

More so there is an urgent need to have a Department within the municipal council concerned with Environment Protection and should be allocated sufficient funds and personnel which will be charged with the duty of public education on environmental conservation and upkeep. Environmental standards should be maintained by all stakeholders, especially industrialists, estate developers and landfill sites. The department should also formulate environment policies and plans necessary to ensure proper waste management. It should also strengthen human resource development and its capacity for building solid waste management sites, pollution control facilities, and doing natural resource accounting, risk assessment and Environmental Impact Assessment (EIA) within the city.

The private sector and the waste pickers should be integrated into solid waste management just as in the local communities where neighborhood cleanliness competitions could be organized and institutionalized.

Solid waste management plans should be developed to ensure that waste from various areas can be collected and transported to designated disposal sites and treatment plants. Transfer stations and collection organizations should be identified as a necessity for further treatment facilities. All of these require the management in Eldoret to increase the budgetary allocation for solid waste management.

From the study the research found out that the municipality should come up with other strategies of solid waste disposal. The following strategies should be adopted by the management:

*Incineration* - this is the process whereby combustible wastes are minimized to inert residue by burning at high temperatures of over 900°C. At such high temperatures all combustible materials are consumed to ash and non-combustibles which occupy only a small percentage of about 5-25% of the original volume. Though incineration greatly reduces the volume, the problem of disposal still persist, but a much smaller space is now required which makes its disposal manageable. In Eldoret the current method of burning the waste is quite inadequate with minimal impact as the temperatures are low and the waste is largely wet and unsorted. Many households within the municipality burn their household refuses due to inadequacy of space to dispose of since the municipality does not serve them as required. The research revealed that even at

collection bins in within the municipality, burning is a common practice since the collection for disposal is irregular.

*On-site disposal:* The research found out that with the increase in rate of solid waste production, there is an urgent need to handle waste at the residential, restaurant, and institutions. This can be achieved by introducing waste disposal vessels (garbage grinders) in the household's kitchen and incinerators in industrials and hospital establishments, high story buildings and estates.

*Animal feeds:* The interview found out that Eldoret is known for its agricultural capability. Food wastes, vegetables peels and other related garbage are growingly being collected and utilized by small-scale farmers to feed domestic animals (pigs, poultry and cattle). Due to the high demand for this source of feeds, farmers usually contract specific sources to ensure regular supplies of these waste products. With increasing unemployment, some youths have resorted to collect banana peels for sale to the farmers as a source of income. However, there is still room for improvement in the collection and handling techniques so that it becomes a meaningful way of earning a living.

*Composting:* This entails the decomposition of refuse through bacterial action into humus like material similar to peat moss in appearance and application. The final product is useful as a soil conditioner and fertilizer. Today composting for commercial use is limited to the developed countries due to the costs involved. However, if introduced it would help recycle nutrients from the municipality back to the supporting rural agricultural farms thus completing the nutrient cycle.

Further, the interview with estate representatives and staff responses showed that corruption should also be addressed in Eldoret Municipal Council. Given that there are some set of rule formulated by the council to oversee and govern the protection of environment, there are some individuals and other business premises that fail to abide by these policies and they end up bribing the people in charge of ensuring that the policies are implemented as required. The courts are mandated to judge such offender.

The research showed that, 86% of the respondents supported that the challenges hampered attainment of the relevant goals while 14% of the respondents showed that these challenges do not hinder implementation of waste disposal and pollution policies as shown in Figure 3. From the research therefore challenges facing waste disposal and pollution policy implementation hinder attainment of relevant objectives.

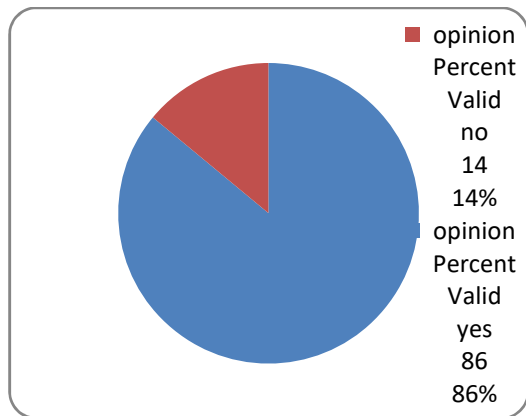


Figure 3: Respondents' Opinion to Waste Disposal and Pollution Policies  
Source: Research, 2012

*This study wish to make the following recommendations on waste disposal*

The study wish to make the following suggestion on how the menace of waste management can be minimized;

#### *Waste minimization*

Reduce, reuse and recycle. Reducing the quantity of waste that must be transported and disposed of should be a primary goal of all municipal solid waste management programs. Waste should be recovered at the source, during transport or at the disposal site. The earlier the separation is done, the cleaner the material in the end the higher its quality and its value to users. Incentives which integrate and foster the involvement of the informal sector itinerant collectors, microenterprises, cooperatives can be essential to improved waste minimization.

Facilitate separation at disposal site. When waste pickers are allowed access to disposal sites, significant amounts of material can be recovered. However, because they interfere with efficient operation of dumps and landfills, waste pickers are usually excluded from these sites, lowering recovery rates and causing severe economic hardship.

Composting and anaerobic digestion: If this part of the waste stream could be used for compost or methane production, many adverse impacts of open dumps and landfills would be reduced. Landfills would require less space, last longer, and produce less leachate.

#### *Collection and transfer*

Careful consideration of the town, climate, and culture is essential to achieving universal collection at recommended frequencies. The following general insights from international experience may be valuable: Eldoret should use appropriate technology such as regular trucks and alternative vehicles. Specialized compaction trucks are very expensive, difficult to repair and often out of service. Compacting garbage provides little advantage, considering the density of the waste currently produced in the municipality. Regular trucks require less capital investment and are easier to maintain. They may also be better adapted to poor road conditions and can be used for

other purposes if the municipality or company decides to transfer collection responsibility to others. For waste collection in hard-to-reach areas very narrow streets, alleys, deteriorated roads alternative collection vehicles should be considered, including semi-motorized carts and handcarts.

Eldoret should integrate the informal sector such as the co-operatives and microenterprises are the primary users of smaller collection vehicles and can effectively collect waste from hard-to-reach areas at a low cost. Community members are generally more willing to pay for such flexible and inexpensive services. Eldoret's management should build on the existing system. Radical changes are often difficult to achieve, especially with limited political support, administrative and technical capacity, or financial resources. The management should develop new structures and processes as part of a strategy of incremental improvement.

The municipality should introduce transfer activities. Transfer activities often increase efficiency, for both small- and large-scale systems. In small-scale transfer, microenterprises or cooperatives bring waste to a centralized area for pickup by private or municipal trucks. In large-scale transfer, waste is transferred from a compactor or small truck to larger trailer trucks. Both types of transfer activities save fuel, reduce wear and tear on trucks, and shorten the amount of time spent traveling to and from the landfill. The farther the landfill is from the city, the greater the benefits of large-scale transfer.

Eldoret should shift to direct fee-for-service and local financing. Most solid waste collection is paid out of tax revenues collected by national or local governments and redistributed to the municipality. Mismanagement of funds, lack of competition, and the resulting inefficiencies often result in non-payment or unwillingness to pay for services. Market-oriented systems in which residents' fees support collection and disposal services are less likely to suffer from these crippling flaws. Nevertheless, unwillingness to pay can still be a problem under such systems. One strategy for overcoming this problem, used in a number of developing countries outside of Africa, has been to link billing for solid waste collection to utility bills. Electricity consumption is closely correlated with waste generation, so fees for waste collection can be tied to electricity use and integrated into the electrical bill. After charging a small administrative fee, the utility passes the payments to the municipal solid waste department.

#### *Landfills*

Most of the waste in Africa is disposed of in environmentally unsound open or controlled dumps. This also exists in Eldoret at Huruma, even using the best waste minimization practices at all stages, some non-recoverable waste will remain, making landfills necessary. The ultimate goal for land disposal should be:

Separate disposal of hazardous and non-hazardous materials, construction of clean and properly sited landfills with diligent

management, including leachate and methane controls, during operation and after closure

When these conditions are met, the landfill becomes a sanitary landfill. It is recommended that the transition from open or controlled dumps to sanitary landfills be made incrementally.

*Sanitary landfills:* Sanitary landfills are the only land disposal option that enables control and effective mitigation of potential surface and groundwater contamination, health and physical threats to waste pickers and sanitation workers; and methane emissions.

Sanitary landfills require much greater initial investment and have higher operating costs than controlled dumps. Full community involvement throughout the life cycle of the project is essential. Proper design, operation and closure also require a much higher level of technical capacity.

#### *Incinerators*

Eldoret should not construct incinerators. Incineration of municipal solid waste is rarely economically feasible for developing countries. Burning the wet waste found in Africa often requires adding supplemental fuel. Furthermore, the composition of the waste often varies a great deal between neighborhoods, which make consistent and optimal operation difficult to achieve. Without proper controls, incinerators can be highly polluting, generating dioxins and depositing toxic heavy metals into water bodies. The proprietary technologies involved require very large capital investments and have high maintenance costs.

#### *Wastes Requiring Special Attention*

Certain wastes merit special handling and disposal because of their dangers or volume. The best option is to minimize or eliminate the generation of these wastes by encouraging users to apply cleaner production approaches and substitute materials or change processes. Those that are generated should be collected and disposed of separately from one another and away from the rest of the solid waste stream.

*Hazardous waste:* Wastes pose a wide range of risks. They may be chronically and acutely toxic, cause cancer, trigger birth defects, explode, corrode many materials, and cut, puncture, crush, burn and infect people and animals. Hazardous wastes endanger many different classes of people, placing waste producers, collectors, landfill workers, waste pickers, and nearby residents at risk. The leachate from a landfill may be dangerous as well; its level of toxicity is directly related to the quantity and toxicity of hazardous materials mixed in with other solid waste.

Management of hazardous wastes needs urgent attention in Africa. The variety and classes of materials and sources from households to industrial and medical facilities makes this particularly challenging. Action is constrained by limited financial resources to deal with these problems and ignorance or unwillingness to acknowledge the risks.

Sound management of hazardous materials includes four elements: waste reduction, segregation, safe handling, and disposal. The best solution is to not generate this waste in the first place. When this is not possible, every effort should be made to minimize generation, and generated wastes should be handled cautiously to reduce risks. Producers of hazardous waste should segregate different types of materials to make recycling easier and prevent chemical reactions or explosions.

*Medical waste:* Wastes from health posts, clinics, hospitals, and other medical facilities pose serious and urgent problems in the Africa region. Eldoret has some major hospitals such as (MTRH) Moi Teaching and Referral Hospital, Uasin Gishu District Hospital and Eldoret Hospital among others thus production of large quantity of medical waste. These wastes contain highly infectious organisms, sharp objects, hazardous pharmaceuticals and chemicals, and even radioactive materials. Since the various forms of healthcare waste require different types of treatment, they should be segregated at the source. General waste should be segregated from hazardous material to reduce volume: sharps should be placed in puncture-proof containers, infectious waste separated for sterilization, and hazardous chemicals and pharmaceuticals segregated into separate bins.

Unfortunately, all of the available disposal options are imperfect. The most immediate threat comes from highly infectious waste. On-site treatment is generally preferred to reduce the risk of disease transmission to waste handlers, waste pickers and others.

*Tires, oil, and batteries:* These three common locomotives waste cause strain in the continental Africa, Stockpiled tires can spontaneously combust, producing prolonged, polluting fires. Reuse or retreading is the best option available for decreasing tire waste in the least developed and industrializing countries. Used motor oil from auto shops is often used as fuel, contributing to air pollution. Re-refining this oil is the best alternative, but this alternative is neither readily available nor commercially feasible in most of Africa.

Lead acid batteries should not be placed in landfills because it is toxic, the acid is highly corrosive and contaminant. Lead acid batteries are often recycled in small-scale foundries that are highly polluting and located in residential areas. Recycling in large facilities that have emission and environmental controls is preferable, if this option is available.

*Construction and demolition debris:* Eldoret is one of the towns in Kenya undergoing fast growth hence there is establishment and bulldozing of big buildings. To avoid disposal of construction and demolition debris in dumps or landfills, as this will greatly decrease the life of the facility. Remains of lead paint, mercury switches, asbestos and PCBs can also make this debris hazardous. Arrange for the return of unused construction materials, recovery of all reusable or recyclable materials, and on-site separation of different waste materials to simplify reuse.

#### IV. CONCLUSION

The general observation was that municipal garbage management is on decline because of inadequacy of equipment, inappropriate planning and coordination, lack of adequate financing marred by bribery and corruption among the municipal workers. In quest to find a lasting solution to this menace in Eldoret-Kenya and by extension to all urban centers in developing countries, the local government should turn and improve on strategies by incorporating private sectors into the mainstream and other stakeholders so that to make the entire process more proactive.

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