GREEN BUSINESS: REDUCING THE EFFECTS OF INDUSTRIAL ACTIVITIES ON THE ENVIRONMENT

5.1 INTRODUCTION

It is imperative that every organisation large or small should focus on their individual roles in the protection of the environment irrespective of whether they are involved in a polluting activity or not. In order to make business more profitable and beneficial to society as a whole, organisations should aim at protecting the environment by taking account of the highest standards in technology and good management practices.

In managing a business, the following environmental management propositions should not be lost to management.

- Industry needs to take proactive approach to environmental improvement and management by implementing Environmental Management System.
- Management should adopt the integrated approach that identify all sources of pollution and degradation and take a holistic approach to its remediation.
- Management may decide on priorities for action but the long-term objective should be the elimination of all negative impacts on the environment.
- Environmental information is the key to improved environmental performance and these needs to be collected and assessed at regular intervals.
- Rules and regulations on the environment are becoming more sophisticated and stringent. To stay ahead of these growing legislative demands, industry needs to take a proactive strategy.
- Management should take an honest, credible and ethical approach to environmental improvement.
- Environmental impact Assessment of individual products should be measured from the beginning of production to consumption.
- Industrial growth needs to be sustainable.
- The industry's strategies to environmental improvement may sometimes be superior to other competitive ones.
- Environmental management represents a new partnership between an industry and its stakeholders. Its successful implementation therefore depends on every party playing its role.

5.2 GREENING THE BUSINESS

The impetus for the "greening of businesses" in the advance countries developed through national initiatives of different jurisdiction and through specific regional initiatives such as the European Union's Environmental Action Programmes. Therefore the "Green Movement" is not a passing phase that will die away to enable companies to revert back to their previous practices. The principles and campaigns advocated by pressure groups in defense of the environment did much to change public perceptions about the environment. The "Green Movement" is now sophisticated and multi-faceted and it is believed that its activities will catch up with the developing countries very soon.

5.3 COMMERCIAL ASPECTS OF GREEN COMPETITIVENESS

Business now has a responsibility to improve its environmental performance just as other social changes such as better employment conditions that have been made over the years. Green change is accelerating especially in:

a) Manufacturing processes is becoming greener, more efficient by using less energy and using and producing fewer environmentally unfriendly chemicals and materials.
b) Scrutinizing of products is becoming more intense – no CFCs, no raw materials from endangered species or wasteful use of resources.
c) Waste is becoming an important issue - controls on what can be disposed of are becoming tighter and actual cost for disposal is rising astronomically as land fill sites become scarcer and legislation forces waste disposal activities to be more and more under spotlight.
d) Legislative rules on recycling are becoming tighter and require that waste products or at least part of them be recycled.
e) Greener utilization of both renewable and non-renewable resources is increasingly becoming an important issue to customers and employees alike

5.4 GREEN MARKETING STRATEGY

It is the ability to include environmental attributes into the selling of a product. This strategy has gained roots in the advanced countries due to the changing consumption pattern of consumers in these areas. Environmental attributes alone does not sell products. Other marketing attributes such as competitive pricing, desired quality, packaging etc. must also be met. These attributes must therefore be combined with the environmental attributes to

achieve an integrated marketing strategy. It is therefore being argued that green marketing is not different from the traditional/conventional forms of marketing in so far as they achieve the same thing.

A corporate entity that wants to grow will have to examine the demands being made on it. This is due to the fact that the corporate body will have to satisfy all these demands to make any headway. It may be very difficult to meet these demands which may include that of the customers (environmentally friendly products at reasonable prices with all the good quality attributes), shareholders (high profitability and growth), employees (reasonable wages and job security) and local community (less pollution). The corporate entity will have to do that to reduce conflict between these stakeholders. For example local community's demand for less pollution may be in conflict with shareholders who want higher output and sales level to increase profit. Directors who want to cut operational cost to increase profit may be in conflict with regulators who are insisting on the implementation of new pollution control measure.

The best way to start solving these problems is to make each stakeholder aware of the others demands. Then try to disseminate information on these demands to the various stakeholders concerned. For example, the local communities need to be informed about the activities of the organisation and its potential effects on the environment. Some results of environmental audits must also be made known to them. Co-operation is therefore as important as competitions. Organisations that are serious about environmental protection should have nothing to hide. **Disclosure of environmental information without compromising competitive advantage should be a good marketing strategy.**

The effects of launching a new product or re-orienting an existing one to have superior environmental attributes will have ramifications for procurement, finance, human resources, production process and delivery. The key to green marketing strategy is to approach the problem systematically by undertaking the appropriate research and planning. This may be a bit different from the traditional/conventional forms of marketing.

However, if greening is to be considered in the marketing strategy of an organisation, then the following questions will have to be addressed:

- Has the marketing plan identified the key environmental consideration involved in the market for the product?
- Has sufficient scientific and technological research been undertaken to ensure that the product will have superior environmental performance to that produced by other competitors?
- What effect will the new environmental attributes have on costs and for that matter profitability?
- Has the environmental impact of the product from production to consumption been assessed?
- Has the product undergone sufficient testing to establish its environmental credentials?
- Have environmental pressure groups been consulted and is the company prepared for any adverse criticism of its products?
- Do the communication strategies relating to the project emphasize the environmental aspects and benefits?

5.5 GREENER PRICING

Prices are established when property rights are exchanged. In a market system, this can only be effective if property rights exist and are well defined. The problem with much of the environmental resources is that there are no clear property rights and has therefore been treated as common property resources and misused. General awareness and legislation have led to a steady growth in attempts to incorporate environmental considerations into the pricing process. It must be noted that when pricing is done very well, it can improve upon the quality of the environment. For example, governments in the EU intervened on the duties charged on leaded and unleaded fuel. This brought about improved consumer behaviour that led to improvement in the environment.

Prices may be affected in three (3) ways when new environmentally friendly products are produced. These are; price decrease, price stabilization and price increase.

i. PRICE DECREASE: This will come about probably as a result of cost saving. This will encourage consumers to patronize the environmentally improved product and this will help protect the environment. Where demand for the product is generally price sensitive, a lower price will be a successful strategy for the firm and that environmental as well.

ii. PRICE STABILIZATION: When this happens, then the environmental attributes of the product will have to be used as a form of non-price competition. This will involve stressing the differentiation process and requiring the firm to look closely at its promotional policy.

iii. PRICE INCREASE: This may come about as a result of meeting stringent environmental standards. In this case, not only will a differentiated green product have to be promoted, but there must be in existence consumers who will be willing to pay a premium for the product. The extent of price difference may be crucial here.

5.6 CHOOSING AND DESIGNING A GREENER PACK

In the advanced countries, packaging is slowly but gradually gaining a place on the agenda of environmental pressure groups. It is an established fact that, an organisation's reputation on environmental issues has a strong effect on attitudes towards its products. **There is a considerable support for the use of biodegradable or recyclable packaging, with many consumers demonstrating the willingness to pay more for such a packaged product**. They insist that there should be legislation requiring manufacturers to use recyclable or biodegradable packaging. Most often, packaging is seen as environmentally unfriendly because it becomes waste after the product has been consumed. Companies which are therefore committed to improving their environmental performance need to examine their packaging strategies and requirements carefully.

One of the best ways to achieve packaging which is more environmentally friendly is by reducing the amount of materials used. This will reduce the extraction and processing of raw materials, reduce the need for disposal and will even reduce the energy used and pollution caused by processing and recycling. Lightweight materials and energy-saving techniques can reduce the production cost of packaging products. After reducing environmental impact of packaging by using as few resources as possible, **the next priority must be to design a pack which is recyclable**. This can be done by combining different materials to reduce materials used. This may, however, lead to the problem of the pack becoming less easy to recycle.

The life cycle of a pack can be extended by refilling it. This may result in significant energy savings and also helps to reduce packaging waste. Studies have shown that a lot of energy is saved by cleaning and reusing a bottle than melting the same bottle and making a new one.

More energy is, however, needed to manufacture a refillable bottle than a non-refillable one. This is because it needs to be strong enough to last the multiple uses. The energy and water needed to clean the bottle will increase the cost of this package at the initial stages, it would be recouped eventually as the bottle is reused over and over again. This investment will be lost, however, if care is not taken and the bottle gets broken.

Environmental issues surrounding packaging do not, however, make it easy to categorize materials into acceptable or unacceptable groups. However, there are some general criteria which can be applied to the choice of a greener pack. To be able to chose and design a more environmentally friendly package and to reduce waste from packaging, the under-listed questions must be answered.

- Does the packaging material come from a scarce or seriously declining source?
- Is production of the packaging material energy intensive?
- Has the design of the packaging ensured that materials can easily be reused or recycled?
- Does any combination of packaging materials create difficulty for recycling?
- Is the packaging associated with the use of chemicals such as CFCs which may cause environmental damage?
- Do current or anticipated environmental protection laws either constrain the use of the chosen materials or increase their disposal cost?
- Can concentrated products that fit into smaller packages be developed?
- Can reclaimed materials be used in production of the packaging?
- Has proper consideration been given to pollution that may be caused during manufacturing of the packaging?
- Do the packaging, the information on it and its overall appearance encourage the efficient use, reuse and disposal of the contents and the pack itself?

5.7 RESPONSES AND BENEFITS TO BUSINESS

Industries/Organisations in the advanced countries have adopted the Green Business due to the following reasons:

- **EFFICIENCY:** An environmental improvement often leads to financial benefits at little cost. The reduction of energy and raw materials used in a production process will cut cost and waste (pollution). It is important to note that waste is money lost.

- **COMPETITION:** Environmental improvements may secure a competitive edge for an industry. Cultivating a "green image" may encourage consumers to turn to the products of an industry. A green image needs action and verifiable systems to demonstrate that claims made are true. Green image may also help in the recruitment and retention of staff or in attracting the needed investment.
- **JOB OPPORTUNITIES:** The expenditure on environmental protection can create job opportunities in providing pollution abatement equipments, cleaner technology, recycling systems, clean-up technologies and consultancy services.
- **COMPLIANCE:** Failure to comply to legislation or to anticipate changes in environmental policies can be costly. Non-compliance can be costly because the industry may have to pay for the damage caused. Failure to keep abreast or ahead of changes in environmental policies can cause problems for the industry in adjusting to changing circumstances.
- **COMMITMENT:** This occurs when the concern for the environment within the industry/organisation transcends narrow self-interest and represents the acceptance of the environmental ethics as a moral duty. Once such commitment is established within the industry, the work force will move towards minimizing the effects of their activities on the environment.

To be able to achieve green business, the under-listed points must be followed:

- **PRODUCT POLICY:** Design products which minimizes the use of non-renewable materials and can easily be recycled. Accredited eco-labels must be used to mark products but must not overstate the environmental friendliness of the product. Provide after sales and advisory services to ensure that the products are used for its intended purpose.

- **PACKAGING POLICY:** Design packaging that fits for the purpose that it is intended for and at the same time require minimum amount of materials for its productions. Materials with minimal impact on the environment should be used and excessive packaging used as promotional materials should be avoided. As much as possible, put in place strategies to recycle packaging materials or take them back for reuse if possible.

- **PROMOTION POLICY:** Ensure that all stakeholders have an input into the communications of the organisation. Public relations and advertising can be used to enhance the environmental reputation of the organisation. All claims made must however be true and honest. Be open and hide nothing which has an environmental impact.

- **PRICING POLICY:** Extra cost that may arise as a result of environmental improvement must be passed on to customers, making it clear to them that the price difference is due to environmental improvement. In the same way, if production cost reduces due to prudent environmental management, be honest enough to let it reflect in the price of the products.

- **TRANSPORTATION AND DISTRIBUTION POLICY:** Preference must be given to transportation systems that reduce environmental cost in terms of energy consumption and pollution. Distribution channels with distributors, wholesalers and retailer must be established to reduce transportation and packaging needs.

- **QUALITY AND EFFECTIVENESS POLICY:** As much as possible, make sure that environmental attributes do not detract from the quality or effectiveness of the product. If it is not possible, do not cover it up but rather explain it to the consumer.

- **PEOPLE POLICY:** Make sure that the whole workforce is sensitive to environmental issues and committed to environmental improvement. Increase awareness and skills by training and education. Reward ideas and schemes which improve the environmental performance of the organisation. Incentives must be provided for surpassing environmental targets.

- **SYSTEMS POLICY:** Ensure that an integrated Environmental Management System is in place and is followed strictly. Marketing strategies should be consistent with this. Make sure that there is adequate monitoring system to sound the alarm bells at the emergence of a potential or real problems. Make sure that suppliers are clear of your requirements and are part of the overall environmental policy.

WASTE MANAGEMENT

6.1 INTRODUCTION

Waste is the by product or the substance that is left behind after the valuable parts of a resource have been used. Waste can be in three forms, gaseous, liquid and solid.

The linkages between emission of by-products and disposal of industrial waste are fundamental. That is, waste and environmental degradation are synonymous. Industries are therefore being challenged to attack the waste problem by "moving back up the line". That is by trying to reduce the amounts of materials that are in need of disposal by recycling residuals back into the production process, and by shifting technologies and operation so that the amount of residuals actually generated by firms is reduced. This is known as **waste reduction.** Approaches to waste management are therefore important for the continuing viability of both business and the environment.

6.2 THE WASTE PROBLEM

One of the major fundamental challenges to the quality of the environment is the waste. This challenge is manifested in 3 ways. These are:

- Unsustainable depletion of natural resources
- By-products of production process
- Waste created by consumers during and after the use of the output of industrial activity

The environment is capable of providing renewable resources and accepting large quantities of waste and rendering them harmless without itself being affected. However, the level of demand for non-renewable resources and the impact of waste emissions on the assimilative capacity of the environment indicate that we have exceeded the levels of consumption and waste generation that the global environmental can sustain. This calls for maximizing the efficiency of production and to minimise the level of waste that is mounting. Products and the ways in which they are produced must become environmentally benign through the application of waste minimisation technique. There are some financial and environmental advantages in approaching the waste problem this way. In the western world, there has been

conscious shift from volume towards value production. This has decreased the level of raw materials consumption and waste production per a unit of income generated. However, increases in consumption and consumption patterns have eroded any environmental benefits that may have been derived from the above practices.

6.3 OBJECTIVE OF WASTE MANAGEMENT

The major aim of any waste management strategy is an attempt to avoid the generation of any waste products. To achieve this in order of priority, the objectives of the waste management should be to

- reduce the creation of waste,
- to reuse the waste products generated in their current form or
- to recycle them into a form that will make it usable. It is only after all the above options have been exhausted that the strategy should resort to
- recovering any value from the waste, for example through waste-to-energy schemes, and finally
- render the waste safe before ultimate
- disposal (Fig. 1).

FIG. 1 RANK WASTE MANAGEMENT OBJECTIVES

REDUCE

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REUSE

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RECYCLE

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RECOVER

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RENDER HARMLESS

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DISPOSE

6.4 WASTE MANAGEMENT STRATEGY

The handling and disposal of waste particularly hazard and toxic waste is a task which demands planning, adequate facilities and effective management. This is the area where the most comprehensive management strategies are implemented. **The waste management strategy deals with the arrangements for monitoring, handling, storage, transport and disposal of wastes**.

6.4.1 IDENTIFICATION OF THE WASTE

i. Have all types of waste been identified? Waste types should be broken down to a pre-determined list special care should be given to wastes considered hazardous and/or toxic since they are the most regulated. The others should, however, not be ignored since waste not properly disposed of today could be a source of major liability in the future.

- All waste that has any commercially recyclable value should be recycled. Toxic and hazardous waste should be recycled if possible since it can be a potential liability in future.
- Normal rubbish such as municipal, paper or other trash should not be mixed with other waste.
- Waste of any type not considered or permitted as effluent should be reviewed with care, since waste not considered non-toxic and non-hazardous may be considered toxic or hazardous in future.
- Toxic and hazardous waste should not be disposed of any how even if it is not regulated. This is because it may be listed as a toxic or hazardous and must be removed. Cost for the removal of waste from landfills can be 100 to 1000 times the initial cost of disposal.

ii. Have all sites, laboratories and facilities where wastes are generated been identified:

- Industrial process, laboratories, offices, warehouses and storerooms.

iii. Is there a register of waste produce?

- Prepare a register that should contain the location and processes of generation, the handling procedures, the composition of the waste, the quantities of the waste disposed of, disposal location of the waste and disposal contractor if any.
- Make sure to keep the register up to date.

6.4.2 HANDLING OF WASTE

Do you have adequate arrangements for handling waste inside your facility during generation, including;

i. Safe loading and unloading of containers

- .Loading of containers should be done safely with the proper ventilation and safety equipment being provided to and utilized by employees involved in the operations.

ii. Adequate Containers

- Used drums and containers can be utilized for waste disposal but only with special inspection.

iii. Adequate identification on containers

- Inadequate identification can cause health and safety problems for employees who handle the waste.

iv. Adequate knowledge of waste incompatibility during container filling

- Bulk packaging of waste is many times cheaper than small packaging. However if incompatible wastes are combined, dangerous conditions may occur. This must be avoided to ensure that the packaged waste will be adequately contained till it reaches its disposal site.

v. Safe access for vehicles, routes for transport of waste and interception and containment of spillage.

- Dyked areas or blocked drains can provide secondary containment of spilled waster\ until help arrives.

vi. Segregation of waste from incompatible materials.

- Materials that is not compatible with waste being stored before disposal must be separated.

vii. Informing and training of personnel involved in waste handling.

- Training and retraining of all personnel working with wastes, especially hazardous or toxic wastes are necessary.

6.4.3 STORAGE OF WASTE

Storage of waste before ultimate disposal can be short or long term. However, both short and long term storage requires strict compliance with proper container management and contingency planning.

i. Are waste stores clearly identified and marked.

- Identify all stores that contain waste and clearly mark them out

ii. Have past site uses which might affect storage been identified.

- Past uses of site which may affect storage of waste should be identified. E.g. storing drums at an area previously used for acids.

iii. Are there adequate security arrangement.

- Security arrangements are necessary to prevent vandalism and unauthorized entry.
- Monitoring for leaking containers or other hazardous conditions.

iv. Permanent labeling, list of stored materials meeting of legal requirements, early detection signs etc. muse all be taken care of.

6.4.4 DISPOSAL OF WASTE

Disposal of waste can be in any of the following forms: land filling, incineration (burning) and chemical treatment.

.i. Do you meet all legal reporting and licensing requirements for the disposal of waste?

- Legal reporting requirement exist for waste disposal in many places, especially when the waste is transported over the road or disposed of at the facility.

.ii. Alternatives to disposal regularly reviewed.

- Waste minimisation, waste reduction, recycling etc must be reviewed regularly to close the better one.

.iii. Do you have a hierarchy of waste disposal methods

- Reuse and recycling should be preferred, then destruction methods (incinerations, chemical treatment etc) followed by land filling to minimise long term liabilities.

.iv. Are those responsible for waste disposal adequately informed and trained?

- Those responsible for waste management should be well educated and trained to be able to handle the complex nature of waste management.

To make disposal safe and friendly to the environment, the disposal site should have the following features;

- The site should be remote from settlements and water bodies
- The site should be above ground water table
- Materials at the site must be made up of low permeable materials
- Access to the site must be convenient
- Controls for storm water must be in place

6.5 GENERAL CONSIDERATION ON WASTE MANAGEMENT

- Is there a clear, written responsibility for waste management?
- Has a person been allocated the overall control of waste management?
- Has this person any other responsibilities which may interfere with his time demands or give a conflict of interest with a competing responsibility?
- Does your waste management strategy come under formal review at least once year or annually?
- Does your waste management strategy account for off-site effects?
- Does your waste management investigate profit-making or cost reducing opportunities?
- Does your waste management strategy involve recycling, reuse or treatment?
- Does your waste management strategy provide for environmental liability insurance?

6.6 IMPORTANCE OF WASTE MANAGEMENT STRATEGY

Many companies have shown a clear change in behaviour relating to the issue of waste management. The emphasis has changed from one of waste disposal to one of waste management and/ or waste minimisation. The view that waste is something to be discarded has changed to one where by-products are reduced, reused and recycled through various means. This is to minimise both the financial losses to the company and the environmental risk and impact of its activities.

The change in behaviour relating to waste management has been driven by two major pressures and they are basically for economic reasons.

- Increasing legislative demands relating to waste disposal and liability for damage caused to the environment by waste.
- There has been an increasing realization of the escalating disposal costs and the loss of potential valuable resources in the waste.

A closer look the benefits of effective waste management reveals a range of reasons why firm should integrate waste minimisation, measures into their business management. The primary reason for waste management by firms must be that of the clear environmental, health and safety, benefits associated with reduced waste flow. Other range of financial benefits may accrue to the firms include;

- Maintaining compliance and proactive strategies for increased legal and environmental pressures.
- Reduce risk of liability
- Environmental, health and safety benefits.
- Improved efficiency and strategies to address increased input prices
- Identification of new internal and external reuse and recycling opportunities
- Cost savings from management and disposal of waste
- Marketing and stakeholder benefits
- Development of clean technologies and techniques.

6.7 THE WASTE PROBLEM IN GHANA

Managing waste has been an albatross around the necks of successive governments, local authorities and individuals in this country for some time now. The problem is more acute in urban areas like Accra, Tema, Sekondi – Takoradi, Kumasi and Tamale. It is not uncommon to see heaps of rubbish dumped indiscriminately. The problem of waste management has been compounded by the changing pattern in consumption among Ghanaians. An example is the proliferation of sachet water producers in the country. The poor management of waste has led to the choking of most drainage systems in the country.

Statistics from Accra Metropolitan Authority (AMA), about 2000 tones of waste is generated in the city of Accra every day. Between sixty five to seventy percent is made up of domestic

waste with thirty to thirty five percent constituting industrial waste. While constituents of domestic waste include food debris, garden waste, ash packaging materials, textiles and, electrical and electronic waste (metals), that of industrial waste includes metals, wood, textile, plastics and organic matter from slaughter houses, fruits and cocoa processing factories and grain mills. The high percentage of organic waste (food debris and plant) in the waste stream in Ghana is due to the fact Ghana' economy largely depends on agricultural products for export and domestic consumption as well as post-harvest losses.

6.7.1 CHALLENGES OF WASTE MANAGEMNT IN GHANA

- **INADEQUATE FUNDING:** Inadequate funding has led to an inefficient waste management and sanitation services in the country. The cost involved in managing waste is very huge. This, coupled with the fact that polluters are unwilling to pay for the cost of waste treatment makes it difficult for most Metropolitan, Municipal and District Assemblies to manage waste efficiently in areas under their jurisdiction.

- **INADEQUATE FINAL DISPOSAL FACILITIES:** Lack of efficient and adequate final disposal facilities such as landfills and waste treatment plant hinder the efficient management of waste in the country. The average volume of waste generated a day far exceeds the available facilities for disposal.

- **INADEQUATE MAN – POWER:** Local authorities lack both skilled and unskilled man-power to manage waste. Most school graduates do not want to work with waste management institutions and this makes it difficult for these institutions to get skilled labour to work efficiently.

- **WEAK DECENTRALISATION:** Weak decentralization at the assemblies has rendered sub – metros ineffective. Management of waste has not been decentralized well and this put so much pressure on the assemblies.

- **INADEQUATE RECYCLING FACILITIES:** Recycling facilities in the country are very few. Small quantities of waste are therefore recycled, leaving a large chunk in the environment.

- **INEFFICIENT COORDINATION:** There is little coordination among the agencies and departments working on the management of waste. This has led to a divided effort, making the management of waste very difficult.

- **WEAK ENFORCEMENT OF BY – LAWS:** Laws on waste management and sanitation issues are not being enforced very well. People therefore dispose off waste indiscriminately.

- **INADEQUATE EDUCATION:** Inadequate public education on waste management and sanitation issues has made people to dispose of waste indiscriminately.

- **INADEQUATE TECHNOLOGY:** Inadequate technology like conversion of organic waste into manure and bio gas has made it difficult for assemblies to deal with the waste problem.

- **LACK OF POLITICAL WILL:** There is also the lack of political will by local authorities and government agencies and departments to deal with the source of the challenge has led to the problem of indiscriminate waste disposal. For example, one of the major causes of the waste problem in the urban areas is street hawking and yet local authorities and government agencies and departments lack the political will to get them off the streets.

- **INADEQUATE LEGISLATION AND BY-LAWS LEGISLATIONS AND BYE-LAW NECESSARY TO ADVANCE THE AGENDA OF WASTE REDUCTION:** Legislations and by-laws regarding waste management constitute the primary tool that provides a path or framework for waste management. These by-law are rule and regulations as well as policies and procedures that individuals and corporate bodies must comply with.

- **LIMITED NUMBER OF WASTE MANAGEMENT ORGANIZATIONS:** The limited number of well-resourced waste management companies makes it difficult for the few companies in the country to handle waste in an effective and efficient manner. fossil

- **DIFFICULTY IN APPLYING SERVICE CHARGES:** A good data base for raising taxes in the city and the country as a whole is weak and even in some cases nonexistence. This inadequacy coupled with the notion carried by many Ghanaians that waste collection and disposal services are not working well provide the leeway for non – payment of waste taxes.

- **POOR NATURE OF ROADS IN GHANA:** Access to waste collection areas has been hampered by the poor nature of roads and hence the low quality of service provided to some communities. It is common occurrence to see waste trucks in muddy potholes for several hours and even sometimes days while on their way to or from collection points. As a result, waste in some communities is left uncollected for a long time (especially during rainy season).