PROBLEMS AND PROSPECTS OF ENVIRONMENTAL MANAGEMENT

(A Case study of Kuje Area Council) Federal Capital Territory Abuja.

By

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Submitted to

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ABSTRACT

The rate at which Environmental problem occurred in our urban centers today is quite alarming. This has been a global change to physical planners and other related professionals both in developing and developed countries of the world. However, the impact of this development is more pronounced in developing world than developed once. Hence, the need to arrest the degenerating urban environment in developing countries like Nigeria, become paramount.

To this end, urban Environmental problems in the Federal Capital Territory with emphasis on Kuje Area Council is a project undertaken to identify the various elements that constituted environmental problem in the area with the aim to offering lasting solutions. Against this background, efforts will be made to ascertain the rate of environmental problems against that of management, the housing problems, conversion of land uses to identify those legally and illegally converted and the pattern of informal activities as well as the environmental problems associated with them.

This study will also cover the level environmental sanitation, health superintendents and sanitary inspectors in Kuje Area Council, in order to be able to design appropriate concept for management of environmental programme in the study area.

TABLE OF CONTENT

		Pg.
Title page		i
Abstract		ii
Certification	on	iii
Dedication	1	iv
Acknowle	dgement	v
Table of C	Content	vi
СНАРТЕ	DONE	Pg.
	roduction	
	atement of problems	
	ms and objectives	
	pjectives	
	ope & Limitation	
1.05 Jus	stification	3
CHAPTE	CR TWO	
2.0 Ba	ackground information of the study area	4
2.01 Hi	story of Kuje	4
2.02 Ge	eographical Location	5
2.03 CI	imate	5
2.04 Te	emperature	5
2.05 Ra	iinfall	5
2.06 W	ind dust	6
2.07 To	ppography	6
2.08 Ve	egetation	7
2.09 So	il	7

CHAPTER THREE

3.0	Introduction8
3.01	The State of Global Environment8
3.02	The State of Nigeria Environment9
3.03	Urban Environmental Management Problems in Nigeria10
3.04	Informal activities as Environment Problems
3.05	Poverty and Urban Environmental in Nigeria
CHAI	PTER FOUR
4.0	Research Methodology
4.01	Secondary Source
4.02	Primary Source
4.03	Sketchmatic Presentation Research Methodology
CHAI	PTER FIVE
5.0	Presentation and Analysis of Data
5.01	Waste Generation
5.02	Number of Dustbin
5.03	Waste Collection
5.04	Staff strength and task perfoun by Board18
5.05	Regularity of refuse collection by Board
5.06	Tool for enforcing waste Management Policy19
5.07	Provision and Maintenance of Dustbin
5.08	The Board Source of fund
5.09	Public participation in Environmental Management activities21
CHA	PTER SIX
6.0	Summary of findings
6.01	Conclusion and Recommendation
6.02	Proposal and Recommendation23
6.03	Collection

6.04	Refuse Collection Centres	25
6.05	Dustbin	25
6.06	Collection frequency	26
6.07	Management	26
6.08	Causes of the failure of Government Agencies	27
6.09	Conclusion	28
	~ · · · ·	
BIBL	JOGRAPHY	30

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CERTIFICATION

I certify that this project was written by **Idris Umar**, in partial fulfillment of the requirement for the award of the Post Graduate Diploma in the department of Geography, Federal University of Technology, Minna.

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DEDICATION

This piece of work is dedicated to Almighty Allah for His guidance and Blessing.

Therefore to Him be glory.

ACKNOWLEDGMENT

The course of undertaking this study has been a period of trial perhaps without the effort

of some people, its completion might not have been possible. Therefore, I consider it

necessary to express my profound gratitude to them all.

The co-ordinator of PGD Environmental Management (Dr. M. T. Usman) my supervisor

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I therefore thank Almighty Allah for the success in all my tribulation and hardship I

undergo during the study.

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CHAPTER ONE

1.0 INTRODUCTION

The Environment is one of the key issues of global concern today. The environment encompasses the land, water, air, nature and all it's habitats, the ecosystem and all factors facts, which make up man living surrounding. It comprises both the man made and natural elements of the earth surface. It is frequently prone to both natural and artificial pressures, which result in negative effects and subsequently aggravated in environmental problems in most of urban centers today. Against this background, physical planners all over the world have always taken it up as a professional challenge to solve our urban environmental from imminent collapse in recent time, Kuje, been one of the closer and satellite town to Abuja city, has been experiencing series of environmental problems that require urgent attention.

Unfortunately little has been done to remedy these problems, have the little management of environmental programme (Problems and prospects (a case study of Kuje Area Council).

As part of the current efforts to save our urban centres from environmental decadence, I deem it necessary to critically examine the nature and the various factor that constituted environmental problems in the study area with a view to making proposal to enhance a letter environmental quality in F.C.T. to this end therefore like Kuje Area Council becomes a focus for my project topics as part of

the requirements for the award of post graduate diploma certificate in environmental management.

1.1 STATEMENT OF PROBLEMS

- i. The rate at which developmental problems occur in our urban centers today is quite alarming.
- ii. Poor environmental management
- iii. Uncoordinated informal economic activities.

1.2 AIMS AND OBJECTIVES OF THE STUDY

The aim of the study is to examine the various urban environmental crises in Kuje with a view to making recommendations and proposals to improve the environmental quality in the study area.

To appreciate the main environmental management techniques in Nigeria with a view to recommend suitable options for the Nigerian situation.

1.3 THE MAJOR OBJECTIVES ARE

- i. To review relevant literature on environmental management.
- ii. To examine environmental problems associated with poor management of environmental programs in Kuje.
- iii. To identify the technologies involve in environmental management.
- To review existing policies related to environmental management problems in the study area.
- v. To recommend appropriate technique and solution for achieving efficient system for management of environmental problems in Nigeria.

1.4 SCOPE & LIMITATIONS

The scope of the study covers Kuje town with particular reference to management of environmental programmes (problems and prospects) in Kuje Area Council.

1.5 **JUSTIFICATION**

The study will be relevant to Abuja Environmental Protection Board (AEPB), Federal Environmental Protection Agency (FEPA) Non-governmental organization (NGOS) Area Council, Health Department Sanitation Agent in Kuje Area Council, community based organization (C.B.O.S.) and any other Environmental Protection Organization within and outside the territory as well as the community at large.

CHAPTER TWO

2.0 BACKGROUND INFORMATION OF THE STUDY AREA.

2.1 **HISTORY OF KUJE**:

Prior to the creation of the Federal Capital Territory by the Late General Muritala Muhammed in 1976, Kuje was part of Suleja Emirate in Niger State.

When it was nothing more than a district center. Now with the creation of Abuja, Kuje is a headquarter an Area Council.

The Kuje Area Council consists of Kuje and Rubochi Development Areas. The two area were merged to constitute one autonomous local government in December, 1987 by the Federal Government as was done to the remaining development areas in F.C.T. However, with the constitutional charges carried out in 1985 and approval by the Armed Forces Ruling Council (A.F.R.C.) the designation of local government was charged to area council with Kuje town as the headquarter of the councils administration with a chairman, secretary, council member, heads of department and other supporting staff.

A major organization contributing in the administration of the area is traditional / district offices. The two district offices in Kuje and Rubochi towns leave harmoniously with their respective village area chiefs. This situation was therefore contributed immensely in fostering peace and harmony in the area.

2.2 **GEOGRAPHICAL LOCATION:**

Kuje Area Council occupies an approximate total land area of 1800 square kilometers which represents about 22.5 percent of the Federal Capital Territory. It shares common border with Gwagwalada Area Council, on the South West, Abuja Municipal Area Council on the North East and Abaji Area Council on the South through Rubochi Development Area.

2.3 CLIMATE:

Although detail climate information is not yet adequate, but extrapolations form existing airport meteorological stations have been of great advantage for the basic description of climate parameters presented here.

2:2.1 TEMPERATURE:

Generally a radiation, which is felt as air temperature, is greatly influenced by the humidity conditions in the air changes in temperature as much as 75^{co} have been recorded between the highest and lowest temperature in a single day. During the raining season the maximum temperature is lower to dense cloud cover. During the day season, relative humidity falls in the afternoon as low as 20 percent.

2:3.2 RAINFALL:

The beginning of the rain season in the study area is around the 10th of April the rain tapers off very rapidly after the 20th of October thus the duration of the rainy season is between 180 days to 190 days. The mean monthly distribution shows a

tendency for concentration in three or four months. Usually 60 percent of the annual rainfall is in the month of July. August and September.

2:3.3 **WIND DUST:**

Two major air masses dominate the climate of the study area. These are tropical maritime air mass and the tropical continental air mass. The tropical maritime is formed over the Atlantic Ocean to the South of the country and therefore warm and moist. It moves inland generally in a South West to North East direction on the other hand the tropical continental air mass is developed over the Sahara desert and therefore is cool and dry and blows in the opposite direction, North East to South West.

It's peculiar geographic location gives it the advantages of moderate climatic conditions. The hilly area of Rubochi is particular temperate and hospitable. The major commercial towns within the area council include Rubochi, Kuje Gudun Kariya, Kwaku, Gaube and Kujekpa.

2:4 TOPOGRAPHY:

The study area is typified gently undulating terrain interlaced by riverine depression. Generally the high variation from west of hill to watercourse varies around so metres, more less. The study area consists of upland and plains with Nemours insolbergs, whole backs and back other rock outcrops of various sizes. Within the 1200 foot crescent, the linear path of these out cropping two parallel banks of residenting sector or either side, leaving the more broken land scapping.

2:5 VEGETATION:

The vegetation of the study area is generally characterized by park savanna. Riverines depressions are typically skinted by fringes of thickets and high tress. There are occasional patches of forest of heavily wooded areas. However, shrubs savanna vegetation occurs on flatter plains and undulating terrain. It is comprised primarily of shrub vegetation, with a well developed grass layers and a few scattered emergent tress. Human use and fire, play an important role in removal of cover.

2:6 **SOIL**:

The soil on the study area are generally the deepest and least story of the soil developed on the basement complex. The soil is generally well drained, having low to moderate erodibility and run off potential. From pan outcrops as sheet on inter flow crests and middle slopes and as scares on lower slopes. Textures are typically loamy sand to sand clay loan.

CHAPTER THREE

LITERATURE REVIEW

3:1 INTRODUCTION:

The protection of Environmental quality has now become an important issue in the affairs of man. Within the last few decades, especially since the Stockholm conference on the Environment in 1972, concern for the environment has brought home to man more forcefully the need to maintain the environment for a sustainable development. However, it would be seen that man is not addressing the issue of environmental quality appropriately, because the environment continues to deteriorate as a result of man's continuous indulgence by way of adopting to the environment with little or no foresight of possible consequences of his actions.

However, various government all over the world have made serious efforts to ensure the qualify of the global environment, but unfortunately, only little has been achieved as adequate emphasis has not been made towards the restricting man's activities on the environment continue to degenerate in recent years.

3:2 THE STATE OF GLOBAL ENVIRONMENT:

The fact that the global environment is endangered through atmospheric pollution is now beyond doubt and man stand being swifted out if nothing concrete is done to arrest the trend of environmental degradation which consists of eroded agricultural and urban land, depletion of soil nutrient and increasing frequency of

droughts. Man finds that desertification is forcing Him out of the limited available agricultural land. At first he wondered why nature was so unkind to Him, but latter he realizes that he is actually the architect of his environmental misfortunes. For example, his cities are flitting as sums reproduce at an alarming rate due to rural-urban drift, occasioning congestion and crime in these cities.

To compound his worries he finds that his effort to produce more goods and enhance his survival and that of his offspring, yield environment all pollutants (from both his factories and the modernized cultivation) that endangered his life more than the natural factors. His methods of disposing these pollutants affects the rivers, lakes and air spaces.

3:3 THE STATE OF THE NIGERIAN ENVIRONMENT:

In 1981 the Nigerian geographical Association proved beyond reasonable doubt that the Nigerian environment is also faced with the some danger from misuse and natural changes. The publications of the Federal Ministry of Science and technology in 1987 and 1989 on environment disasters in Nigeria show more of the deplorable situation of the environment which resulted from both natural and man wade environmental problems. Also in 1991 the Nigeria Environmental study action team came up with a publication that shows that the Nigerian environment is threatened not only by natural changes and human misuse, but also by desirable activities designed to combat source of the environmental crisis arising from such changes and misuse.

It has earlier been argued that solid waste is an inalienable product of sophistication and development. However, the concentration of the indicators and proceeds of development in the city have not been matched by institutional provisions to control and monitor the collection, storage, devaluation, and disposal of waste. By laws setting standard and guidelines on environmental sanitation have earlier been lacking or where they exist have been evacuated at the level of government incapable of managing the environment.

3:4 URBAN ENVIRONMENTAL MANAGEMENT PROBLEMS IN NIGERIA:

It must be re-emphasized that the volume of waste generated per-second does not invariable measure the degrees to which the environment will be polluted. Thus, if the waste can be evacuated and dispose of, satisfactorily, and as fact as it is generated and collected there would be no accumulation and hence no insult, abuse and pollution. It is when evacuation and disposal perpetuatually lag behind the rate of generation, that solid waste becomes an environmental nuisance. Solid waste management therefore, concerns the interplay among generation, storage, presentation, collation and disposal.

In Nigeria there are two broad systems of solid waste management, namely public and private, the former being the more conventional and traditional. In the public solid waste management system; the waste disposal unit seems to have been the most common arrangement, of which have at different times been established at Ibadan, Benin City, 1985, Enugu, Onitsha, Warri and Kaduna among other urban

centers. Usually the waste disposal unit is often established at the local government level under the responsibility of the health superintendents. The unit is specially operational in the area of locating public garbage collection centers where the public collect their domestic waste and ensure that they are disposed off properly.

The following differences between the private and public system could be seen as factors accounting for the poor level of waste management system in Nigeria.

- i. The public is seen as a public social service, while the private is a contractual arrangement between a private firm, institution or the individual beneficiary.
- ii. The public system is a free service venture, while the private requires user charge.
- iii. The public is expected to operate on a comprehensive coverage or more of where more refuse are generated while the private operation is based on affordability.
- v. While public defends on the use of report for refuse display for collection, the private operate on house to house basis.

3:5 INFORMAL ACTIVITIES AS ENVIRONMENTAL PROBLEM:

Informal activities involves all economic activities under taken by individual of a group of individual an a small scale basis as a survival strategy. This includes, hawkers, street vendors, petty traders etc. informal activities in our urban centers have been described as an insecurity of sustainability, because of the poor economic background of operators, a lot is left to be desired in their nature of operation, hence rather than providing a good source of livelihood for this low

income group they create a lot of environmental Nuisance in our built environment.

However, the genesis of this situation is that the employment absorption capacity of the organized, formal sector of the cities is very limited, and having been trapped in the "urban limbo", a significant segment of urbanites are either unemployed or finds unstable employment in the informal sector. Despite the fact the urban economy in Nigeria it could be that some of the practice constitute environment consequences. The high association between the number of street traders and the volume of solid waste generated form street to street as well as the springing up of uncoordinated development of temporally structures for those activities. Substantiates the rate of distortion on the aesthetics of urban steels.

3:6 POVERTY AND URBAN ENVIRONMENTAL IN NIGERIA:

The rate of urbanization in our urban centers today increase with the oil boom, which occurred after civil war in Nigeria. Many able bodies youths left the rural area for cities in search of paid employment, unfortunately. The recession of the 1980's and the Structural Adjustment Programme in 1986 made life more difficult for many urban dwellers and those already in employment were laid off.

This situation spelt an increase in the level of poverty and deprivation in the urban centers. Against this background, the rate of rural urban migration has not threatened and the number of Immigrates and unemployment increased such that

they become permanent feature of many market, transportation terminals, steels and residential areas.

As survival strategy many families sold their wards to hawk in the streets thereby increasing the over crowdingness of our city centers. To lengthened the situation these crisis have aggravated the state of urban violence in our major cities as these bandits have termed themselves into gangs in pursuance of means of survival.

Thus, stealing and terrorizing others so as to gain supremacy on the street become the order of the day. This since their basic concern is to obtain income for food and other necessities due to lack of employment, they are poor and it is the hopelessness of their situation, which promote violence.

CHAPTER FOUR

4:00 RESEARCH METHODOLOGY:

To be achieved was stated and subsequently, the objectives to follows in order to achieve the aim were also stated.

Data were collected from two sources from the conception of this Research work, the research topic was clearly stated with the first step, statements of problems were equally made which form or serve as the hypothesis to be tested.

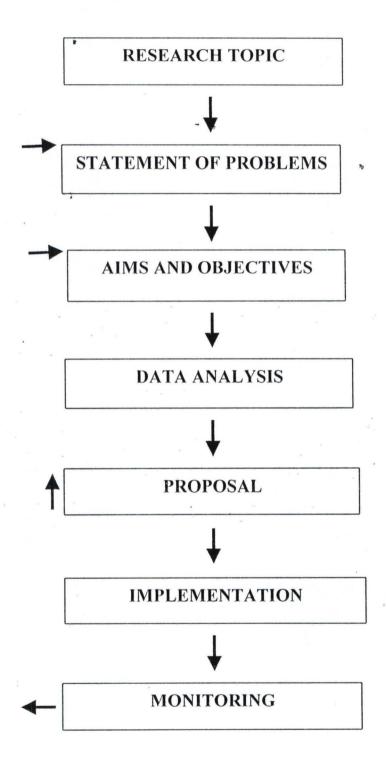
- 4:1 <u>SECONDARY SOURCE:</u> These are data collected in the process of this research work from text books and journals.
- 4:2 **PRIMARY SOURCE:** These are data collected through questionnaires, interview and personal observation.

It is important to stress that, two characters of questionnaires were prepared and administered. In the first characters of questionnaires, a total number of one hundred (100) were administered using random sampling of 10% sample size among the community of the study area (Kuje). The second character of the Questionnaires was administered to Abuja Environmental Protection Board and Kuje Area Council Health Department (That is the agency responsible for management of environmental programmes in Abuja and Kuje the study area),

after the collection of data, they were subsequently analyzed in form of report writing.

The inference drawn from the analyzed data from the basis for the proposals and recommendation. Implementation and monitoring is the last stage in this research methodology, which needs to be received if need arises.

SKETCHMATIC REPRESENTATION OF RESEARCH METHODOLOGY



CHAPTER FIVE

PRESENTATION AND ANALYSIS OF DATA.

5:00 PRESENTATION AND ANALYSIS OF DATA:

The data collection from the field survey have been analysed and presented in this chapter. Among the main issued are the socio-economic characteristic, refuse collection and disposal method in use, agencies responsible for refuse management and public participation in waste management. Finding of there analysis form the bases for recommendation proffered.

The management of Environmental Pollutant, has become one of the most important issue in the affairs of man. In most urban centers, the major problems of waste is that the rate of generation and the level of management are not commensurable with one another. However, it is quite evident that whatever the rate of generation might be, if the storage and disposal as well as treatment are done effectively, the issue of waste constituting environment problem would be a minor one.

5:1 WASTE GENERATION:

From the survey conducted it was revealed that a total volume of 98.53 tones of refuse is been generated weekly in Kuje, with highest generation point at the back of Kuje market and other area like Kayarda Sauka, Angwan Gade, Wuru, Pasali, Sundaba and Damakusa.

department has 200 staffs with such task as workshops, landscaping, erosion control and drainage. Waste management department has a total number of 150 staff which takes care of solid waste, hospital waste, land fill site/treatment.

From above analysis, it reveals that, the waste management department, which is the main focus in this project, is short of staff compared to the tasks expected of it and total are coverage.

5:5 REGULARITY OF REFUSE COLLECTION BY THE BOARD:

From the policy that established the board in the Abuja master plan, it is revealed that solid waste should be evacuated, twice week.

5:6 TOOLS FOR ENFORCING WASTE MANAGEMENT POLICY:

From the survey conducted, it was revealed that, the health department of the board constituting the sanitary inspectors are on charge of enforcing waste management policies.

If any waste found disposed indiscriminately or constituting nuisance to the board. The "health department" will serve a warning notice given time for evacuation of such waste. If not evacuated within the time given, such person or group of people will be summoned to court.

With "policies" establishing the board the following policy are made in respect to solid waste.

5:7 PROVISION AND MAINTENANCE OF DUSTBIN:

- Every occupier of tenement shall maintain the good condition the division supplied in is tenement by the board on payment of prescribed amount and shall replace same destroyed or worn out.
- No person shall burn or cause to burn the contents of any dustbin or any other commercial waste.
- 3. A person who contravenes any of the provision of this policy is liable to a fine of fifty naira or one month imprisonment.

5:8 THE BOARD'S SOURCE OF FUND:

Based on the survey conducted, the sources of funds opened to the board as revealed by the Abuja Environmental Protection Board Policy 1990.

- 1. The board shall establish and maintain a fund from which there shall be defragged all expenses incurred by the board.
- They shall be paid and credited to the fund established under sub-policy (of this policy).
- b. Such sum as may. From time to time, be granted to the board.

- c. All money raised for the purpose of the board by way of gifts, grants in an aid, testamentary disposition and sales of publications.
- d. All subscription fees and charges for services rendered by the board and all other sums that may accure to the from out source.

5:9 PUBLIC PARTICIPATION IN ENVIRONMENTAL MANAGEMENT ACTIVITIES:

Private sector system of solid waste management may be regard as the product of the failure of public organizations and arrangement. The important of private sector cannot be over emphasized in the sense that, because of its profit motive ensures that efficiency is maintained.

The survey conducted showed that was involvement of private sector in conjunction with "F.C.D.A. department of public work" in the management of Environment of Programmes, in Kuje prior to the establishment of Abuja Environment Protection Board in 1989 / 1990. However, since the inception of the board there have not been any involvements of private sector in the management of environment programme in the study area. Which mean all the activities and work regarding protection and maintenance of environment quality are left in the hand of the board.

CHAPTER SIX

SUMMARY OF FINDINGS.

6:00 <u>CONCLUSION & RECOMMENDATION:</u>

The following facts are gotten from the survey and analysis of management of Environment Programmes in the study area. They are and summary of the research finding and are the basis upon which proposal and recommendation in this work are made.

The first finding in this research work is the problems associated with inadequate provision of containers such as dustbin, trashcan, etc. for storage of refuse which leads to indiscriminate disposal of environmental pollutants. In order to explain the properly, I shall split it into component parts:

- a. The dustbin provided are only restricted to within the governmental quarters to the detriment of other land uses and private houses.
- b. There are no provision made for dustbin or trashcan's along the roads / streets.
- c. Neighbourhood collection centers are not designated for those area that are not accessible by vehicles for refuse collection.
- 2. Ineffectiveness of the agency responsible for refuse disposal. The study revealed that, the agency / board is ineffective in the sense that

- a. They fail to present bills to the public to serve as a charged for service rendered by the board especially in the area of solid waste management will go along way of assisting the board financially.
- b. The board has not been effectively enforcing enough waste management regulations.
- c. There are also the problems of inadequate staff to carry out waste collection and disposal effectively.
- 4. Non participation of the private organization in the management of environment programmes. Kuje which would have help to correct the failure of the public organization because of its profit motives ensures the efficiency is maintained.

There is also the problem of unhealthy attitudes of the public as some of them converts the dustbins provided for fetching water and storage of their waste inside the dustbins instead of directly inside the bin.

6:1 PROPOSALS AND RECOMMENDATIONS:

Based on the findings of the research work carried out, a number of proposals and recommendations are hereby advanced with a view to improving the environmental management programmes system and ensuring a decent environment quality of Kuje. The proposal and recommendation are made.

1. REFUSE COLLECTION CENTRES:

Abuja Environment Protection Board should establish refuse centers in all components parts of the town that are not accessible by the existing compacting truck (waste collection vehicle). Although, house to house collection system being used but it is observed that, such can only to be done within the government quarters, therefore, in order to take solid waste problem in totality in the area, other parts that are not accessible such as the village should be provided with neighbourhood collection centers.

2. **DUSTBIN**:

Dustbin should be joint provided by both the Area Council and Abuja Environment Protection Board to all houses for collection and storage of refuse.

- i. In this case, other land uses other than the government residential quarters should be adequately provided with such dustbins.
- ii. Dustbin should equally be provided in all the road and street and such dustbins should be located in strategic places and at convenient distance for the users.
- iii. It is important to emphasizes that private individual that are not provided with dustbin by the government can equally supplement the effort of the government by getting one for themselves.

3. COLLECTION FREQUENCY:

To cope with the frequency at which waste is been generated by the study area, require urgent solution to save the situation.

It is therefore, recommended that, waste should be collected by the board a least twice in a week. This will go along way in improving the quality of the environment.

6:3 **MANAGEMENT:**

Management plays crucial roles in any organization or operational activities because, it revolves round handling of resources (man, money and material) against the background, the following recommendation are made in order to improve the management aspect of the solid waste disposal system in the study area.

- 1. To improve the efficiency and effectiveness of the Environmental Protection Board, the following Managerial Function should be improved on;
- (i) Collection of rates: The board should determine the most appropriate money payable by the general public for the service they rendered to the public in area of waste (Solid) management. By sending the bill should be presented to that effect as to ensure the public to know that it is mandatory for them to pay.
- (ii) Maintenance / Purchase of equipment. A lot of maintenance work is needed to be done and equally purchases of some equipment of which if the services they

rendered (Board) are adequately paid for; will assist the board financially tackle problems.

(iii) Personnel: The Board should recruit more personnel in the department of waste management in order to be able to cope with the rate at which the waste is being generate and the area coverage of their activities.

In carrying out such recruitment, the board should first of all carry out job specification and job description, this will enable the board to know the right number and the right kind of personnel to be recruited.

- (iv) Enforcement of Environment Law: Functional machinery should be set in motion to take care of the proper enforcement of environment law in the study area. That is, any personal found violating environment law should be prosecuted in accordance with the appropriate law.
- Private concerns should be involved in waste management in the area. The
 involvement of the private sector is very important and this is a result of the
 failure of the government agencies.

6:4 CAUSES OF THE FAILURE OF GOVERNMENT AGENCIES:

- (i) The area of jurisdiction is two large area coverage
- (ii) The lukewarm attitude in government agencies
- (iii) Civil service bureaucracy
- (iv) Inadequate facilities such as staff truck

The above noted cases of government agencies failure can be corrected by knowing the private sectors because, they will ensure that efficiency is maintained in order to have more profit.

Public enlightenment should be carried out in form of seminar, workshop, conference in all the 3 tier of government. This will educate the general public about to protect and improve environment quality.

6:6 CONCLUSION:

The volume of waste (solid wasted generated in Kuje does not invariably measure the degree to which the environment will be polluted. If the waste can be evacuated and disposed off satisfactorily as soon as generated and collected, there would be no accumulation (storage collection and disposal) though these factors differ from one place to another due to difference in institutional structure and level of awareness on this basis, problems or factors affecting the efficiency and effectiveness of management of environment programme in Kuje focuses mainly on environment pollutants.

Therefore, for my effective and efficient management of environmental programmes in Kuje, there is need for wall-defined law to give both the activities of the board and the board the general public. Provision of adequate facilities and equipment will go along way in the improvement of the system and not only that,

management should be considered very seriously that is in the area of supervision, decision on new technology, personnel and enlightenment campaign.

As has been aptly said, it is not man that environment problems threaten to destroy, but the quality of human life. To this effect, it is vividly seen that the long struggle between man and nature has resulted in a multitude of beneficent and harmful life styles as well an infinite variety of environment patterns.

However, this study has critically look into the existing management of Environment programmes in Kuje, assessment of the available facilities and resources and like wise the existing problems militating against the system. Therefore, it is to this end that, the above proposal and recommendation are made, or which if they are strictly adhered to will help in eliminating the problem of management of environmental programmes in the study area.

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Survey Questionnaire for Environment agencies in Abuja. This questionnaire is designed purely on academic which will enable me to collect data for my "dissertation".

PLEASE TICK / COMMENT WHERE NECESSARY

1.	Name	of the organization /	Agency:				
2.	What a	are the types of servi	ce rendered:				
						•••••	
1				1			
3.	Which	areas do your activi	ties / service co	/er:			
4.	What a	are the types of facili	ities available:				
					•••••		
5.	State t	he number of the fo	ollowing categor	ies of vehicle	e that are a	vailable	in your
	organi	zation / agency					
						*	47
	1.	Compacting Truck					
	2.	Tipper	, x				
	3.	Pay labour					4.
	4.	Bulldozer					
	5.	Excavator					
	6.	Septic Tank					
	7.	Tractors					
	8. Do	o your organization	n / agency pr	ovide dustb	in / refus	e conta	iner for
	re	sidential, commercia	al, offices and i	ndustrial are	as as well	as the r	oad and
	stı	reet.	*				

2.	No	
7.	If yes,	how often do your organization evacuate the waste?
	1.	Daily
	2.	Weekly
	3.	Monthly
	4.	Not at all
8.	Is there	e any final disposal site?
	1.	Yes
	2.	No
9.	If yes,	state the locations:
10.	What t	sype of solid waste management techniques does your organization adapt?
	1.	Sanitary hand fill
	2.	Incineration
	3.	Composting
	4.	Open dumping
	5.	Treatment plant
	6.	Waste Recovery / Recycling
11.	How r	much do you change for your service for each of the following land uses?
	1.	Residential:
	2.	Commercial:

1.

Yes

	3.	Public (Offices):	
	4.	Industrial:	
12.	Is the	ere any private agency (i.e) involved in the activities of enviro	nmental
	Prote	ection in your Finding?	
		• •	
	1,	Yes	
	2.	No	
13.	If yes	s, state the name:	
14.	What	t role or part do such agencies play?	
15.	How	do your organization monitor the activities of the private agencies?	
16.	What	t is the average metric tone of waste generation in Kuje	
	1.	Daily:	,
	2.	Weekly:	
		Monthly:	