PARTNERSHIP FRAME-WORK FOR THE PROVISION AND MANAGEMENT OF URBAN INFRASTRUCTURE IN ABUJA CITY

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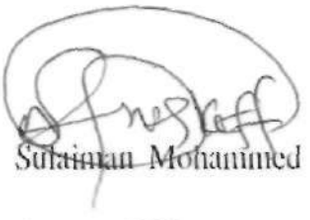
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A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN URBAN AND REGIONAL PLANNING

AUGUST, 1998

DECLARATION

I hereby declare that the thesis has been composed by myself and that it is the outcome of my research work. It has not been accepted in any previous application for a higher degree. All sources of information are specifically acknowledge by means of reference.



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CERTIFICATION

This thesis titled "Partnership Frame-Work For The Provision And Management Of Urban Infrastructure In Abuja City." by SULAIMAN MOHAMMED SULAIMAN meets the regulations governing the award of MASTER OF SCIENCE, DEGREE IN URBAN AND REGIONAL PLANNING of the Ahmadu Bello University Zaria and is approved for its contribution to knowledge, humanity, and literary presentation.

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DEDICATION

This Research work is dedicated to my Daughter Bilkisu and my Son Abdul-Jalil who all died in the course of this programme in Zaria.

ACKNOWLEDGMENT

I will start by showing thanks and appreciation to the almighty God for permitting me, that is, by giving me the strength , patient, courage and endurance to see to the end of this programme.

My special thanks goes to my first supervisor and Head of Department, Dr. James Bako Kaltho, for his unique support and guidance on the successful completion of the research and Mr. Sunday Ojibo the second Supervisor for his understanding.

A special gratitude goes to all Lecturers of the Department, especially Mr. J. D. Abin and Mallam I. D. Sulaiman.

Others of great importance that played significant role in seeing to the success of the whole programme include; My wife (Ramatu) for her endurance and patience in my absence. My sister (Aishatu) and her husband (Engr S.K. Danladi). I wish to acknowledge the contribution of the followings: My father (Amb. M. Sulaiman Dan Iyan Keffi), Alhaji Abubakar Sulaiman and Hajiya Rukkaya (Mother) Alhaji Mohammed Nasir Paskari and Alhaji Sabo Ago both (Former Directors of Planning and Survey F.C.D.A) and Alhaji Kassim Tijjani Ahmed (Present Director of Land Planning and Survey FCDA).

Finally, my thanks goes to the FCDA my sponsors for the programme, my colleagues in my class, my colleagues in the office and all those with genuine intention for this programme and whose their names cannot appear in this write up. I remember them always. May God guide us all. Amen.

ABSTRACT

This research work is on the widely accepted strategy, that is, the participatory framework to planning and development. The approach is not new in the world. However, community participation has only been either at the concept level or on a micro-scale and formalised. But the new approach is on macro level and has been made formal and involves local participants ,national and international involvement that are involved in a structured manner in relation to their resources and based on their priorities as stake holders. The approach has proved effective and yielded positive results in terms of maximization of resources, coordination of activities, spread of equal responsibilities and opportunities and seeing the value of their creativeness.

It is due to this reasons that motivated us to adopt the strategy to be able to hasten the physical development of Abuja and provide infrastructure in a sustainable manner

In the study, it has been seen and analysed that FCDA or Government carries all the financial burden in terms of provision of all the components of physical infrastructure in Abuja. Also the elements and shortcomings of the various public sector providers of infrastructure have been identified. Similarly, stake holders within Abuja that are responsible for infrastructure provision have been identified, and their financial base analysed.

Finally, policy recommendations have been made within the participatory framework for sustainable provision and management of infrastructure in Abuja city.

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CHAPTER ONE

THE RESEARCH DESIGN

1.1 BACKGROUND:

The then capital city of Nigeria Lagos was having a lot of problems, hence the need for movement to Abuja. The problems analysed in 1976 by the Justice Akinola Aguda committee on the re-location of the Federal Capital of Nigeria from Lagos to Abuja, include:

a. The cost of laying infrastructure is very high due to natural constraints on land by sea, lagoons etc. To reclaim the land and make it usable is always expensive.

b. High population concentration or migration to the national capital had led to over- stretch and overstress on the available infrastructure facilities in Lagos.

c. The city of Lagos was incapable of functioning as both a Federal Capital and State Capital due to the problem of inadequate land space for development commensurate with its status.

Hence the committee recommended a site at the hinterland and some additional land from three neighboring states, Plateau, (now Nasarawa) Kwara (present Kogi State) and Niger, making up a total land of about 8,000 square kilometres. Therefore, the Nigerian government has since 1975 embarked upon building a befitting Federal Capital City (FCC), Abuja, located within a new Federal Capital Territory (FCT). The planning and development of the town is vested

in the Federal Capital Development Authority (FCDA).The actual physical development started in 1980 with the provision of basic infrastructure, such as roads, electricity, sewage and water supply.

1.2 THE RESEARCH PROBLEM

The physical development of Abuja city started with the preparation of a Masterplan. The Plan which was approved by the supreme military council in 1979 was supposed to be fully implemented by the Year 2,000 A.D. The city was to be developed in four (4) phases. However, it is clear that implementation of the plan proposed is lagging behind the scheduled date. The slow provision of infrastructure has been the major factor that has drastically slowed down the implementation. Refer to map I , at the appendix.

The implementation of any town's Masterplan, largely depends on the provision of physical infrastructure. This is because infrastructure forms the foundation for physical development. It opens up areas for development and serves the population in the town. In the case of FCC, the pressure of development has been in those parts particularly phase I, where some urban infrastructure have been provided. The pressure has been much. This is creating negative effects as there are violations in those areas with plots being allocated in areas earmarked as reservation. There are cases of plots allocated

on green areas and utility lines. Neighbourhood children's play ground have been converted into residential and commercial uses. Development control regulations are not being properly enforced as set-backs have not been adhered to in some sectors; high density residential areas have been developed as low density, sizes of buffer zones reduced and allocated as plots, proper zoning regulations have not been enforced.

The phase one (1) of FCC development is supposed to have been completed by the year 1986; that is, 6 years from 1980 when development commenced. However, it extended to 1992. Similarly, the second phase was scheduled to have started from 1987 but uptill now, none of the 14 planning districts within this stage have been provided with infrastructure. Consequently, the lack of infrastructure is delaying the implementation of other proposals in the Abuja Masterplan.

Apart from that, it is Government that has been mainly responsible for the provision of infrastructure, but these are provided at high cost because of the adopted strategies and framework. For example, from the building programmes in phase I, it is clear that large amount of funds were spent on the provision of infrastructure component. Nevertheless, the outcome has been less satisfactory. A 1996 prepared estimate by the Engineering Services Department of FCDA, for instance, shows that the 14 planning districts of phase II, will gulp =N=500 billion for infrastructure alone. This colossal

amount of money shows that Government single-handedly cannot keep on shouldering this financial burden with equally competing demand from other sectors of national development, such as health, agriculture, education, transportation etc..

Following the provision of infrastructure, is the question of its maintenance and management. It is certainly too much to expect Government to finance the maintenance of the infrastructure or to take sole responsibility for its management. With the existing framework and strategy for provision and management of infrastructure, little will be achieved in terms of implementing the physical development programme of Abuja FCC. Also there will be possible collapse of already provided infrastructure on account of huge financial burden, which the maintenance task will entail.

Already, there is crisis in the maintenance of infrastructure facilities such as, poor maintenance of pumping stations, breakages on the pipes which take long before repair is effected, and treatment plant for the sewer which is not properly maintained thereby creating foul odour, in some areas of the FCC. Drains are not regularly cleared. Also, the method of refuse disposal is not functional. Lawns and trees used for landscaping interrupt visibility at intersections because they are not properly taken care of.

There is therefore the need to appraise the entire urban infrastructure provision and management strategy in order to evolve a more effective and sustainable

framework. This would require identifying and setting out the specific roles of partners and actors, such as private developers, public (government), Non-governmental Organisations (NGO's), and Community Based Organisations (CBO's) towards the building of the federal capital. The framework will involve the provision and maintenance of urban infrastructure in order to hasten the implementation of the Abuja MasterPlan and maintain the infrastructure in a sustainable manner. This shall be based on a well-formulated partnership framework for action within the specific circumstances of Abuja.

This research will therefore, attempt to answer the following questions:

1. Why has urban infrastructure provision proceeded at a slow rate?
2. What are the elements and framework for the sustainable infrastructure provision and management?

1.3 AIMS AND OBJECTIVES

1.31 Aim:

The aim of the study is to evolve a partnership framework as an effective tool for the provision and management of urban infrastructure in Abuja.

1.32 Objectives:

The aim of the study will be achieved through the following objectives:

1. To examine the role of infrastructure in city development and management and the various framework for the infrastructure provision.
2. To examine the existing framework for the provision of urban infrastructure within Abuja municipality.
3. To identify the major stake holders in Abuja and their role in the provision of urban infrastructure and management.
4. To evolve a framework of partnership of the stake holders as an effective tool for sustainable provision and of urban infrastructure in Abuja.

1.4 SCOPE AND LIMITATION

The study shall analyse the stake holders in the development and management of Abuja and establish their resource base.A framework in which they effectively complement one another as partners shall be established.

However, particular emphasis shall be placed on the provision and management of selected urban infrastructure, that is, physical or economic infrastructure (roads, bridges, footpaths, street furniture, drainage maintenance, water and electricity supply, sewage solid-waste collection and disposal system). This is because the provision of infrastructure constitutes the basic requirement for implementation and management of physical development plans.

1.5 RESEARCH METHODOLOGY

Data collected for the study, were from two sources: primary and secondary sources. The primary sources include, informal interviews with senior officials of private and public organisations involved with provision of infrastructure in Abuja. A review was made of official documents and statistics at FCDA.

The secondary data source, includes, journals, books, past thesis, magazines etc.

CHAPTER TWO:

2.0 CONCEPT, ROLE AND SYSTEMS OF URBAN INFRASTRUCTURE

2.1 Concept Of Urban Infrastructure:

The word infrastructure conjures up images of concrete roads, steel girders and metal pipelines. Over the years it has been identified with huge physical projects - dams, sewerage, tunnels, super highways, electric utility plants. Such mega projects have involved large amounts of money in capital cost and have been an indicator of a country's economic growth and prosperity.

Herbert Muschap of the New York Times, has expounded the definition to embrace and to join together many elements of the built environment including housing, transportation and public space.

Similarly, William Morrish and Catherine Brown, architects/planners of the University of Minnesota in an article for the French publication "Urbanism" referred to infrastructure as "the systematic framework which underpins a community's ability to fulfill its mission of providing for its citizens to be productive and nurture social equity". That is, infrastructure is a kind of public trust or commonwealth that should manifest something more than the sum of its parts.

Nancy Connery, a member of the U. S National Academy Committee on infrastructure, described infrastructure as a "slender thread that weaves together human needs and values with those of our environment". This translates into

shared commitment to people, their well-being and the quality of their lives. (Mc Neil M., 1993). The systems that make up infrastructure are three. The planners' conventional groupings of these are: facilities, utilities and services. Looking at the various definitions by organisations and authorities, therefore Infrastructure can be defined as an aid or accelerator to social, economic and political development and growth of an area or settlement. Therefore, Infrastructure encompasses the following housing:- Infrastructure, educational Infrastructure, health Infrastructure, Industrial Infrastructure e.t.c. The presence of Infrastructure at a place leads to an orderly, rapid and functional growth of any settlement.

Infrastructure has also been categorised by social researchers and physical planners into two categories, namely, social Infrastructure and economic or physical Infrastructure.

Social Infrastructure include services like hospitals, schools, recreational facilities, offices, Police stations, Post-offices e.t.c. While physical or Economic Infrastructures include Water, Electricity, Telecommunication, roads, bridges, storm and foul water.

Investment in infrastructure can deliver major benefits in economic growth, poverty alleviation and environmental sustainability but only when it provides services that respond to effective demand and does so efficiently. These services fall under the following categories:-

a. **Public utilities** -They include power, telecommunication, piped water supply,sanitation and sewerage, solid waste collection and disposal, and piped gas.

b. **Public works** - This includes, roads and major dam canal works for irrigation and drainage

c. **Other transport sectors** - this includes urban and inter-urban railways, urban transports, water ways and airports.

2.2 ROLE OF INFRASTRUCTURE IN CITY DEVELOPMENT

The importance of infrastructure in development of any urban community cannot be over emphasized. They are central to the welfare of the community and also to the socio-economic and political development of the community. The provision therefore, has profound influence on the overall growth of the city or settlement. Furthermore, it can be said that modern society is becoming increasingly and extricably dependent on utilities. Some specific roles are as follows:

1. **Determines Country's success and failure**

The adequacy of infrastructure helps to determine one country's success and another's failure. In diversifying production, expanding trade, coping with population growth, reducing poverty or improving environmental conditions. Good infrastructure raises productivity and lowers production cost.

2. **Leads to the Growth of an Economy**

Infrastructure provides critical support to the growth of an economy, e.g. China's intercity transport system with the links to the supply of raw materials, coal and electricity.

3. **Public Health**

The provision of good quality water supply to any community helps in sustaining the high standard of living of the people. Improper disposal of waste

water leads to diseases like malaria, typhoid, enteric diseases, such as worm infection and other viral diseases.

4. **Attraction of population**

Presence of infrastructure in any society plays leading role to the development of any community or lead to population growth.

5. **Leads to the Growth and Development of Industrial and Commercial Activity**

Infrastructural services – It encourage the growth and development of industrial and commercial activities. For example, the concentration of industries, as in Lagos, Kano, Port-Harcourt and Kaduna etc.

6. **Differential Level Of Development**

Major infrastructure failure quickly and radically reduces quality of life and productivity. Improving infrastructural services enhance welfare and foster economic growth. That is why cities with infrastructure have high level of development, while those without have less.

7. **Employment**

Utility supply is a source of employment, that is, whether water supply, sewage or electricity supply both skilled and unskilled labour secure employment and they must work round the clock to keep the system functioning. A lot of people have been employed to maintain the facilities which have in turn improved the overall standard of living in the city

8. Provision of Fertilizer

It provides raw materials for agricultural activities such as fertilizer from sewage.

9. Improvement In Business Transaction

Communication facilities such as telephone, telex, fax etc. promote business transaction and forms the lifeline in major business transactions worldwide. It also spares the business world from unnecessary or avoidable trips.

10. Recreation Activities Improved

Environmental quality - Utilities have come to play a leading role in the enhancement of social life. For example electricity is very fundamental to social activities such as entertainment centres etc..

11. Revenue Generation

Utilities also help in the generation of revenue to the government. This is possible by the rate charged based on level of consumption of utilities, except for sewage that is presently not being charged, all other utilities have rates in consumption.

12. Health and Sanitation Improvement

Infrastructural services that help the poor, also contribute to environmental sustainability. Clean water and sanitation, non-polluting sources of water, safe disposal of solid- waste and better management of traffic in urban areas, provide environmental benefits for all income groups. That is, an important

positive impact of infrastructure is the environmental concern with the removal and disposal of liquid and solid wastes.

2.2 POSSIBLE NEGATIVE IMPACT OF INFRASTRUCTURE

1. Eco-System and Land Scape:

Construction or development of infrastructure at a place, for example, road and dam constructions tend to destroy the eco-system and ecological balance of an area such as natural vegetation, trees, plant species etc. Insects and animal life are often being destroyed, through killing, relocating and uprooting.

The landscape of areas having this kind of development are also affected, for example the terrain is been exposed to denudational processes, such as, erosion, mass wasting etc. due to earth works by heavy machines. With time due to lack of maintenance the area is affected or dissected.

2. Destruction of Human Settlement.

The construction of certain facilities like dam, road, central sewer system leads in most cases to the shifting or resettlement of people from one place to another. This in turn affects the socio-economic and cultural activities of the people. For example, farmland is affected, as well as family cohesiveness

3. Population Pressure:

Infrastructural facilities attracts immigrants into an area, for example, in most developing nations' capitals, like Lagos, Kaduna and Ibadan in Nigeria, Rio de Janeiro in Brazil, Central London in Britain etc. This population increase has

compounded problems of over-stretching of facilities and utilities, giving rise to more stress on infrastructure and has in turn led to the development of slums at the center of traditional settlements or at the periphery of urban centres.

4. **Development Pressure:**

The availability of Infrastructure at a place attracts the concentration of commercial and industrial activities. These landuses create foul odour, release poisonous chemicals to the drainages and streams and this in turn affects community, plant and animal life. Also the smoke released into the air may have adverse effects on the general life of the city dwellers.

5. **Accident Rate Increase:**

The construction of infrastructure facilities, like roads, has led to an increase in the number of vehicles and travels on our roads and in turn become one of the highest means of killing or causing death or accident.

6. **Disruption in River Regime:**

Construction of dams in most cases affect the flow of running water. That is, if the water is damned at the upper reaches it affects the activities at the lower reaches.

7. **Problems of Sewage Disposal:**

If the sewer, sewerage and the sewage systems are not constantly cleared and treated with chemicals it creates foul odour or even may pollute the environment, like what is happening in the FCC Phase I in some areas.

2.3 THE DIFFERENT SYSTEMS OF INFRASTRUCTURE PROVISION AND MANAGEMENT IN NIGERIA.

2.31 Characteristics of the Systems

Urban infrastructure is a pre-requisite to physical development or one of the major factors responsible for the growth of towns and cities anywhere in the world. If our cities are to grow in a sustainable manner infrastructure has to be provided to encourage physical development by individual, community, private and public co-operations.

In the past cities like Maiduguri and Kano were located close to rivers or nodal points of trade for easy access. Towns like Kukawa were destroyed and rebuilt and facilities were provided like road, houses, wells, etc., with revenue collected from local inhabitants (i.e. tax, trade levies etc.).

Also, in the past, individuals engaged in providing domestic water supply with the aid of wells dug in their compounds. Similarly, the native authority participated in providing water to the various communities in the northern parts of Nigeria. In the rural areas of Nigeria, villages demarcate streams to serve as reservoir for the consumption of inhabitants of these areas. Also, road networks were provided, drainage systems constructed, pot- holes were filled through the combined efforts of local communities and the local government.

The method of refuse disposal is mostly by incineration at individual compounds or collected at a point within the neigbourhood.

KASHIM IBRA

Method of feaces disposal was organised and is done in the following ways:

a. Individual compounds - have dug-out-pit latrines

b. Night soil men move from house to house to convey the waste for disposal out of the city.

With the coming of British colonialism after the slave trade, there were recruits which were mostly administrative officers. The coming of these officers necessitated the construction of houses and roads joining the traditional African settlement. This was known as European residential area for colonial traders or administrators.

As trade improved, population increased making it necessary to provide facilities, like water, electricity and water supply and more indigenous Africans were employed. This later changed to government residential area (GRA).

The local governments in Nigeria, were responsible for maintaining urban conditions before independence, but later it became glaring that they cannot cope due to financial constraints. With this setback, some agencies were created. Examples of the agencies are the Kano Metropolitan Development Board, Kaduna Urban Planning Authority and the Jos Metropolitan Development Board. Their functions include provision and maintenance of facilities within the state urban centres like, street light installation and maintenance, refuse collection and disposal, lay-out design, Masterplan preparation, zoning regulations, development control functions etc.

The Local Governments in Nigeria are concerned with water supply, sanitation issues, maintenance of hospitals, running of public utility services like construction, maintenance and repair of roads, street lighting and installation.

Apart from these three tiers of government that provide infrastructure in Nigeria, there are also the United Nations Development Programme (UNDP) through the Infrastructural Development Fund (IDF) Programme. So far, in Nigeria, the Infrastructure Development Fund (IDF) has played a significant role in this aspect. For infrastructure provision to towns, like Yola, Jimeta, Mubi Wukari, Jalingo and Numan and some towns in Edo and Delta states, the World Bank through (IDF) Infrastructure Development Fund has been the source of financing, which include water supply, road construction, supply of equipment and manpower, electricity supply and refuse collection and disposal etc.. The work that has been started and is yet to be completed was stopped in Nigeria due to lack of proper accounting to the World Bank and shortage of counterpart funding for the project so far executed.

Similarly, within the same period, the state governments were concerned with the provision of facilities and amenities, which include, housing provision, preparation of physical development plans, the construction and maintenance of urban roads, drainage, parking facilities, street lights, waste disposal and the provision of infrastructure such as water, public transport, health facilities.

There were problems associated with some of the development agencies, such as the Bendel Development Authority founded in 1969. These include:

i. Lack of technical and qualified staff.

ii. Conflict in decision making between Ministry of Lands and the authority's governing council.

iii. Political problems - membership was politically controlled.

Other important agencies within this period include: Lagos Executive Development Board and Eastern Nigeria Housing Authority. These two agencies were concerned with city planning, provision of infrastructure, control of environment against out-break of diseases (environmental sanitation). An example of the latter is the bubonic plague of Lagos which encouraged the implementation of Planning Acts and Ordinances.

After independence, all three tiers of government continued with the responsibility of provision of infrastructure either directly or through their agencies. Infrastructure provision has not received serious attention in the first and the second National Development Plans. The fourth NDP and the Rolling plans for example, the federal and state governments are responsible and have done the following:

a. Construction and provision of infrastructure facilities.

b. Development of residential and industrial estates.

c. Construction and maintenance of urban roads.

These are the responsibilities of Federal Ministry of Works and Housing and the provision of services like electricity, hospitals, secondary and higher educational institutions and also sites and services schemes developed in most state capitals. For example, the Shagari housing estates were built and provided with infrastructure in the 19 states of the Federation. The Jakande housing estate, now Jerimiah Useni housing estate built in Abuja and the different programmes embarked by the Federal Ministry of Works and Housing all over Nigeria are providing houses to different income groups, and are involved in the provision of infrastructure

Despite all these efforts by governments and private organisations to provide and maintain infrastructure facilities in Nigerian urban centres, the level of essential services to communities is inadequate, including water supply, electricity , roads and storm water, drainage, housing, cemeteries and burial grounds, markets, fire prevention and control facilities, sports and recreational facilities and general local administration.

All these are not provided sufficiently or adequately by the three tiers of government due to lack of finance or funds. Another problem is lack of trained or skilled professional urban managers, professionals to carry-out planning activities or constant monitoring of physical development.

2.32 Shortcomings of the System

The different systems discussed above have certain shortcomings.

(i) For the successful provision and management of urban infrastructure in Nigerian cities and towns, finance, manpower and technical know-how are lacking to operate and sustain it in a continuos manner. At times if a project starts, sustaining it is always difficult. For example, the various urban development programmes started by various state governments, e.g. road construction, refuse collection and disposal, drainage clearance, etc., and currently the Urban Development Bank (UDB).

(ii) There is no clear role between the three tiers of government and the agencies as regards infrastructure provision. Instead of concentrating on one area of specialisation or provision of infrastructure, there tends to be overlaps between the different tiers. For example, state governments are involved in providing economic, social and physical infrastructure instead of concentrating and specialising in one area. In this case there is no efficiency and continuity.

(iii) Similarly, in both the pre-colonial and post colonial era, there has not been any serious involvement of management in the provision of urban infrastructure.

(iv) There is also lack of financial accountability, that is corruption. One of the characteristics of the systems discussed is that financial mismanagement is common in the system. A good example is the IDF and Urban Development Bank (UDB) where the construction work in Yola had to be suspended due to

lack of accountability. In the case of partnership funding the level of corruption is minimal because of the calibre of people involved and the availability of financial controls and accountability.

(v) Finally is the standard of planning and design of certain projects, for example, Shagari Housing Programme, low-cost housing provided in state capitals does not satisfy our cultural needs, in terms of design and environmental needs.

2.33 Advantages of the Different Systems

Despite all the short comings associated with the different systems enumerated so far, there are lots of lessons or benefits to be derived from it, and can be carried along to the next approach; for example, participation of community in the provision and maintenance of these infrastructure, that is the traditional method has worked in our historic cities. Also the system of levying or taxing people in the past was very effective. People were always conscious of building maintenance and management of their housing environment both to avoid penalty (levy) and also owing to their appreciation of the need. Money realised from the levies was used to finance the provision of other projects for infrastructure development. In this approach, the rich contribute financially, while the poor contribute their skills or labour.

In addition, some methods of infrastructure provision can still be maintained, like the soak-away system can be constructed and maintained by individuals.

Similarly, the method of refuse disposal where it is collected in the compound and burnt outside was found to be adequate. In the same vein, the method of road maintenance done collectively by the community is encouraging.

Finally, the three tiers of Government and International Organisation concerned with city development have financed and implemented infrastructure development project as follows:

1. Infrastructure Development Fund (IDF) projects for:

a. Provision of infrastructure in some major urban areas on a cost recovery basis

b. Provision of expert advice and training

c. Proper co-ordination of activities

Some of these advantages associated with the traditional approach and the contract type can be integrated into a system to make for effective infrastructure development.

2.4 PARTICIPATION IN URBAN INFRASTRUCTURE PROVISION AND MANAGEMENT

2.41 Concept of Participation

Participation is a partnership based on voluntary relationships between various actors which may include government institution ,individual infrastructure user, community based organisations, user-groups, private enterprises and Non-

governmental organisations. In this context, participation is a process whereby people as consumers and producers of infrastructural services and as citizens, influence the flow and quality of services available to them. Participation is not limited to development projects but includes many activities that take place in normal day to day city life outside the project context. These range from the micro scale which includes such activities as community-based maintenance of local drains, to the macro-scale, which includes public support for government sponsored environmental protection programmes. Participatory strategies build on existing processes of informal and self-help infrastructural development supporting where possible and rendering them to formal infrastructural system. Participation is a means of achieving other objectives, such as cost reduction in the construction of new facilities . Also ,partnership between public and private enterprises reduces construction costs, increase cost recovery, promote sustainability and respond more to the needs of the users. It also provides a mechanism to ensure that the comparative advantages of public, commercial provide informal and community sectors are able to be exploited in a mutually supportive way, to the ultimate benefit of both equity and efficiency in infrastructure management. That is, participation enhances user "ownership" of facilities, thus helping to ensure fuller and more efficient use, better maintenance and more reliable operations.

2.42 Elements of A Participatory Framework

The elements of participatory framework in the partnership approach include:

i. Participants

In this category participants include infrastructure users, communities and community-based organisations. In this case every inhabitant of the city is an infrastructure user. The basic unit of decision making and action regarding is always an individual or household . In addition to residences, infrastructure users include private enterprises and institution. The government is responsible for providing infrastructural services to all urban residences.

The main activities of households and private establishments include registration for services, connection of private facilities to the municipal network, consumption of services and payment of bills.

ii Interests Of Users And Community Organisation

The involvement of users in participatory activities depends upon the type of infrastructure in their priority of heed related interests and the extent to which their interests may be promoted through participation. Infrastructure users are primarily concerned with the level of service access and the reliability and quality of available services. Together, these factors contribute to the comfort, attractiveness and hygiene of their living conditions and, to the quality of life. In economic terms users are concerned with the relative cost and affordability of services. Beyond these factors, property owners are interested in the impact

of infrastructural services on property values. Finally, there are many social and political interests that may be promoted through participatory provision and operation of infrastructural services. These include the effectiveness of community organisation and leadership in dealing with local problems and the influence that the community acquires in dealing with government authorities.

iii. Leadership

Community leadership plays a vital role in the organisation of all forms of participatory development of infrastructure. There are many types of Community Based Organisations (CBO's) and many kinds of leaders, may be present in a community, which may be traditional or ethnic, tribal and /or religious leaders, leaders whose status depends on connections with external authorities, leaders who mediate or broker between the community and the authorities, "positional" leaders representing political parties; and elected officers and informal activists.

2.5 IDENTIFICATION OF PARTNERS OR PARTICIPANTS

The following groups are the major actors relevant in participation in urban infrastructure provision and management

i. The government at national, regional and local levels.

ii. Non-governmental organisations and Community Based Organisations.

iii. The formal private sector developers

iv. Informal private sector developers.

i **Government** (i.e. national, regional and local) are responsible for infrastructure provision, social services supply, and general urban economic and spatial development. The government has three (3) functions: These include:-

a. Welfare and quality of life of the population, development of the economy, environmental protection and public process of government.

b. In economic terms, government, especially local government authorities are concerned with financial viability of the municipal administration and the mobilization of investment funds for urban infrastructure development.

c. In political terms, the local government is concerned with the level of satisfaction of the population with Municipal services, civic peace and possibly the approval of higher government authorities.

ii. Non-Governmental Organisations and Community-Based Organisations.

a. Non-Governmental Organisations- This is a third system between the public and the private. They are semi-autonomous, generally external to political power structures and non-commercial in their motives. They originate outside the community which they work. The NGO may be cultural, humanitarian and /or embedded in a vision of social and economic development.

Their functions include mediating between communities and government authorities advocating community interests, consulting and providing support to community based development, occasionally managing project activities, awareness building and mobilization, strengthening the organisational capacity of CBO's. The NGO's play the main roles of mediator, consultant and occasionally project manager.

b. Community Based Organisation(CBO). As a sociological entity, the "community" is seldom a functional unit for common infrastructure-related activities. For communal efforts that relate to infrastructural services, people normally form more specific type of users association. Also local communities come together to improve local security, housing quality, basic utilities and social services. Community leadership is important to participatory infrastructure development. This leadership includes, traditional or ethnic, tribal or religious leaders whose connection depend on external authorities and informal activities. All these represent the community in dealings with

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government authorities or external bodies. The function of COBs includes: residential development, development of security, housing improvement, utilities provision, environmental quality and social services.

iii. The Formal Private Sector

This refers to institutions, firms and individuals who may be active in many different aspects of infrastructure management, but whose main objectives and organisation is to generate a profit on these investments.

Private sectors can set up inventive consortium arrangements with banks to bid for public sector projects. This approach can be adopted for construction and for the operational running of a service. The public sector will achieve its return through a charge made to the public agency as prime operator or by manning the facility itself and collecting charges directly from users. Example of the latter include, toll financed on highways and bridges, privately formed public housing schemes, telecommunications net-work and power generations. That is, the role of formal private sector in infrastructural management include, provision of consulting services, provision of management and operation of a portion of the service.

iv. Informal Private Sector

This refers to informal workers and small scale enterprises, i.e. waste collectors and scavengers. In the conventional sense of partnership participation, users often contribute to the planning and implementation of infrastructure

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development projects. Even more important than project-based activities are contributions made by residents of informal settlements, who join with neighbours to construct footpaths and drains, organise community level services and petition the government for improvements to infrastructure.

2.6 CASE STUDIES OF PARTNERSHIPS

2.61 The Case Studies

This section discusses some case studies of partnership in infrastructure development projects in Africa, Asia, and Latin American cities and with one or two examples from developed communities.

In the 1970s, low income urban residents played a major role in shelter provision, including the provision of infrastructural services. For example Villa El- Salvador, a desert site on the outskirts of Lima, Peru, was transformed between 1971 and 1976 into a striving community of about 130,000 inhabitants possessing basic services, largely through the self- help managed residential development (Rees, 1981).

Also in the city of Cirebon, for example, the Swiss government supported a Cirebon Urban Development Project (CUDP) expanded municipal garbage collection from 42% to 85% of the total generated waste between 1988 to 1993. During this period, door step collection by the municipal agency dropped from 13% to 6% of households (Colenco/Alpin consult 1994, pg. 99). Another example is Barrioe Carmen in Quito, a low income neighbourhood of about

250 families located in the southern area of the city. With support from local religious groups this neighbourhood is currently in operation an alternative method to solid-waste management based on communal effort and micro-enterprise initiative. Domestic refuse, previously sorted at homes are collected by members of the micro recyclable are sold to companies and some parts of the organic fraction are finally collected freely by the municipality and carried to the city's dump site.

In the same approach, in Togo the capital of Lome, a private company concerned with waste collection in the city of Lome, with French technical participation and financial support, the Togolese refuse collection company (SOTEMA) has been in operation since 1974 when it was granted a year renewable contract with the government to collect, transport and dispose of solid-waste. It is now expanding it activities to other countries. Similarly in Kuala Lumpur, it was discovered that the private firms made more trips per vehicle per day and collected 8.5 tonnes per vehicle per day while the public service collected 5.7 tonnes.

Also in the United States of America, it has been shown that contracting of solid-waste collection was from 10% to 30% less costly than direct public service. The cost saving included monitoring of contracting estimated to average 25% of overall cost (world bank 1954)

In the Puerto Valletta sewage project, Mexico, a contract was awarded in 1990 to BI - water inc. to build and operate for 20 years a treatment plant in Puerto Valletta, a city of 405,000 people in Mexico. The contract implementation involved the formation of local subsidiary company (CTAPV) to own and operate the plant, charging the local water and sewage company (sea pal -pv). This company acts as effluent monitor (Rees, 1992).

In 1993, Buenos-Aires, a large international consortium (led by Compagmie Lyonnaise Des- eaux - Dumes) was awarded the concession to maintain and operate the water and sewage services for 30 years. Revenue would be collected directly by the concessionaires who would be responsible for upgrading and expanding the system. All assets would continue to be owned by the central government. Annual turn-over was estimated to be 300 million.

Also a Mexican partnership was formed by private interests in Armadillo largely to improve municipal roads. By providing capital finance for improvements the aim was to liberate the municipality from the burden so that it could apply all its limited resources to the supply of basic public services. Finance was sourced from Federal and State governments with 67% and 33% raised voluntarily from many sources, including local trade associations and vehicle owners. Voluntary contributions are tax deductable. Similarly, Ethiopia arranges road organisations that have mobilised financial resources for improving and maintaining roads and other infrastructural services formerly

over looked by governments. GRCO founded in 1962 mobilised funds from local Gurrang villages and towns and from Gurrange migrants living in Addis Ababa. Since starting operations, it has financial improvements worth more than 350 bill (U.S $3.5 million). In addition, members here contributed an estimated 8 million bier in professional services and labour. GRCO contributed 70% of the cost and government 30% (World Bank, 1994).

Street furniture is normally purchased from a private manufacturer with either private staff being responsible for erection of places identified by public officials. Under such an arrangement, the private sector may be supplied furniture in return for an annual license fee or an agreement to maintain the furniture to agreed standard. Similarly, a metropolitan company for sanitary works (emos) in Santiago Chile applies contract with the private sector for 2 main groups of activities; those related to investment, and those dealing with maintenance, quality control and general service. It also includes rehabilitation and replacement of facilities. Private sector participation in this area represents approximately 95% of the total investment budget of the company. Contracts related to maintenance, quality control and general services represent nearly 22% of the current expenditure in operation and maintenance. There was tremendous success in the exercise.

Another recent development assisted by UNCHS/UNDP has facilitated the contracting out of cesspool emptying in Nakhon Pathon a major urban area in Thailand (Alfano r-1994, pp. 42).

Another way or means of water supply is franchising, which is popular in France and Spain by active companies. Here private operators, operate and maintain facilities and collect authorised tariffs from customers. An agreed percentage of the collectors may be retained by the private partners with the remainder returning to public authority. One other method for achieving success in the water sector is made up of a number of operations. Here it should be possible to consider exposing part of the activities of the organisation to competitive tendering and hence to contracting out, for example, maintenance of mains or even revenue collection. The final approach to water supply by privatisation, to individual, private firms and organisation in Santiago, Chile for sanitary works (Emos) is a public sector company providing water supply and sewage services to the 4.8 million inhabitants of capital city. In recent years, Emos has achieved a substantial improvement in the quality of the services it provides as well as in economic returns of its operations. The participation of the private sector in service provision has played a key role in achieving these results (UNCHS/UNDP 1993).

In terms of electricity distribution, Purang in Nepal have established a power installation that supplies about 100 houses with; 120 watts each. Consumers

are charged to cover operations and maintenance costs. The project is successful because the management of the system is well integrated into social, political and economic structures, ensuring that all participants have access to the decision making process (World Bank, 1994).

In Sri- Lanka, the community was left with the construction of local facilities, such as wells, toilet facilities (blocks), and road surfacing with (RS. 750,000) instead of allowing commercial contracts.

Also the role of women in the partnership approach in infrastructural management is important, women participate in the supply of drinking water, sanitation, waste disposal services, the struggle for security and services access. This occurs in Guayagul, Ecuador; Judas in Managua. In Nicaragua with a population of 37,000 financial support was organised through church related non-governmental organisation and the planning and design phase was done by women.

In Cirebon, Indonesia with community programme support from the Swiss development corporation, the CUDP was initiated in 1978, with the goal of improving water supply and also concerned with drainage works, sanitation, solid waste improvement. This was done through the assistance Of Community Participation Programme (CPP). By the mid 1993, communities managed and to a large extent(68%) financed the implementation of a wide

range of improvements including local drains, footpaths, garbage collection bins, waste collection center and water connection Wilson 1980 pp.75.

Finally, the Indian Urban Community Development Programme, in Hyderabad, India, was started in 1988 in New Delhi, and supported by The Ford Foundation. The programme aim at improving the extremely poor living conditions and infrastructural services in low-income urban communities, through supported self-help programme, and was extended to Ahmadabad (1960), Barroda (1965), Calcutta (1966) and several other cities.

2.62 Short Comings of the Partnership Experiences

The limitations of partnership experiences in other parts of the world include, legal problems, regulatory and technical constraints, as well as inappropriate policies.

i. Legal Constraints:

The fact that a high proportion of the residents of informal residential areas (which often constitute up to one-half of a developing city's housing units) do not possess legal title to their plots constitutes an important constraint to their participation. As service provision amounts to de-facto recognition of property rights, it is a step, which the "technical" agencies responsible for infrastructure service provision are neither willing nor authorised to take. In Sao - Paulo, Brazil, this was an important factor which inhibited the water and sewerage authority (SABESB) from providing water supply in the Favelas.

ii. Regulation And Technical Standards

Another constraint to participation is derived from regulations and technical standards which municipal governments apply to infrastructure construction. Full compliance with prevailing infrastructure service regulations and standards often raises the price of infrastructural services beyond the means of low income households. While a certain level of subsidy is sometimes required genuine participation is only possible when the applied solutions are more or less affordable.

iii. Planning Methods

Current planning methods and procedures often hinder participation in infrastructure development. For example, Masterplaning embodies a conceptual approach which is in many ways antithetical to participatory , community-based, bottom-up planning. Employing a sectoral Masterplan, conventional planning is a top-down process that frenzies on the desired future state of a single infrastructure sector, which is viewed as a spatially extended technical network. Implementation is organised in stages.

The bottom-up participatory planning approach begins with present needs and priorities, and takes an integrated view of all service sectors in a particular location or place. Implementation is organised as a strategy or process of

progressive improvement. People are both consumers and active agents in the services management process.

In particular, the Master plan approach is normally not the best route from present problems to desired future conditions in a way that does justice to the evolving needs and potential contributions of the users (schiibeller, 1989).

By their nature, participatory development processes are self - regulating and not entirely predictable. Conventional planning methods often have some difficulty in dealing with these qualities. The introduction of more flexible, short-term, bottom-up planning and programming approaches (including "community action planning" and "multi - sectoral investment planning") is thus an essential step toward enabling participation. (Sri Lanka's million houses progamme and Peterson et al. 1994).

iv. Project Management Procedures

The administrative procedures and practical interests of external support agencies often restrict the scope of participatory infrastructure development.

Also a practical constraint to participation often arises when a project is scaled up from the pilot or trial phase to a larger-scale application. This was the case in the Indian Urban Community Development (UCD) project in Hydrabad: the shift from a relatively small- scale programme of self-help housing production involved a change in the operating pattern of the UCD unit toward more

directive project management. The role of participants in project planning was reduced rather than expanded.

v. Absence Of A Workable Model

The participatory approach usually implies important innovations for the responsible government institution. Bureaucratic resistance to change and the mere fact that it has never been done before, constitute major hindrances to the introduction of participatory approaches. Even when the will to introduce participation is present, lack of knowledge of required inputs of time, skills and resources may lead to unworkable compromises.

CHAPTER THREE

3.0 EXISTING FRAMEWORK FOR THE PROVISION AND MANAGEMENT OF URBAN INFRASTRUCTURE

3.10 Introduction

This chapter is divided into two broad areas. The first looks at providers and managers of infrastructure in Abuja city. The second is the result of analysis to show burden on federal government in infrastructure provision.

In the Federal Capital City (FCC) the following bodies listed below and shown in fig. 1, are responsible for the provision and management of economic infrastructure in the city. They are discussed in the subsections in the order of listing.

i. Federal Capital Development Authority (FCDA)

ii. Federal Ministry of Works and Housing (FMWH)

iii. Abuja Municipal Area Council (AMAC)

iv. Abuja Environmental and Protection Agency (AEPB)

v. Others, including Water Board, and Federal Housing Authority

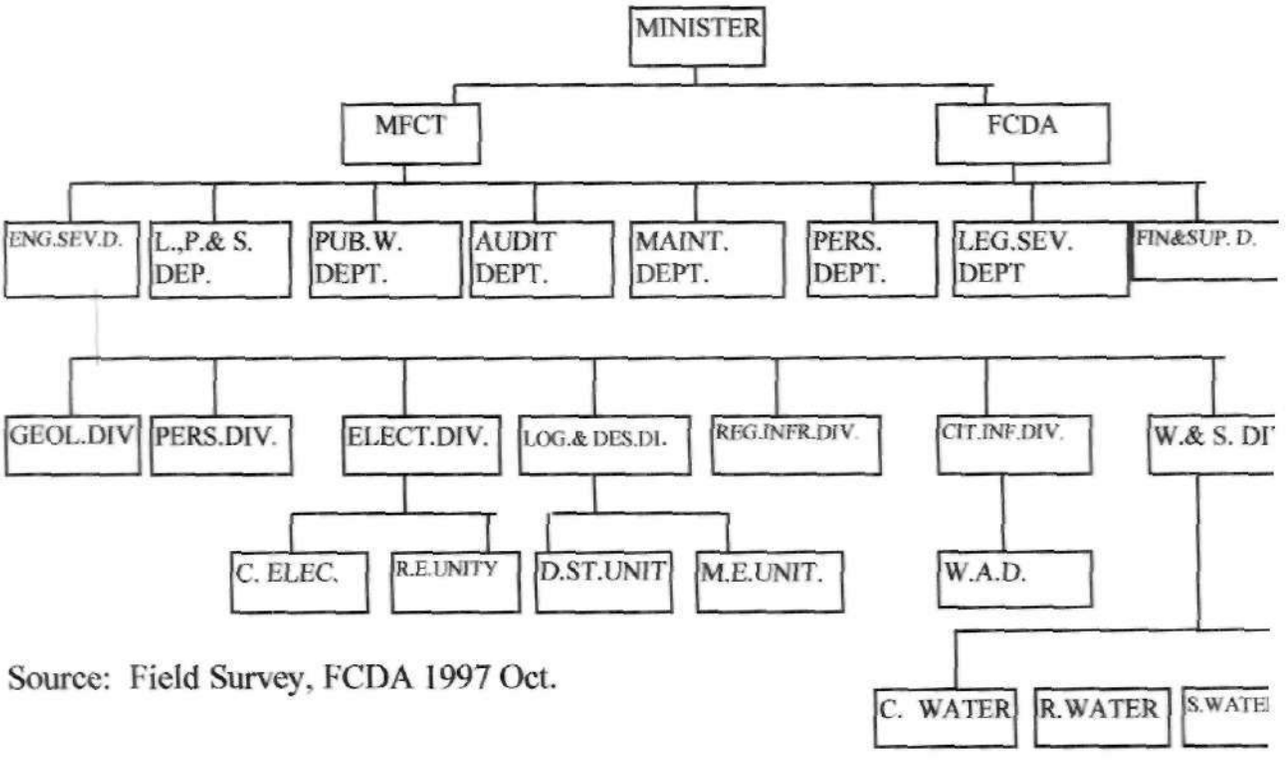
3.20 ADMINISTRATIVE FRAMEWORK

3.21 Federal Capital Development Authority

The main provider of physical infrastructure in the Federal Capital City (FCC) for the physical development and improvement of different phases of Abuja is the Federal Capital Development Authority (FCDA) an agency and has the following organisational framework.

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Fig. 1. Organizational Frame - Work For Infrastructure Provision In FCC Engineering Department



Source: Field Survey, FCDA 1997 Oct.

As can be seen from organisational chart, fig. 1, of MFCT and FCDA, the Minister runs the Ministry through the Directors of Department and professionals. The Authority was established by a Decree No. 6 of 1976 establishing the Federal Capital Territory (FCT) and Federal Capital Development Authority(FCDA). The FCDA was established to provide infrastructure as a key component of the physical development of the city. It has eight departments to perform these functions, as shown in fig. 1 above.

The functions of the Federal Capital Development Authority among others include:

(a) The provision of Municipal services within the Federal Capital Territory.

(b) Provision of infrastructure in accordance with the Master plan

In this analysis, attention will be on where the functions overlap, methods, type and nature of infrastructure provided by the Engineering Services Department, Public Works Department, Maintenance Department, Abuja Environmental Protection Board, Abuja Municipal Area Council, Federal Housing Authority FCT - Water Resource Agency and Federal Ministry of work and Housing.

(i) Engineering Services Department

Engineering Services Department of the FCDA has seven divisions involved with different aspects of the provision of infrastructure. They include:

a) Water and Sewage Division, which has the following functions :

(a) Water pipe line construction and supervision within FCC and FCT

(b) Dam construction and expansion, for example lower Usman Dam and Jabi Dam.

(c) Construction of overhead tanks within the city and satellite towns like, Kubwa, Karu etc.

(d) Vetting of design and making proposals based on the Master Plan of the city.In the case of sewage division, the Engineering Services Department is involved in: -

(a) Construction of sewer lines within the city for easy connection by individual plot owners; and

(b) Development of central sewer-system for the whole FCC

The city water and sewage unit of the Engineering Services Department, constructs and supplies infrastructure with the help of the Federal Capital Development Authority, by contracting it to any multi -national construction companies.

Apart from the FCDA, no other agency supplies water to the Federal Capital City (FCC). So far, the supply network to the phase 1, of the FCC has been completed in terms of laying of pipes(about 95% of the work); the remaining 5% is individual plot connection. The remaining three phases are yet to be handled.

(b) Electrical Division

The Electrical Division of FCDA Engineering Services Department has two main units, the city electricity supply and the rural electricity.

The city electricity supply, has two areas, namely city one and city two. The city one comprises, Asokoro, Garki 1 and 2 phase 1. For phase 2, there are Kado, Jabi, Utako, Mabushi Districts. While city 2, covers Wuse 1 and 2, Maitama, Central Area, Industrial Area of Idu, etc..

So far areas covered with electricity supply are Wuse 2, Maitama, Garki 1 and 2, and Wuse 1 districts. Those partially constructed include Asokoro 9 south-

west, Gudu, Jabi, Central Area phases 1 and 2, Wuye districts and those yet to be completed are Utako, Jabi, Dakibiyu etc. in phase II.(Refer to map 2 at the appendix on City electricity) for clearer understanding.

The division is engaged in the following:

a. Network and electrical facilities design; and

b. Construction work, for The supply and installation of transformers.

The main source of providing electrical facilities in Federal Capital City (FCC) is the FCDA, and the National Electric Power Authority (NEPA) is finally handed over the maintenance work and revenue collection.

(c) Logistics And Design Division

This is another section of the engineering services department. It has the Engineering Service Department which has four units, namely, design structure, mechanical / electrical and structure.The division has the following functions:

a. Monitoring of on-going projects;

b. Assessment of cost;

c. Employment;

d. Transportation planning;

e. Preparation of design for infrastructure for buildings;

f. Co- ordination of activities of the department;

g. The division is a think tank of the department of engineering services;

(d) Telecommunication Unit

The FCDA, Engineering Services Department provides telecommunications facilities. According to the records of the department, of telecommunication work for the whole of FCC from phases 1-4 which has been completed. What remains is the regional areas. Work is normally done by a multi-national construction company, like the ASTAC Nigeria PLC. The Telecommunication map 4 at the appendix to shows the average extent of average of telecommunication distribution in the FCT. Telecommunication as a unit has the following functions.

a. Installation of telephones;

b. Fault rectification;

c. Reticulation;

d. Initiation of projects;

e. Provision of telephone services;

f. Installation of intercom services;

g. Provision of TV booster station for NTA; and

h. Provision of fm (frequency modulation) station for FCT;

(e) City Infrastructure

City infrastructure as a division has the following as its functions:

a. Construction of different classes or hierarchy of roads within the city;

b. Construction of drainage along the roads;

c. Provision of street light in the city;

d. Provision of traffic light;

e. Construction of bridges;

f. Construction of project houses for the staff of FCDA, particularly engineering and services staffs;

So far, phase I of the Federal Capital City has been provided with drainage system, street light, different classes of roads and bridges. All these have been financed by FCDA, by contracting the work out to any multi-national construction firms, as well local contractors. Example of multi national companies include Julius Berger Nigeria PLC, Dantata and Sawoe, Paulosa etc. Physical development within the FCC is carried out district by district. For example, phase I has 5 districts, namely Asokoro, Maitama, Garki 1 and 2, Wuse 1 and 2 Central Area 1 and 2. Also some parts of phase II like Gudu district, have been provided with infrastructure, but the construction is not yet completed.

f) Regional Infrastructure

The regional infrastructure division within FCC, is in charge of the followings:

Construction of roads from regional areas that link the city e.g. Kuje - Airport road, Bwari - southern express road;

Bridge construction; and

Drainage construction;

(g) Geology Division

This section of the department of engineering services has the following as its functions:

i) Soil analysis, to know the composition, texture, and characteristics of the soil;

ii) To know the capability and strength of the soil in terms of different constructional strength or engineering works; and

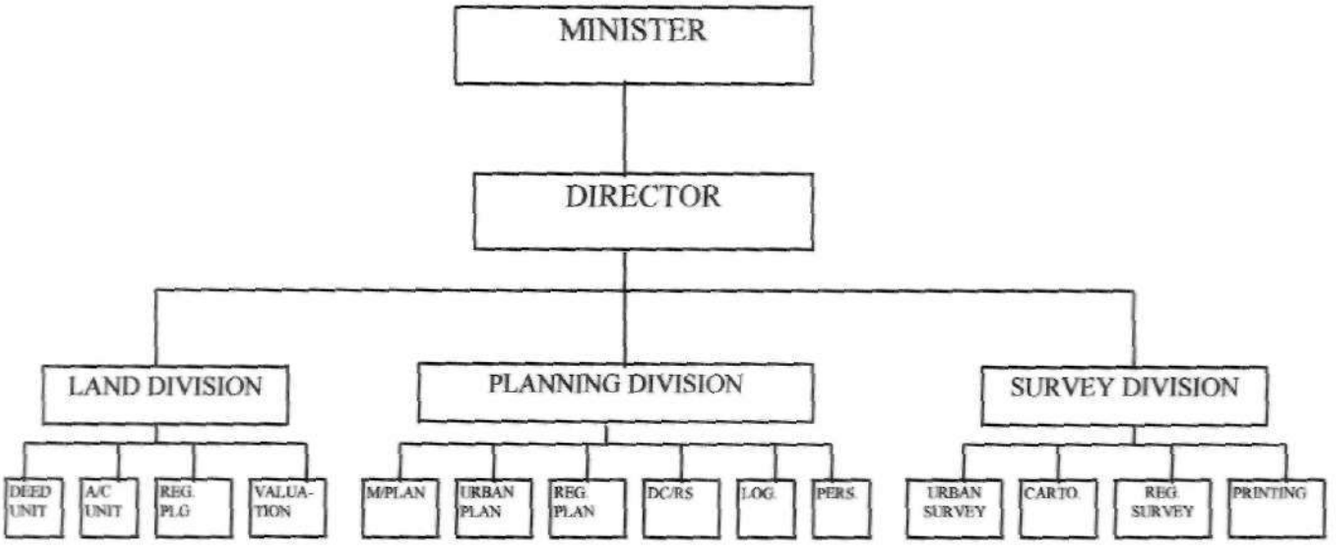
iii) To determine the availability of water at the surface and sub-surface layer of the soil;

(h) Personnel Division

This division is concerned with all persone matters of the department of engineering services and reports directly to central personnel department of the agency.

(ii) **Land, Planning And Survey Department**

FIG. 2 Organizational Framework For The Infrastructure Development Of FCC (Land, Planning And Survey Department)



SOURCE: Land, Planning, and Survey Department

The department of Land Planning and Survey has three divisions that make it operational, these include:- Land Division, Planning Division and Survey Division

i) **Land Division:**

This division has four Units, namely Deeds, Accounts, Registry and Valuation.

The functions of land division include:

a. Preparation of Premium fee and Ground rent for Certificates of Occupancy (C of O);

b. Registration of Certificates of Occupancy (C of O);

c. Revocation of Certificates of Occupancy (C of O);

d. Change of Use;

e. Assignment of property, that is, sale of plot; and

f. Opening of land files;

ii) Planning Division:

The Planning Division has six units, namely; Masterplan, Urban Planning, Regional Planning, Development Control and Resettlement Scheme Unit, Logistics and Personnel Units.

The functions of the division include;

a. Lay-out design of different landuses;

b. Supervision and Monitoring of Consultants on design purposes;

c. Recommendations and allocation of plots for various landuses;

d. Control and Planning of regional development areas;

e. Regulating, Monitoring and penalizing physical development in the City; and

f. Co-ordinating of activities within the department, for example, budgeting and personnel matters;

iii) Survey Division

This division has the following functions:

a. Establishment and re-establishment of survey beacons;

b. Re-design of plots;

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c. Settlement of disputes of land within urban area;

d. Surveying in regional areas;

e. The Cartography Unit is concerned with plots charting both in urban and regional areas, preparation of Title Deed Plans; while

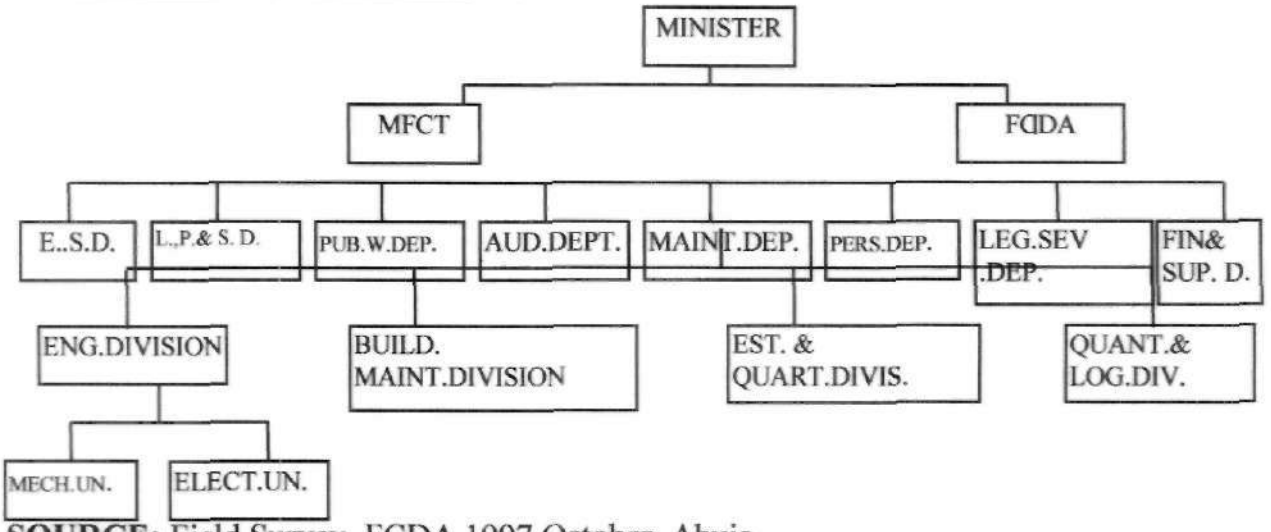
f. The printing department is concerned with production of cadastral sheets, printing of plans for commercial purposes;

Over-lapping In Function.

1. Areas of Conflict occur between the A buja Municipal Area Council (AMAC) and the Land, Planning & Survey Department of the FCDA in terms of land allocation. There does not seem to be clear demarcations of the limit or boundary of the exercise of jurisdiction on the matters of the two organs.
2. In Demolition exercises; problems also arise between Development Control and theAbuja Environmental Protection Board.
3. In addition there are ad-hoc bodies such as the Task Force on Environmental Sanitation established for both the FCC and the entire FCT and often charged with similar responsibilities with the agencies listed above.
4. There is also now in existence the Urban and Regional planning Tribunal established for offenders under Decree and Development Regulation/Bye-laws in the FCT This is supposed to so be but such offenders are often handled by the Task Force.

(iii) Maintenance Department

Figure 3 - Organisational Frame - Work For Infrastructural Development In FCT (Maintenance Department).



SOURCE: Field Survey, FCDA 1997 October, Abuja.

The FCT maintenance activities are being carried out by the department of Maintenance. The realisation that maintenance functions require Support from all other departments of the FCT led to its upgrading from a division in the department of engineering into a full fledged department.

The maintenance department has four major divisions. These include; engineering maintenance division, building maintenance division, estate and quartering division and quantity and logistics division.

a. Mechanical Division: it has the following as its functions:

i. Plant maintenance; and

ii. Workshop - repair of vehicles etc.

b. Electrical Division: This has the following functions:

i. Street light Installation;

ii. Residential building maintenance;

iii. Repairs of electrical faults in public building; and

iv. Maintenance of International Conference center (ICC).

c. Building Maintenance: it has the following as it functions:

i Maintenance of residences;

ii Maintenance of public buildings; and

iii Civic maintenance of both roads and bridges.

d. Estate Quartering Division: its functions include:

i Staff quartering;

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ii Furnishing of public buildings; and

iii Furnishing of residences, hospitals and schools;

e. Quantity And Logistics Division: This performs the following functions:

i. Preparation of bills of quantity for building maintenance; and

ii Provision of Tender board memos.

In order to consolidate, Integrate and Implement the maintenance policy of the FCT, the department has a close co-ordination with other departments and Specialised agencies such as FCT water Board, Environmental Protection Board and others.

(iv) Public Works Department

The Department of Public Works of FCDA is the chief provider of social infrastructure for example, hospitals, schools etc., but also plays certain roles in providing economic infrastructure, especially in areas like staff housing projects that are not large, but if the project is large, engineering service department is called upon to provide it.

i. Housing Division

This division is in charge of housing design architectural and supervision of housing projects. In this division, different services are involved, they include, electrical services and quantity surveying.

ii. Pubic Building

This section is divided into two parts, the mechanical and electrical division.

iii. **Quantity Division**

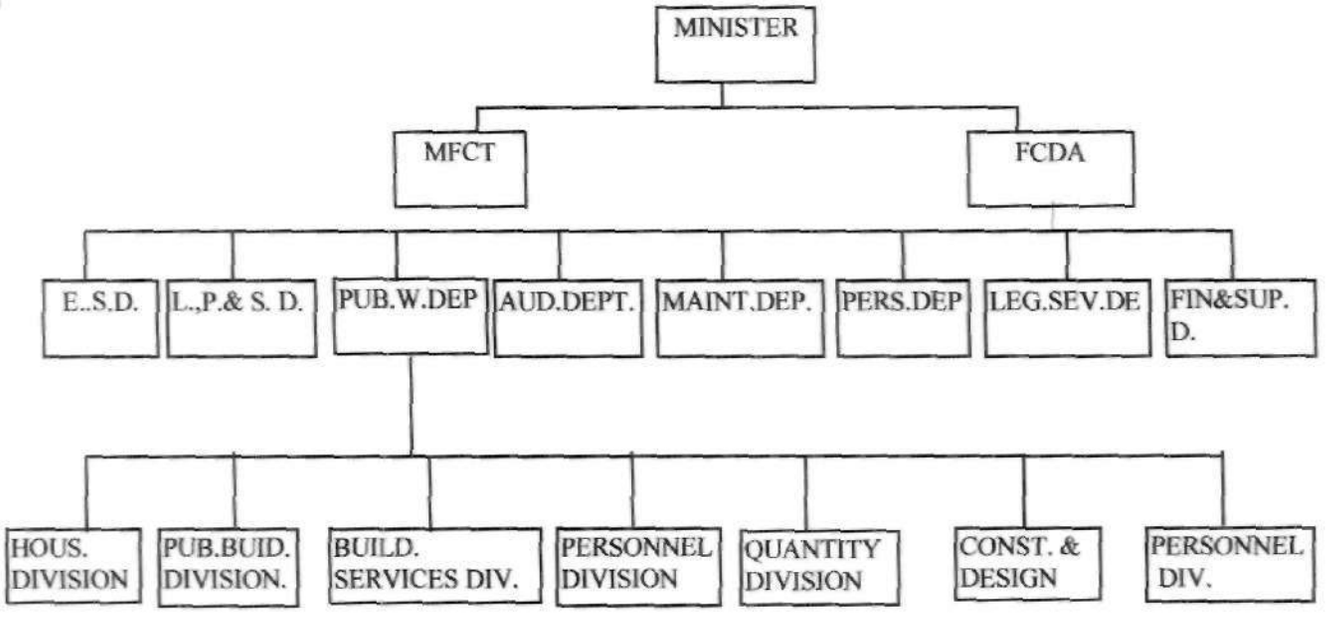
The function includes:

a. Preparation of bills of quantity of all projects;
b. Projects control;
c. Quality control;
d. Interim valuation of projects;
e. Tender analysis;
f. Variation of contract;
g. Fluctuation;
h. Profit monitoring; and
i. Contractual claims and preparation of bills of quantity.

iv. **Construction and Design Division:** its functions include:

a. Supervision of the construction of housing and public buildings; and
b. Structural design work.

Fig 4: Organisational Frame Work Of Public Works Department For Infrastructure Provision And Management in FCC



SOURCE: Field Survey, FCDA 1996 Oct.

v. **Personnel Division-** The division is in charge of all staff matters, pertaining to junior and senior staff; including promotion, staff welfare, records etc.

vi. **Logistics** - Co-ordinates all matters, internal and external that relates to the departments.

3.22 ABUJA ENVIRONMENTAL PROTECTION BOARD (AEPB)

Abuja Environmental Protection Board is an agency created to manage, supervise and maintain the growth of the capital city in a clean and orderly manner. The agency has six departments and is under the Ministry of the FCT. It has the following as its functions, according to departments:

i. **Engineering Department**:

The department has two different units':- workshop and landscaping units.

a. **The Workshop:**

As a unit, the workshop is used for maintenance of all plants and vehicles in the Board. These plants and vehicles include, Bull-dozers, Tractors, Lorries, Pay-Loaders, Fillers, etc.

b. **The LandScaping Unit**: The unit has the following functions:

1. Development of parks
2. Beautification of the city
3. Establishment of zoological gardens
4. Planting of trees as a protection against erosion.

ii. **Public health department**: This has three units to handle .

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They are;

a. **Inspectorate Division:** It has the following as it roles:

1. Pest and vector control;

2. Street cleaning;

3 Control of stray animals; and

4. House-to-house inspection;

b. **Laboratory Division**

1. The laboratory division is in charge of water chemical analysis and bacteriological examination;
2. Food poisoning testing; and
3. Fermugation of insects and de-ratting.

c. **Enforcement Division** – This controls illegal structures of hawkers and butchers on the streets.

iii. Open - Space/ Orchards Department

The function of this department includes:

a. Clearing of grasses at green areas and other public areas, and

b. Planting of flowers and hedges.

iv. Waste Management And Sanitation Department

The functions of the department include:

1. Distribution of dustbins to residents and organisations; and
2. Collection and disposal of solid- waste.

v. Liquid Waste Unit

This has the following as its functions:

1. The control of blockage of sewer lines; and
2. Inspection of soak-aways, and Pit-latrines.

vi. Personnel Department

This department is concerned with all personnel matters, that is, employment, discipline and promotion.

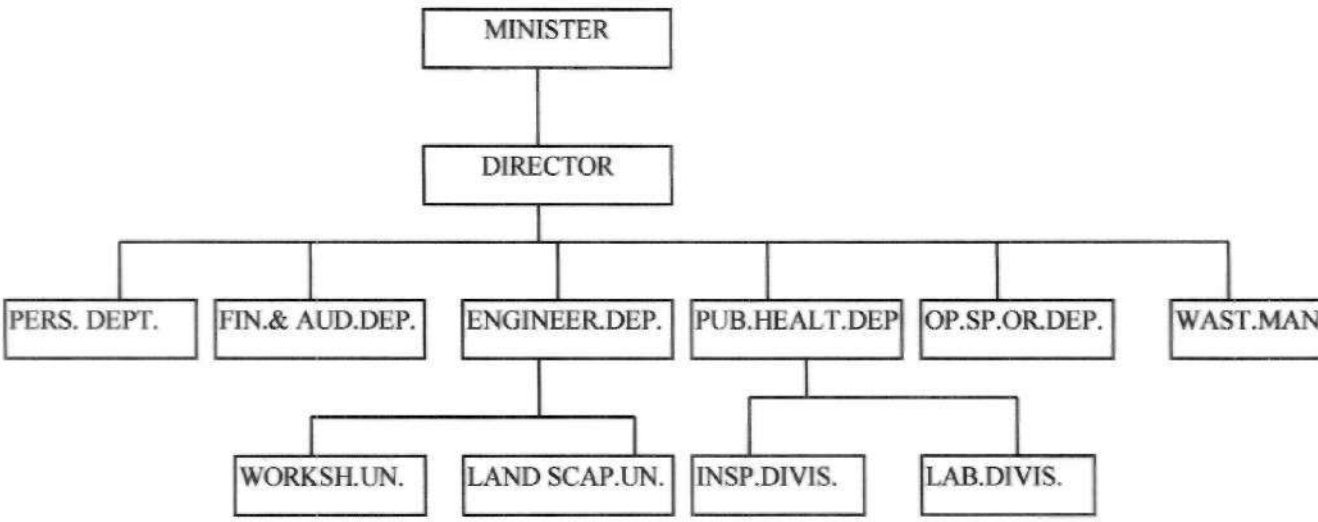
vii. Finance Department

The department is concerned with all financial matters relating to the board,

viii. Overlap In Function

1. There are overlappings between the functions of the Development Control Division of the Land, Planning and Survey Department of FCDA and the enforcement unit of AEPB, that is, in areas of demolition power. There exists no clear-cut boundary on individual jurisdiction.
2. Conflict also exists in function between Abuja Environmental Protection Board and the Abuja Municipal Area Council on sanitation issues.

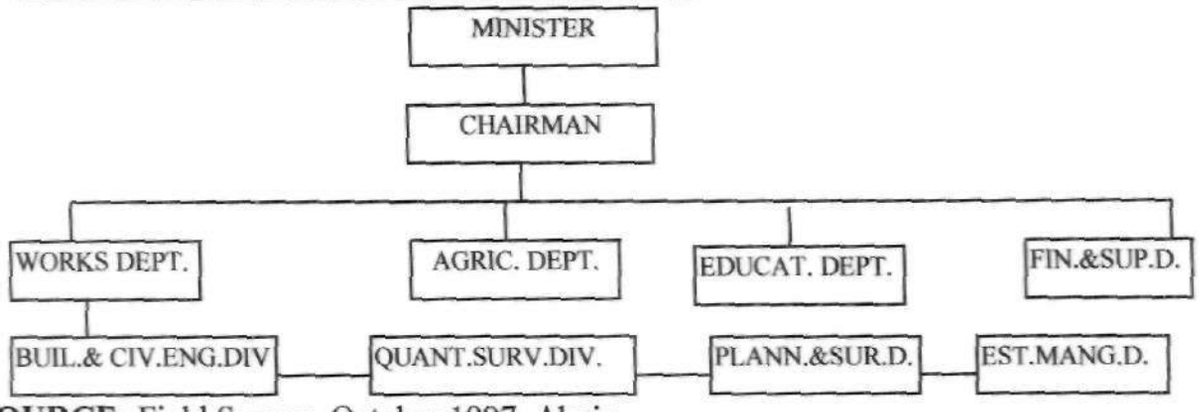
Fig. 5 Organisational Framework For Infrastructure Development And Improvement /Management Of FCC(AEPB)



SOURCE :Field Survey October, 1997 Abuja.

3.23 Abuja Municipal Area Council

Fig 6 Organisational Framework For The Infrastructure Development And Improvement /Management Of FCC (AMAC)



SOURCE: Field Survey, October 1997, Abuja.

i. Functions Of Abuja Municipal Area Council

1. Market development and maintenance. Here markets are usually built by FCDA and handed over to AMAC.
2. Allocation of plots at unserviced areas, e.g. satellite towns
3. Garbage collection (sanitation exercise) at Nyanya, Garki village, Gwarimpa, from time to time.

ii. Overlap In Functions

There is no clear - dividing line distinguishing between which area is a rural plot and which is an urban plot. The FCDA, FHA and AMAC don't have clearly defined boundaries for their functions, when it comes to plot allocation and usage.

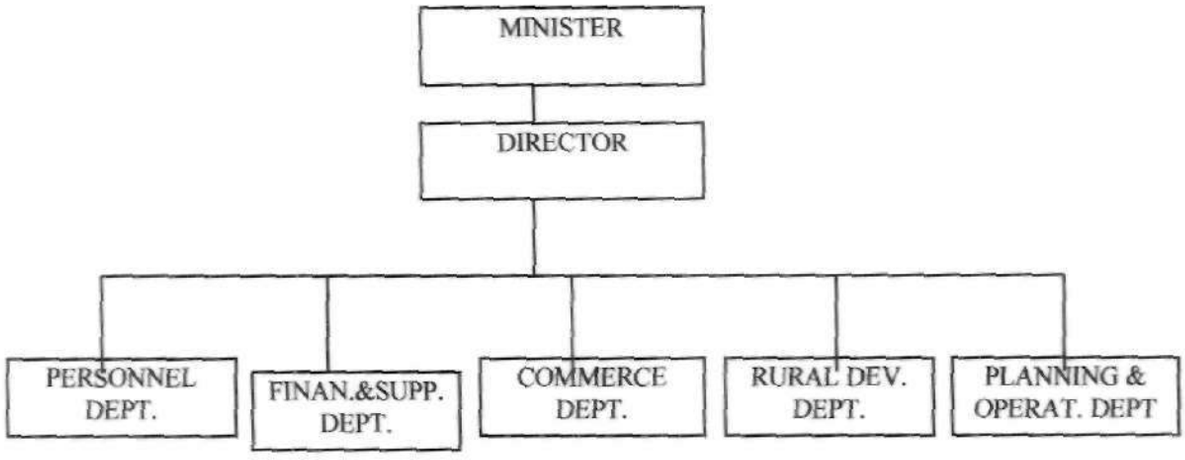
3.24 FCT WATER RESOURCE AGENCY

The Water Resources Agency was created in 1989 to provide healthy and adequate water for human consumption and Industrial use in the FCT, under Decree 6 of 1976.

The main objectives of the board include: -

1. To control, manage, install, maintain all water works and services vested or to be vested on the board by the Minister of Federal Capital Territory;
2. To secure for present and future generations an efficient use of potable water;
3. To encourage the contract of research for the purpose of carrying out its function;
4. To harness all water resources of the territory for economic development; and
5. To submit the result of such research to the Hon. Minister, for policy formulation relating to water supply and pollution control in the territory.

Fig7. Organisational Frame - Work for Infrastructure Provision and Management in FCT - Water Resource Agency.



SOURCE: Field Survey Oct. 1997

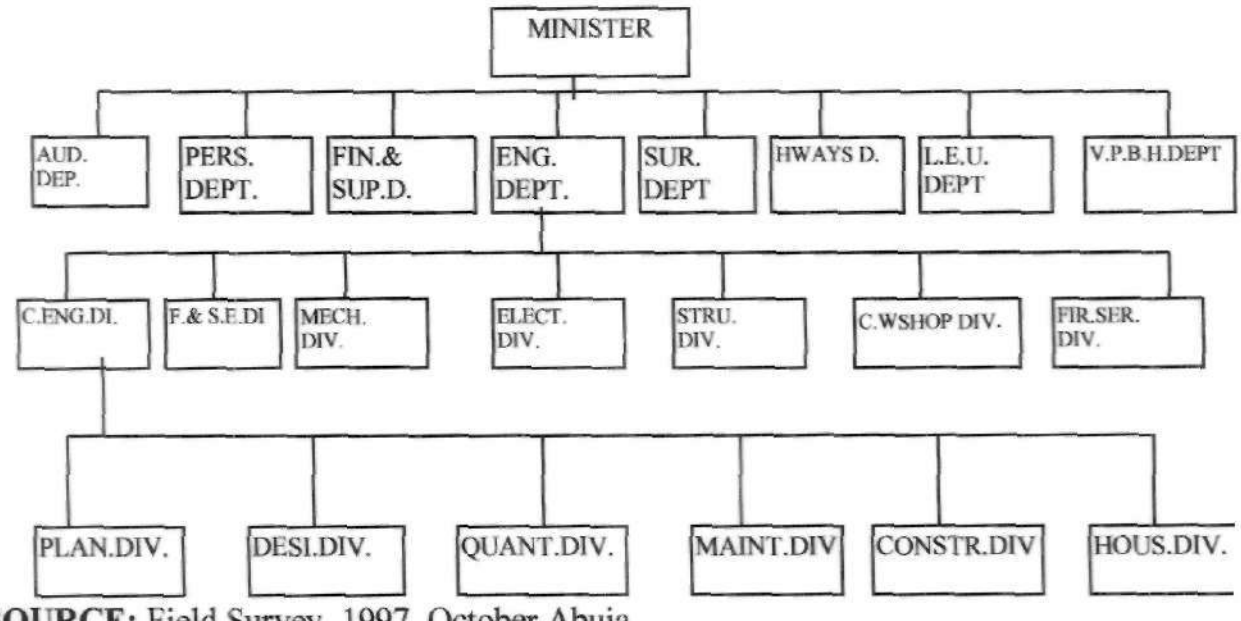
FUNCTIONS OF FCT WATER RESOURCES AGENCY

1. **Personnel Department:** - Is in charge of all general administration and staff matters.
2. **Finance and Supply Department:** - Controls the board finance.
3. **Commerce Department:-**
   i) In charge of billing and distribution of bills
   ii) Revenue Generation
4. **Planning and Operations Department:** -
   i) In charge of water connections and maintenance of pipelines.
   ii) Planning and monitoring of budget.
5. **Rural Development:** - In charge of rural water supply and rural mobilization.

3.25 FEDERAL MINISTRY OF WORKS AND HOUSING

The Federal Ministry of Works, Land, and Housing is charged with the responsibility of providing good road net-work nation wide, bridge construction, erosion control and provision of houses for staff and the general public. They also carry - out construction, rehabilitation and maintenance of public buildings nation - wide. They also engage in site and services schemes. So far, the ministry has been able to execute considerable number of projects in the FCC and provided necessary economic infrastructure within its area of physical development. For example within FCC and FCT are Kado housing estate, Karu, Kubwa, satellite towns etc.

Fig 8 organisational Framework For The Infrastructure Development And Improvement /Management Of Federal Ministry Of Works And Housing Abuja.



SOURCE: Field Survey, 1997, October Abuja

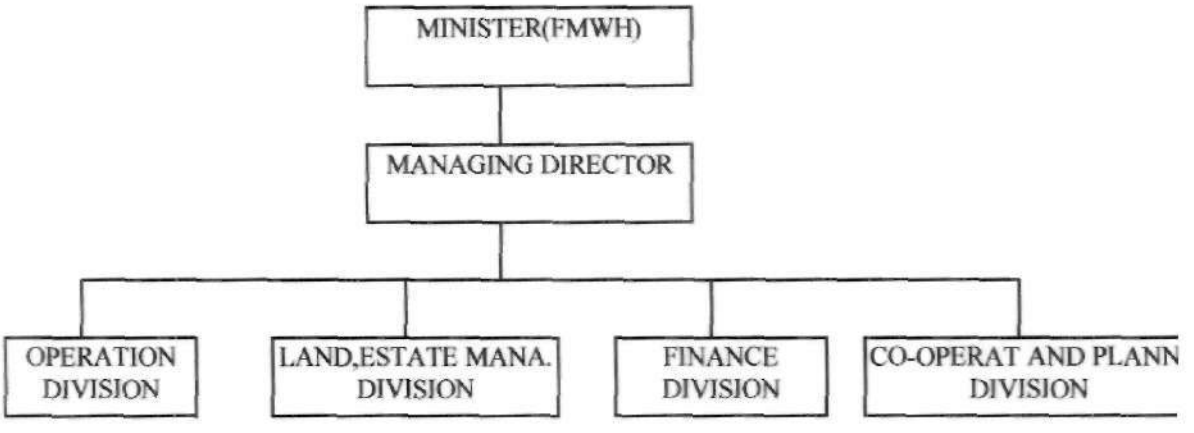
3.26 FEDERAL HOUSING AUTHORITY

The Federal Housing Authority is an agency created out of Federal ministry of works and Housing. The objectives of federal Government creating this agency include the followings:

a) Preparation and Submission from time to time to Government of proposals for National Housing programmes;
b) The making of recommendations to the Government on such aspects of Urban and Regional planning, transportation, Communications, Electric Power, Sewer and Water Supply development as may be relevant to the successful execution of housing programmes approved by the Government; and
c) The execution of such housing programmes as may be approved by the Government as well as selling such out to the public, as a profit making organisation.

The Federal Housing Authority have the following Administrative frame - work as shown below.

Fig. 9 Organisational Frame - Work for the Infrastructure Development in FCC (Federal Housing Authority)



SOURCE: Field Survey, 1997, Oct. Abuja

i. Operation Division

The operation division of the agency has three different units, namely: Housing Division, Engineering Division and Research and Planning Division.

a) Housing Division - Its main functions are design , monitoring and construction of different categories of houses.

b) Engineering Unit - The Unit is concerned with Mechanical, civil, Electrical, Structural aspects of housing and infrastructure.

c) Research and Planning - The Unit is concerned with carrying - out research on the kind of houses needed, prices of building materials, co-ordination of management and professional ideas within and outside the agency.

ii. **Land and Estate Management Division**:- It has the following factors

a) Valuation - That is valuation and assessment of different land and property for compensation purposes before acquiring land for development.

iii. **Finance Division**: - This Division is concerned with all financial matters within and outside the agency, like budget planning and execution, revenue generation means etc.

iv. **Corporate and Planning Division**: - It is concerned with all administrative matters of the different divisions, processing of contracts; in short, Logistics and design of the agency is its primary concern.

The presence of the Authority can be seen around Abuja, in the following areas: - Lugbe, where a total number of 2,500 housing units have been constructed and provided with infrastructures. Other areas include, Kado with 960 housing units, and the current one is at Gwarimpa district where a total amount of N3.5 billion is committed to the project.

3.30 FINANCING FRAMEWORK:

The existing framework for financing Infrastructure in FCC (source of finance), by agencies and establishments appears somewhat similar in source and strategy. They include: -

3.31 FINANCING SOURCE

i. **The Federal Capital Development Authority** (FCDA) has the following as its sources of finance.

a). Federal Statutory Revenue Allocation;

b). House Numbering by Development Control Division, where N500.00 is charged for every house;

c). Contravening Fee;

d). Special grants from Federal Government through the Presidency;

e). Revenue Generation from Land, Planning and survey Department, such as processing fee, Ground Rent, Building Plan processing fees, Printing of Plan Fee, Extension Fee, Penalty on illegal conversion of Land-Use, Certificate of completion fees, setting out fee, and demolition fee;

f). Charges on completed Contracts;

g). Royalties paid by manufacturers to FCDA, for example, quarry activities by Messrs. Julius Berger (Nig) PLC, Strabag Construction Company, Crushed Rock Industries Limited to mention a few;

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h). Bill Board erection fee for advertisement by Commercial houses and individuals payable to the Development Control Division; and

i). Revenue generated from Stores built by FCDA for commercial purposes as well as the Value Added Tax.

ii. Abuja Environmental Protection Board:

Its sources of finance for the Infrastructure maintenance within the Federal Capital City (FCC) include:

a. Budgetary allocation by the FCDA in a form of statutory allocation;

b. Grants and other financial support from Federal Environmental Protection Board (FEPA);

c. Internally generated revenue from the following Sources:

i. Connection of sewer lines to individual plots;

ii. Monthly charges for the collection and disposal of refuse;

iii. Charges on the demolition of illegal structures; and

iv. Charges for pest-control activities in private properties and offices etc.

iii **Abuja Municipal Area Council:**

Sources of financing for maintaining infrastructural facilities in the FCC by the Local Government include:-

a. Grants from the Federal Capital Development Authority;

b. Federal Statutory Revenue Allocation to Local Government and Grants from the Federation account;

c. Internally-generated revenue from plot connection fee and monthly payment of water bills; and

d. Other sources like, revenue generated from land, market tax, commercial shopping activities, mass transit buses and out door activities for annual revenue generation ie. Trade fair.

iv. **FCT - Water Resource Agency**

The FCT Water Resource Agency has the following financing sources: -

a. Statutory allocation from FCDA;

b. Special Grants from Federal Government; and

c. Internally-generated revenue from plot connection fee and monthly payment of water bills.

v. **Federal Ministry of Works and Housing (FMWH)**

The Sources of finance of this Government establishment include:

a. Federal Government grants and annual budget allocation;

b. Construction and selling of houses to the public, where some interest is charged;

c. Site and services programme;

d. Other land-related means, that is, processing of land applications etc.

e. Revenue generated through toll plaza;

There are loans, grants and aids from International agencies such as UNDP, European Union in a form of material or finance, for example, ecological disaster fund that comes in yearly.

vi Federal Housing Authority

The source of financing for infrastructure in this agency include:

a. Loans: The Federal Housing Authority collects loans, at an interest-free rate from which it builds and constructs houses and then sell them out to public

b. Special Grants – Similarly finance for providing infrastructure comes through special grants to this authority. For example houses built all over Nigeria by Shagari administration, known as National Housing programme

c. Sale of Property - The Authority also generates revenue from its sale of houses to the public. The interest generated from this is used to carry-out other projects within the city.

3.32 FINANCING STRATEGY:

There are two basic methods of financing physical economic infrastructure development and management within the Federal Capital City (FCC) by

Government agencies. It includes Contract-based approach and the direct labour approach.

i. **The Contract Based-Strategy**: -

About 90% - 95% of physical or economic Infrastructure in Federal Capital City phase I, are provided through contract method, by multi-national construction companies and local contractors (Planning, research and Statistics Department, FCDA), through Federal Capital Development Authority.

The strategies for financing infrastructure in FCT/FCC are two, and they include, Capital projects and Special fund project.

a. The Capital projects (FCT/FCC) are the normal FCT projects which facilitate the administration of the territory, for which provisions are made in the annual capital budget. Thus, the capital budget is mainly for the provision of funds for basic infrastructure and social facilities and its maintenance;

b. Special Funded Projects (Presidency) are those critically important projects that are beyond the financial capacity of the FCT, funded by the Presidency through the Central Bank of Nigeria (CBN). Projects that fall into this class are those related to provision of districts' infrastructural facilities, complex institutional buildings and their expansion and maintenance.

The two strategies discussed above are not only applied within Federal Capital Development Authority, but its agencies , like the Abuja Environmental Protection Board, Water Resource Agency, Abuja Municipal Area Council. Also the Federal Ministry of Works and Housing applied similar strategies to execute and finance physical infrastructure and management.

In the case of Federal Housing Authority, the strategy they used in infrastructure provision is that loan is collected from Federal Government (Finance Ministry) and used for construction of houses and infrastructure provision and is an interest free loan.

ii. Direct Labour Strategy

This approach involves the rehabilitation of roads, either filling of pot holes, purchase of plants for use in the Zoological Gardens, fuel use by the vehicles, office stationary, hire of labourers for sanitation work etc. This kind of job is normally undertaken by staff of the Department or Board, An example of such Departments include, Maintenance Department of FCDA for filling of pot-holes, electrification work, like transformer installation in Engineering Services Department (FCDA). There is Maintenance of highways by Works and Housing Ministry. The method of payment or financing strategy is either through monthly imprest or cash advance through the FCDA and departments concerned

3.33 SHORTCOMINGS OF THE CONTRACT-BASE STRATEGY

The contract method of providing infrastructure in Abuja city, has a lot of short comings compared to partnership approach - some of the limitations include:

1. It puts too much responsibility on government in terms of finance, it is therefore a one man affair, instead of spreading the whole activities to every individual and organisation in the community;
2. The contractors that are engaged in the provision of infrastructure in Abuja (FCC) are multi national construction companies with sophisticated technology, the structures they put in place are of high standard, the maintenance after completion is always problematic. Some of the facilities and utilities within phase I have started showing some element of degeneration.

3. Since there is no involvement of other members of the community in terms of skill, finance and decision making, they do not see the need to contribute in sustaining the infrastructure in a continous manner;
4. Also workers employed like the middle and low- income earners are thrown out of job, the moment the contract is finished. Unlike The partnership approach that encourages sustainable physical development and management of the services provided. For example, services, facilities and utilities provided by government through some agencies like the Jos Metropolitan Development Board and Kaduna Urban Planning and Development Board have deteriorated due to lack of maintenance.
5. The approach does not encourage the use of local construction materials, techniques and manpower.

Table I - Showing the amount of Ground Rent and Premium Fee payable for each category of plot and the amount for 99yrs

	RESIDENTIAL PLOTS			**EDUCATIONAL**	**RELIGIOUS**	**FILLING STATION**	**SHOP &SUP.MARK.**	**HOUS.EST.& STAFF QRT.**	**OFF. &RELATED USE**	**TOTAL**
	HIGH DENSIY	MEDIUM DENSITY	LOW DENSITY	-	-	-	-	-	-	GRAND RENT
GROUND RENT	=N= 226655	=N= 226182	=N= 163203	=N= 160790	=N= 6049	=N= 58943	=N= 4247677	=N= 6868917	=N= 12680	=N= 5789079
PRMIUM FEE	4121000	4112400	2967460	1286305	48780	196475	19822494	12488940	8068480	12572865
TOTAL	=N= 4347655	=N= 4338582	=N= 3130645	=N= 1447095	=N= 51829	=N= 255418	=N= 24070171	=N= 24070171	=N= 24070171	=N= 80697480

Source: Field Survey, Oct, 1997, FCDA.

Table 2 Showing Financial Sectorial Allocations From 1984 - 96

S/n	Sector	Year 1984 Alloc.	1985 Alloc.₦	1986 Alloc.₦	1987 Alloc. ₦	1988 Alloc.₦	1989 Alloc. ₦	1990 Alloc. ₦	1991 Alloc. ₦	1992 Alloc. ₦	1993 Alloc. ₦	1994 Alloc.₦	1995 Alloc. ₦	1996 Alloc. ₦
1.	Economic	193503000	102968000	94352840	92287000	121526000	179740000	128010000	186221000	150251000	309188000	205953180	5700000	198362250
2.	Social service	2930000	755423000	24706000	60621000	58583000	68116000	119273000	141922000	67267000	211034000	194070000	175500000	168411650
3.	Reg.Devt.& Infr.	8500000	258883000	219678000	276222000	259380000	305433000	361220000	396204000	249526000	541936000	103497470	1603000000	290293000
4.	Gen.Adm.	55750000	600479000	415996480	102652000	593638000	280250000	319490000	1030377000	940573600	1936462000	2035042160	3605734950	1213217600
5.	Total	260143000	1717753000	754733320	530782000	10331227000	554649500	927993000	1754724000	1407617000	3000620000	34700408108	5389934950	1870315160

FINANCIAL ALLOCATIONS FOR INFRASTRUTURE IN FCT

This seems to be changing Table 2 above, shows that the Federal Capital Development Authority (FCDA) has committed large amount of money on the provision and management of infrastructural facilities. Going through the table and years can be seen that sectorial allocation on infrastructure has almost the highest share, despite other important sectors like social services, economic and general Administration. See table 2, for detail and comprehensive illustration.

3.34 COST BENEFIT ANALYSIS OF GROUND RENT FOR 99 YEARS VS COST OF THE PROVISION OF INFRASTRUCTURE BY THE FCDA IN ABUJA

A cost Benefit analysis of rent was computed for one district as a case study and compared with infrasture provision as shown below:

Complete total amount for ground rent and premium fee for 99 years was computed.

This gave a sum of = N498, 334231 Premium fee for 99 years = N12572805

Total = N510, 907036

Going through this analysis, there is the need to show the amount government or FCDA spend on economic infrastructure alone in Garki II districts, to be able to make comparism and see the success and limitation of the approach.

From available information, the FCDA has so far spent about ₦7720.06 million or ₦7.720 billion from 1989 - 1994 on economic infrastructure. Based on this information the following observations were made:

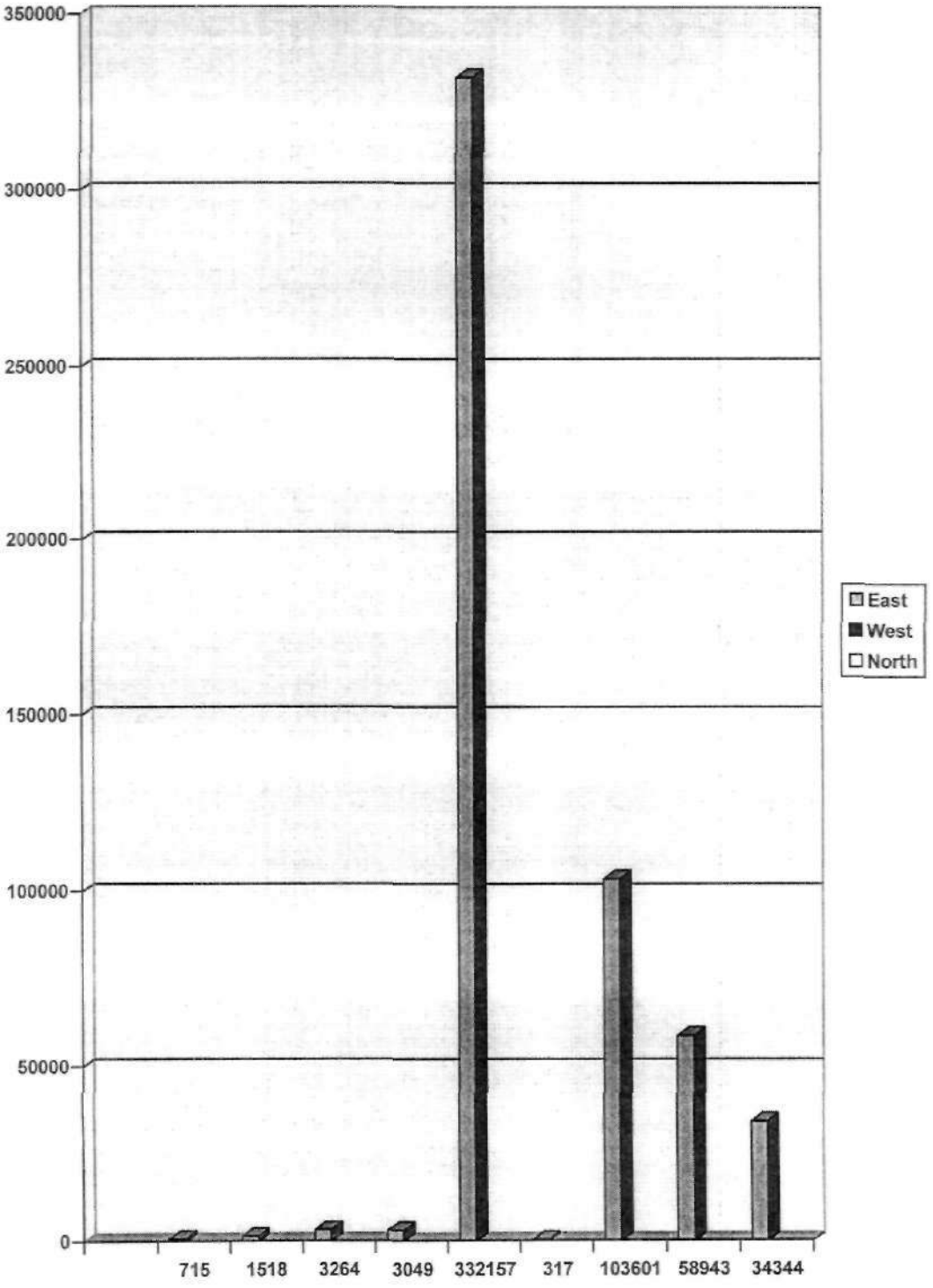
The Federal capital development authority spent about ₦7.720 billion on or to facilitate the use of 1086 plots of different uses and density. On the average it means

₦772,000,000.00million ₦ 7115207.

Thus, government or FCDA spent =N=7225207 on each plot to attract individual or public/private development. While from the table and the analysis, it can be seen that the overall ground rent and premium fee for the whole plot is =N=578079 and =N12572865 respectively. Also the sum total amount of fee for both the ground rent and the premium fee for 99 years is =N510,907036. While the total amount spent by FCDA on each plot is =N7115207, for this analysis it means government is just giving out plots freely to people without paying the right dues. For detail understanding refer to table I, above, figures 7, 8, 9 and 10 below.

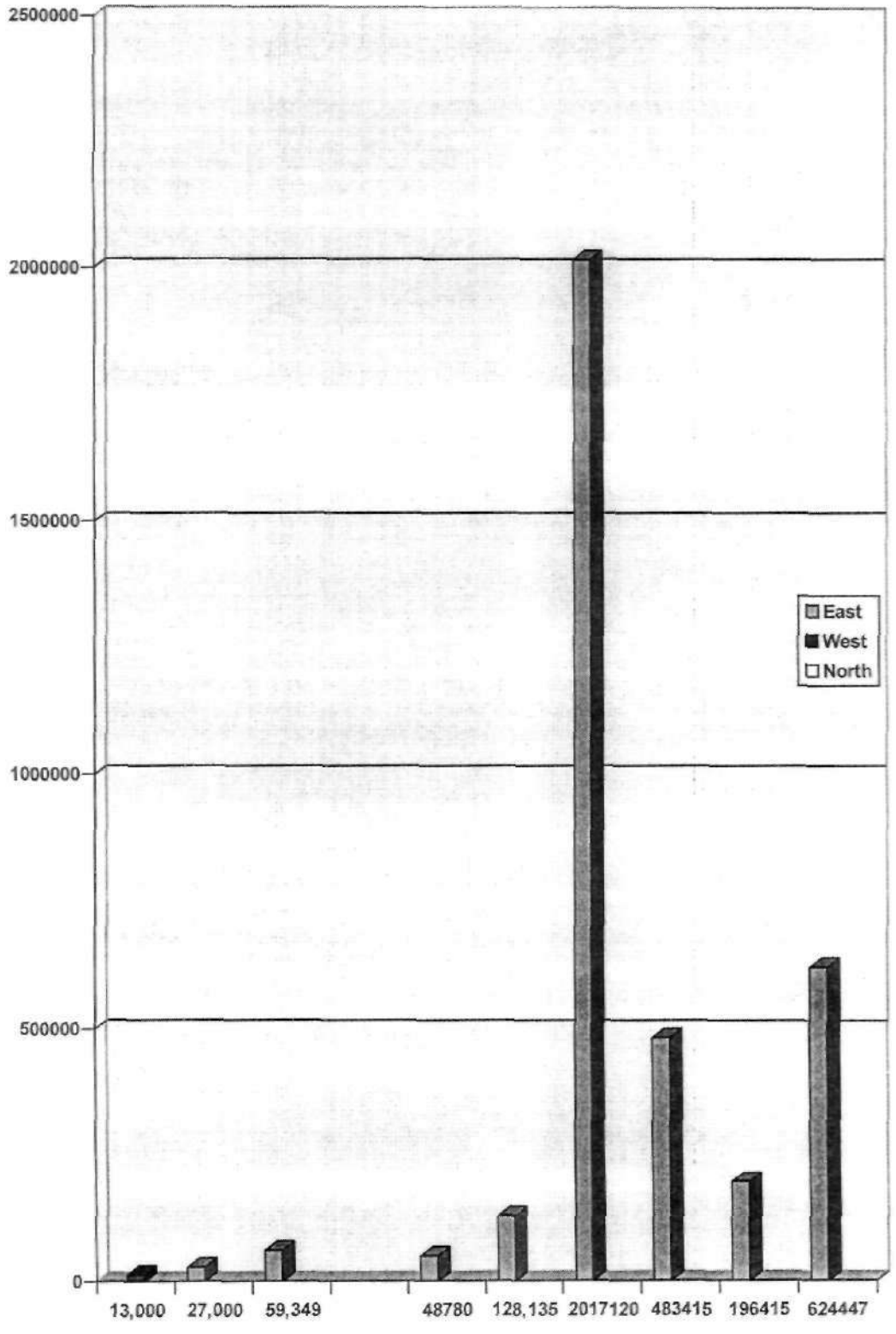
The second inference made is that individual plot owners or land speculators sell a medium density plot (i.e.1000 sqm - 1, 950sqm) at =N=3 million - ₦4 million a and low density (from 2000 sqm and above) at =N=4 million , 11 million Naira, while the applicants acquire it at less than =N150,000 - -N200,000.00.

The third observation made is that it can be seen that the amount spent on infrastructure alone in Abuja, not to talk of other sectors of the National development is enormous. About =N=7.720 billion on one district for economic infrastructure, hence the need to identify partners and actors to accelerate the development of FCC.



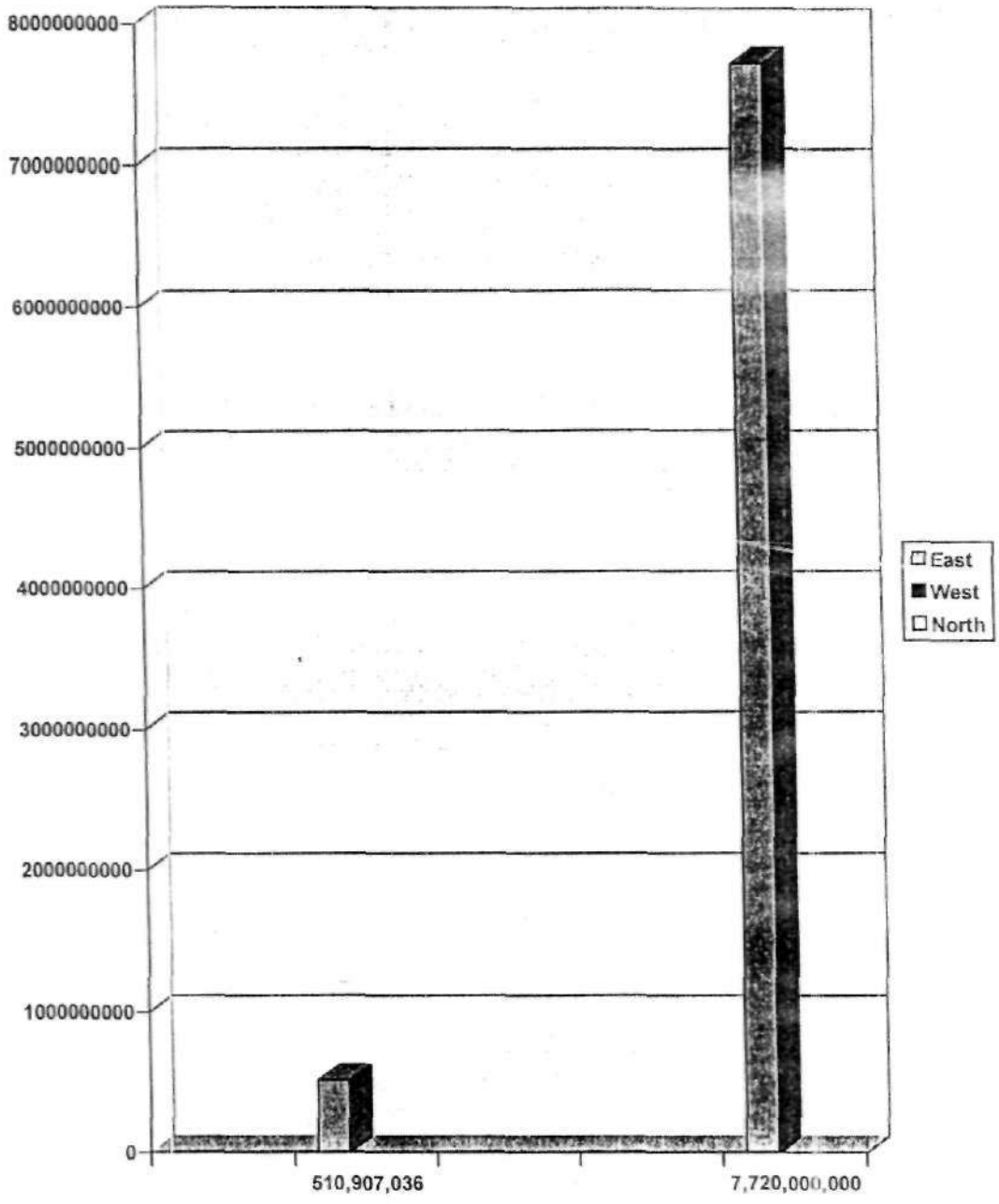
SOURCE: LAND, PLANNING & SURVEY, FCDA, Oct. 1997.

FIG.11: BAR-GRAPH SHOWING ALL LANDUSES IN FCT AND ITS GROUND RENT - AVERAGE OF THE WHOLE TOTAL IN NAIRA.



SOURCE: Field Survey, Department of Land, Planning and Survey, Oct. 1997.

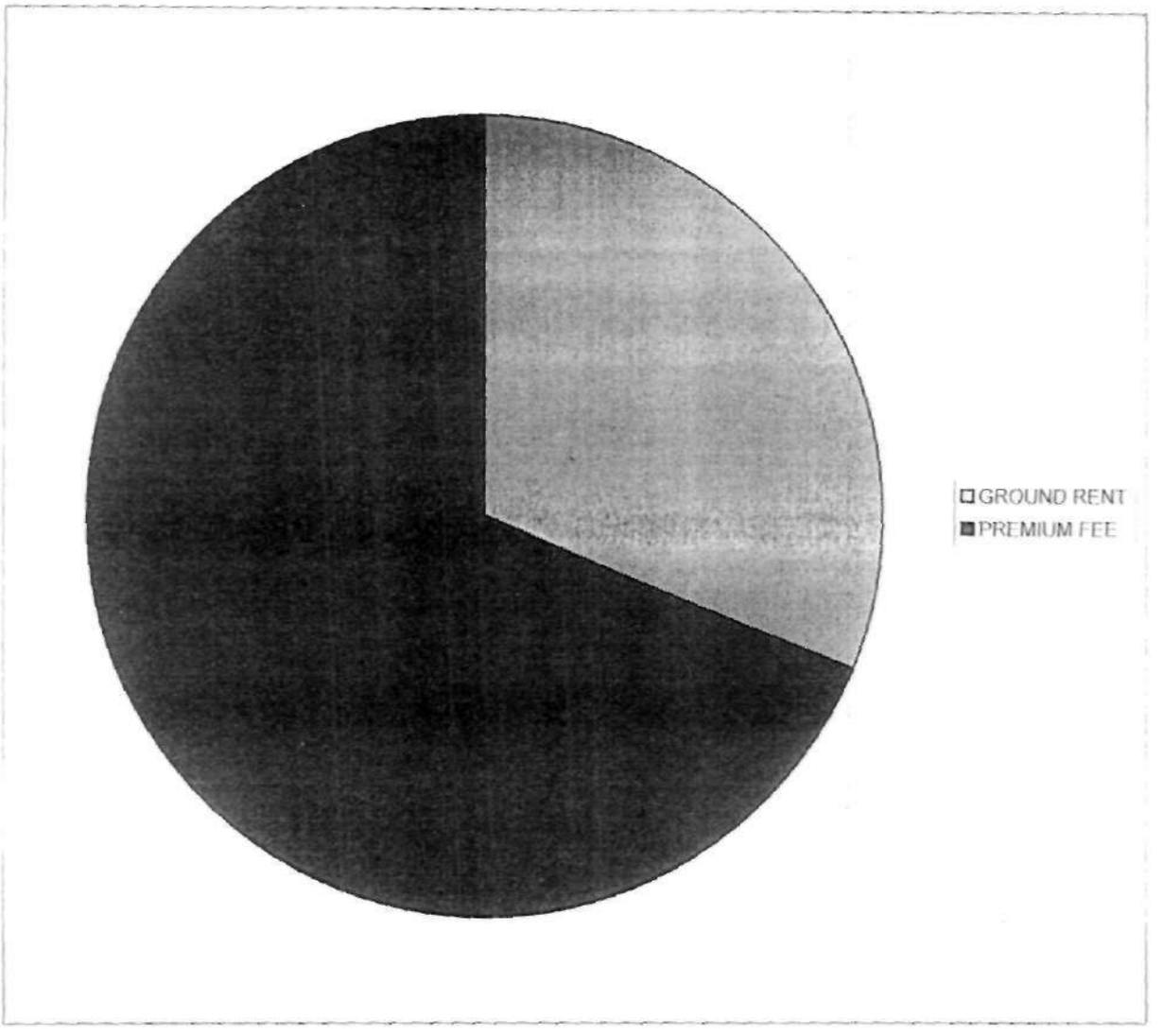
FIG. 12: BAR-GRAPHY SHOWING ALL LANDUSES IN FCC AND ITS PREMIUM FEE – AVERAGE OF THE WHOLE



SOURCE: Field Survey, Department of Land, Planning & Survey, FCDA, Oct., 1997 Abuja.

FIG.13:BAR-GRAPH SHOWING THE TOTAL AMOUNT FOR THE WHOLE LANDUSES FOR A PERIOD OF 99 YEARS AND AMOUNT SPENT ON ONE DISTRICT TO PROVIDE INFRASTRUCTURE (GARKI II - PHASE I). AND COLLECTIVE SPENDING (GROUND RENT AND PREMIUM FEE) AND GOVERMENT SPENDING IN BILLIONS.

GROUND RENT	31 %
PREMIUM FEE	69 %



SOURCE: Field Survey, Departpment of Land, Planning & Survey, FCDA, Oct.97.

Fig.14 Showing Ground rent and Premium fee for the whole Land uses.

3.35 SUMMARY AND CONCLUSION OF DATA ANALYSIS

In conclusion to this chapter, it has been discovered from the analysis, that for a single district to be put in place in terms of infrastructure provision or to make it developable a total sum of about N7.7346bn. is required and for the 14 planning districts in Phases II, about N5000 billion is needed to provide infrastructure, that is, some districts need about N10billion, N15billion, and N20billion and as discovered in the preceeding chapters in the 14 planning district of Phases II, only of the two districts have been provided with economic infrastructure (i.e Gudu and Jabi district) while the remaining 10 districts are yet to witness any thing.

Also looking at the allocation to different sectors within FCDA and MFCT on infrastructure large amount of money has been committed to infrastructure right from 1984 to date, but still there is no significant progress in terms of infrastructure provision, with three more phases ahead.

Considering large financial responsibilities by the Federal Government that is on social economic and political problems, the rate Government, through FCDA spent on infrastructure cannot continue in the same pace, hence the need to recommend a new approach known as partnership , in order to hasten the physical development of Federal Capital City (FCC).This issue has been further discussed in the next chapter by identifying partners and stake - holders within the Federal Capital City.

CHAPTER FOUR

IDENTIFICATION AND ROLE OF PARTNERS AND STAKE-HOLDERS IN ABUJA.

4.10 INTRODUCTION

This chapter is divided into two sections.The first section identifies stake-holders within Abuja municipality while the second section discusses their role in the provision and management of the City's infrastructure.

4.20 PARTNERS AND STAKE-HOLDERS IN ABUJA

i. **Government within the Federal Capital City** (FCC) include; The Federal government (i.e. Federal Ministry of Works and Housing and the Municipal Local Government.

Government agencies, refers to agencies like Federal Housing Authority, Federal Environmental Protection Agency, Federal Capital Development Authority. Agencies under the latter include; the Abuja Environmental Protection Board, Water Resource Agency, Petroleum Trust Fund, etc..

ii. **International organisation.** They includes:

a. The World Bank - The Infrastructural Development Fund/projects (IDF)

b. The United Nation –The United Nation's Development Programme(UNDP)

c. The European Union (EU)

iii. **Bank /Financial Institutions** - They include:-

a. Urban development Bank of Nigeria Ltd.; and

b. Commercial banks.

iv **Private Estate Developers;** These include among others :-

a. Imani Estate Developers;

b. Zangon Daura Estate Developers;

c. Global shelter Developers;

d. Private Individuals

e. Dantata Housing Estate Developers;

v. Family Support Programme Abuja and National Headquarters.

vi. Philanthrophist organisations. Which include the following:

a. Rotary club/Inner Wheel;

b. Ford Foundation;

c. Green space organisations.

vii. Cultural/social organisations.

4.30 THE ROLE OF STAKE HOLDERS

4.31 FEDERAL GOVERNMENT:

The Federal Government is represented by the Federal Ministry of Works and Housing and it agency, the Federal Housing Authority (FHA). Its functions nationally include the provision or construction of houses and the provision of site and services scheme. Its financial base comes from, Federal budget allocations (annually), internally generated revenue, (like the Sale of houses, ground rent, sites and services, toll plaza fees etc), and donations/loans from international organisations. The following amount have been realised on the followings;

a Internally generated revenue = N1 to 12 billion

b. National budget =N11 billion

ii. Federal Housing Authority

As mentioned earlier, the authority's present activities can be seen within and around Abuja (FCC /FCT), like Ibrahim Sani Abacha Housing Estate, Kubwa, and currently the Gwarimpa Housing Estate. For example, N3.5billion has been provided to construct and provide infrastructure at Gwarimpa, and around N1.5billion was used to develop Kado housing estate.

iii. State Governments

Most state government in the country have played significant role in erecting houses, hotels, offices, residences and governor's quarters in Abuja. In doing so some pockets of infrastructure have been provided within the areas of their development. Some of these structures are worth =N=250 million, =N=400 million. Currently, the Akwa- Ibom liaison office, is provided with hotel accommodation.Other Liaison offices include those of Jigawa and Rivers etc.

iv. Government Agencies

Under these, include Federal Environmental Protection Agency, Federal Capital Development Authority, within FCDA, and agencies like Abuja Environmental Protection Board, Abuja Water Resource Agency.

v. **Family Support Programme**

a. The FCT and National chapters of the Family Support Programme. The two are concerned with awareness building, and education of the public. So far, they have substantially achieved, this aim by encouraging environmental sanitation.

b. The Federal Environmental Protection Agency, derives its finances from the Federal Government and tax collected for; the location of industries and fees charged for the polluting environment as well as support from World Environmental Agencies like the UN in form of material and finance.

The Federal allocation = N1 BILLION (To FEPA)

Tax collected from industries =N1.2 BILLION

while the Abuja Environmental Protection Board also Sources its money from FCDA and taxes or revenue generated from sanitation exercise, sewer connection to individual plots as well as sale of plants from zoological gardens.

The amount realised are as follows:

1. Source from government = N700 million
2. Source from revenue generated =N200 million
3. Federal capital development authority

As already mentioned, this is the chief provider or supplier of infrastructure in FCC. Its financial source include, sources from federal allocation, from

Federal government, internally generated revenues from land, shops, sewer connection etc.

So far, 95% of the work completed in phase I is done by FCDA, running to N100 - N120 billion (Planning Research and Statistics Dept.). The following are some amount received as a budget for the whole FCDA and the amount generated as revenue.

i. Total amount for some years received from federal government as budget:

a. 1993 - N2,804,800,000

b. 1994 - N4,806, 173, 764

c. 1995 - N3,885, 138,522

d. 1996 - N7,015,363,414

ii. Total amount generated for revenue in one year = about N1 to N1.5 billion.

4.32 INTERNATIONAL ORGANISATIONS

These are bodies created at international levels to aid the improvement and development of developing worlds. They include:

i. Infrastructure Development Fund - A department or section created by the World Bank to provide support for infrastructure provision in our urban areas. Within Nigeria where this has created an impact, are in towns like Jimeta,Yola, Jalingo, parts of Delta and Edo States and recently there are proposals from Kaduna State Government on four different areas of Kaduna Municipality (i.e. Kurmin Gwari, Angwan Dosa etc.) to the Federal Ministry of Works and

Housing to the World Bank for IDF loan to carry-out renewal programmes. Also the issue of Kano and Ibadan sustainable city development, an idea by the world habitat through the World Bank is creating an impact.

The function of the Board (IDF) is to realise money in dollars, manpower and equipment to help in providing drainages, road networks, street furniture and vehicles for refuse collection and disposal. The amount that is normally realised ranges from 20 to 30 Million US dollars, in adhoc manner, not yearly.

ii. United Nation's Development Programmes (UNDP)

This is an agency within the United Nations, Whose function is to loan out money for infrastructure provision. Common areas of assistance to developing world is in the area of water supply, that is construction of dams, and purchase of ductile iron pipes. They give out loans reading millions of dollars in cash and in kind, that is $40 - 50 million, for the projects (Infrastructure Provision and maintenance/ or Sanitation) in a country.

4.33 BANKS /FINANCIAL INSTITUTIONS

They include those banks concerned with giving out loans for building purposes. These are:

a. Federal Mortgage Finance - concerned with normal saving and mortgage activities and .

b. Federal Mortgage Bank - concerned purely with mortgage activitiesand not with savings.

The first-two kind of banks, normally give out loan of 10-15% of the total value of the whole construction, at times N200,000, N300,000 depending on the kind of construction. The annual turn-over is N800 - ₦1 billion after tax. (FMB and FMF).

Others include the Urban Development Bank and the African Development Bank.

4.34 PRIVATE ESTATE DEVELOPERS

a. Imani Estate Developers This is a partnership business, concerned with estate development and financial mortgage banking system. So far, within FCC, what is on the ground in terms of estate development is worth a billion naira. They have been able to provide basic infrastructure, like light, water, transformers, telephones and roads.

b. Zangon Daura Housing Estate Developers In terms of construction, houses have been constructed and finished, so far the amount spent on house

construction is worth N600 million. light and water have been tapped, but road and street furniture within the neighborhood have not yet been provided.

c. Global Shelter Developers An estate developer concerned with construction of houses in corporate or high-rise form and sell them later. So far, they have constructed houses worth N500 -700 million.

d. Dantata Housing Estate Developers An estate development still under construction, so far, what is committed on the ground is worth N300 million. Infrastructure are yet to be provided.

e. Private Individual owners of plot engage in promoting certain facilities in their house, especially carved-out plots or irregularly allocated plots.

4.35 PHILANTHROPHIST ORGANISATIONS

a. Rotary Club - This is a charity organisation that has so far, provided information signs at junctions and intersections of roads within the municipality and provided seats and gardens etc. what they have so far provided is within the neighborhood of N3 - ₦5 million.

b. Ford foundations - a philanthropist organisation that distributes money or material worth $5 million to Nigeria and unspecified amount of money to others for environmental improvement and to tackle ecological disaster or problems. The foundation is based in USA.

c. Green space organisation - This is a newly created organisation within Abuja and has recently carried out its publication that was sponsored by the

World Bank and the aim of creating it is to enlighten the general public on environmental sanitation.

4.36 PETROLEUM TRUST FUND (PTF)

An agency created for the improvement, upgrading of urban and rural economic and social infrastructure within the country.

Within FCC, some major roads linking the capital have been improved upon and the Trust Fund is currently settling outstanding debts running to hundreds of millions of Naira on FCDA projects, ranging from N100 million and above.

4.36 CULTURAL AND SOCIAL ORGANISATIONS

These include the religious organisations, the tribal associations and the social clubs. The religious organisations include the Christians and the Muslims different sects and denominations that engage in construction of worship houses, schools and hospitals and facilities, utilities and services are provided within these areas by the organisations.

The tribal association, like the Gwari association, Tiv, Igbo, Hausa, Yoruba associations. build houses, shops and facilities for their use, for example, the currant Dei - dei market in which 90% of the occupants are Igbos.

After critically analysing the actors and partners within Abuja municipality and discussing their roles and resource capability or potentials, the next chapter assigns roles, formulates partnership framework for the new strategy for

sustainable provision and management of economic infrastructure within the Federal Capital City.

CHAPTER FIVE

FRAMEWORK OF PARTNERSHIP FOR SUSTAINABLE PROVISION OF URBAN INFRASTRUCTURE AND MANAGEMENT IN ABUJA

5.10 INTRODUCTION:

The different actors and partners that are found within Abuja Municipality are represented in fig 11 below ,and for each of the stakeholder a role or more is assigned to it In assigning these roles and responsibilities, the following have been considered, that is, their resource base, revenue generating source and strength, and their financial source, like Government and contributions from charity and international organisations.

For example, the FCDA, FMWH and Petroleum Trust Fund (PTF) is to shoulder more and heavy responsibilities, like road construction, foul and storm water.

While others like the Philanthropist organisations and Social and Cultural organisations, will be concerned with street sweeping, drainage clearance and street light maintenance.

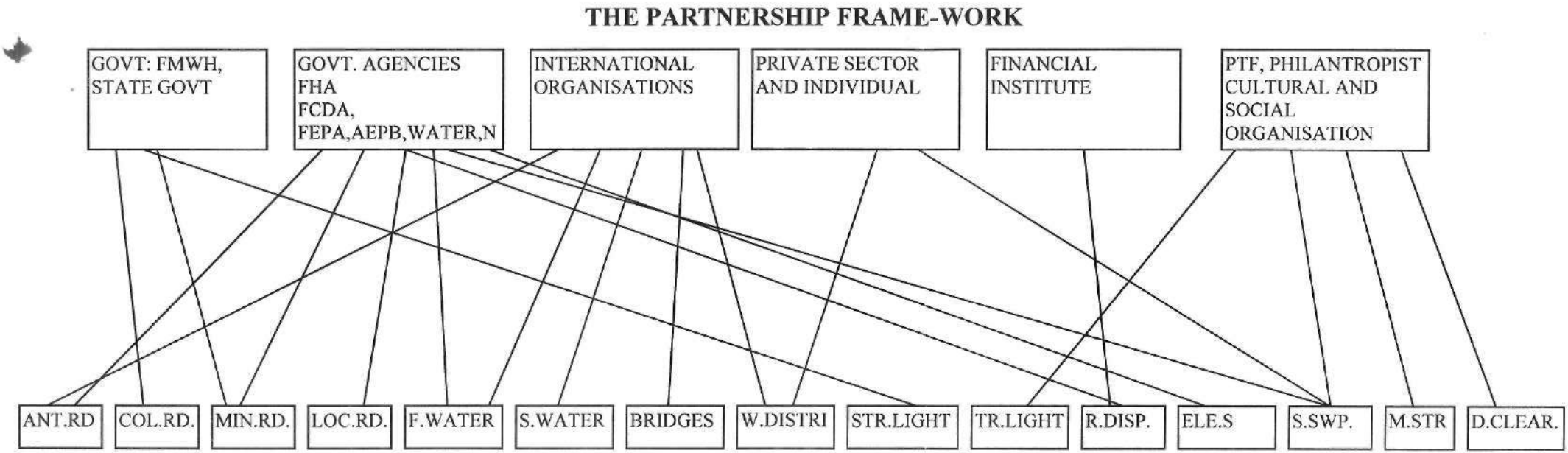


Fig 11 Shows the different stake holders identified within Abuja and new roles assigned in a frame - work form

In fig. 11, above roles and responsibilities have been assigned to different stake-holder, before assigning responsibilities to each of the partners a thorough evaluation of their financial capabilities and strength have been analysed through consultation by different authorities. In making this proposal, the following have been considered, that is, legal consideration; regulation and technical standards, planning methods, project management procedures and absence of workable model.

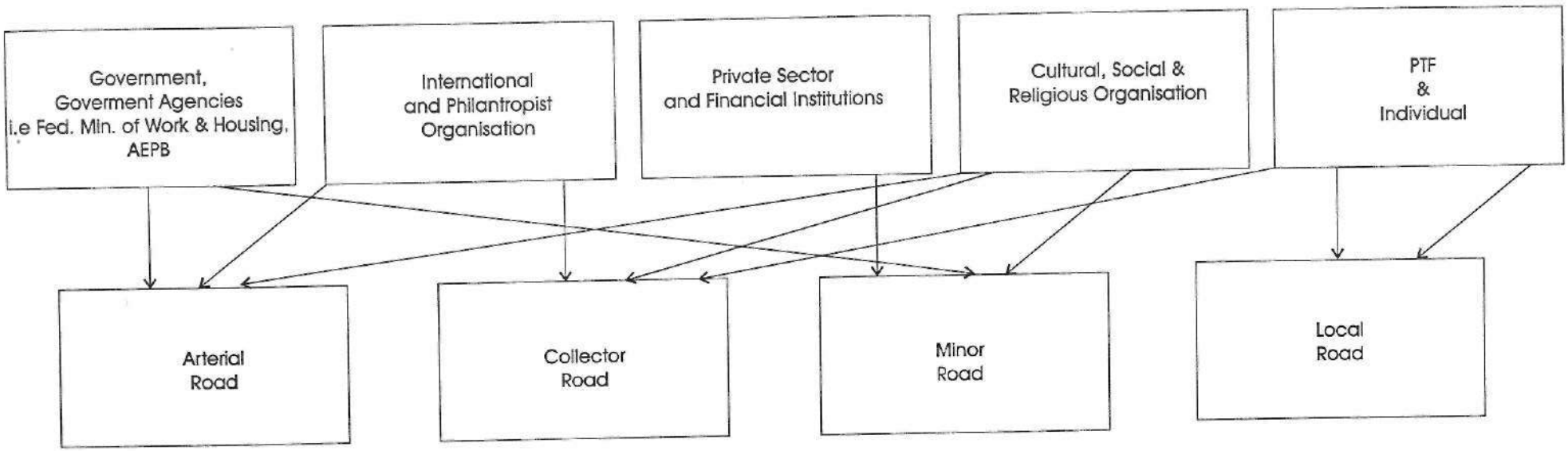


Fig. 12, shows a single project and mode of execution based on partnership frame work (classes of Road).

The table above shows how a project is to be handled, that is road net-work, the road net-works are in classes, the following include as shown from the diagram: (i) Arterial road (ii) Collector road (iii) Minor Road and (iv) Local Road.

Using the partnership framework as shown in fig 12 a Project like roads was used to show how the frame work can work. Different categories of roads as used as shown below.

(i) Arterial Road - This is the first class of road to be opened and constructed, and has the widest carriage-way. For this road to be executed the following people are to be involved (a) Government, (b) Government Agencies (c)Cultural, Social and Religious organisations. What is expected here is dam construction, drainage construction, street light Installation and road marking.

(ii) Collector Road: This should involved International and private organisations, cultural, social and religious organisation. The construction of the road and street furniture should be done by the aid of PTF and international organisations, especially the maintenance of drainage, street sweeping to be done by the social, cultural and religious organisations. For this class of road to be maintained house owners should be charged certain fee for street sweeping and maintenance.

(iii) Minor Road:- The construction and development of all the components of this road should be the responsibility of government, government agencies, private sector and Financial Institutions and Petroleum Trust Fund. Continuous road maintenance should be the responsibility of social, cultural and religious organisations. Also for

sustainable maintenance and provision of infrastructure substantial fee has to b charged to be able to continue with the development of Infrastructure.

(iv) Local Road:- This class of road in planning road geometry is also known as access road, it should be the responsibility of PTF and Individual plot owner. In this case individual plot owner can hire a local or multinational construction company to carry-out infrastructure development and mode of payment can be arranged by the affected people.

5.30 POLICIES AND OPTIONS FOR THE SUCCESSFUL IMPLEMENTATION OF THE APPROACH.

For a sustainable growth of the city of Abuja and to meet the date for the implementation of the Masterplan, that is the year 2000 A.D., infrastructure must be provided and government cannot be left alone to carry the burden of infrastructure provision and management. To provide and maintain infrastructure in Abuja in a sustainable manner, the following steps should be observed.

i. As explained in chapter three, the fees charged for infrastructure is too small, that is, ground rent and premium fee. While survey fee and building plan processing fee is not included in the amount meant for infrastructure. For example, the amount Government spent on the average on infrastructure on a applicants plot is above seven million Naira (N7 million), while ground rent paid by land on high density plot is N715 and the premium fee is N13,000.00.

It means something is really wrong some where, government seems just to begiving out plots to people for little or no fee. The policies have to be revisited and the fees charged on the Right of Occupancy (R of O) has to be looked into and thus a need to increase the amounts charged (i.e Survey fee, Ground rent, Premium fee and Building plan processing fee).

ii. The second observation made is that, people acquire plots at a cheaper rate despite services, facilities and utilities provided on the land, but sell these plots

at exorbitant rates. For example, a high density plot with every facility can go for N3-N4 million and a low density one goes for N9-N11 million. With this kind of cutthroat profit and government always the looser, adjustment has to be made, by increasing the amount.

iii. Also as shown from the framework, in Fig. 11, some facilities need combined effort of individuals in the community, some roads have to be provided by the community, by coming together to organise money and hire a company to lay-down road net-works, for example, minor roads and local access roads, but the road corridors, that is, arterial and collector roads can be constructed by Government. Government through its agencies and the PTF has to intervene by producing a specific design with planning standard.

iv Some facilities like water, need the attention of Petroleum Trust Fund (PTF), international organisations and financial institutions. This utility can be privatised or commercialized, through meter rate, by billing all the land users.

v. Also Philanthropist and social/cultural group can help in the dissemination of information or creating public awakening and awareness of the environmental issues or sanitation. Similarly, the Family Support Programmes and Green-space organization and religious groups can play same role.

5.40 LOAN REPAYMENT AND SOURCE OF REVENUE GENERATION

Some of the actors/partners identified within Abuja are purely profit making organisations, for example, the financial banking sector, the international

organisation, the Private organised sector e.t.c. For them to continue to survive maintain and provide infrastructure they need finance and the following are the means of loan repayment and means of revenue generation:-

i. As regards to banking system and private organised sector, since they are concerned or involved in water supply construction, refuse disposal and maintenance of street light, There is need for Monthly fee to be charged to individual house holds/companies for water supply and street sweeping and for the street light maintenance and provision, that can be charged to individual plot owners. Also for the provision of roads, foul and storm water, this involves PTF, FMWH, FHA, this can be charged to individual plot owners on their certificates.

ii. Also some aspects of the different systems that are still practiced in other parts of our urban areas can still be adopted or shifted to the next approach, like the method of incinerating refuse, construction of cesspool at individual compound, community coming together for self-help projects like road openings and maintenance and drainage clearance. It has proved very effective in terms of improvement on environmental sanitation and less in forms of finance for construction and continuous maintenance.

5.50 CONCLUSION

It has been seen from the analysis that economic infrastructure is a spring-board to any meaningful urban growth and development in the world. Its provision and management in |Nigeria right from pre-colonial era to date has not been adequate to the teaming urban population.

In this study, a new strategy and policies have been advocated for the new federal capital of Nigeria for speedy development of infrastructure. It will discourage the over-utilization of land and going against planning regulations in areas already provided with Physical infrastructure. This approach is to continue in a sustainable manner for the healthy and planned growth of the Capital.

QUESTIONNAIRE
FOR STAKE-HOLDERS

INTRODUCTION

This is an M.SC. Thesis research work and is purely academic. The research is aimed at evolving a partnership framework as an effective tool for the provision and management of urban infrastructure in Abuja city. Your sincere response will be highly appreciated

a. Name of Ministry/Agency/Organisation etc----------

b. Rank of Respondent ----------

1. Types/Categories of infrastructure provided by your organisation ----------

2. What other organization are involved in providing such infrastructure----------

3. Do You experience any conflict or overlaps in functions ? Yes or No

If yes

4. What are the Conflict?----------

5. If you are called to participate in the provision of Infrastructure in Abuja city, What can you Contribute?

---

6. Is it going to be on cost recovery method or charity----------

APPENDIX

In this part, data collected is analysed, that is all the different land uses to determine amount spent by individuals, public corporations, private organisations to acquire land after been serviced by all the components of infrastructure by government and to compare the total amount spent by FCDA to provide the infrastructure. In this case, a district completed in terms of provision of infrastructure has been analysed, that is, Garki II, in phase I.

For any body to acquire a certificate of occupancy in Abuja, The Person is normally issued with right of occupancy, that is, temporary allocation until the following are settled:

a. Survey fee (TDP)
b. Building plan processing fee
c. Premium fee
d. Ground rent

The survey fee is not meant to help in providing infrastructure, but inserting of beacons and printing of plans for certificate processing.

The building plan is generated for internal use of development control and printing of plans.

But the last two, premium fee and ground rent are the variables meant for continuos servicing of the allocated plot. The premium fee is paid once in 99 years, while the ground rent is a yearly affair.

With this explanation we are going to be concerned with ground rent and premium fee in Garki II district of phase 1.

Below are the calculations of different land uses, based on size, density and the actual rate fixed by the authority.

i. **RESIDENTIAL PLOTS**

HIGH DENSITY

a. Total area of high density plot =206174sq
   total number of high density plot =317
   to find the average = 206174sqm = 650.4sqm

b. To calculate ground rent (11,000-constant)
   10,000sqm - 1 hectare
   650sqm = ?
   $= \frac{650}{10,000} = 0.0650$
   $= 0.0650 \times N11,000$
   $= N715$

c. Similarly to calculate the premium
   10,000sqm - 1 hectare (200,000 - constant
   650 - ?

0,0650x200,000
=N13,000

d. To get the total amount for the whole plots

i. Ground rent = N715x 317
total ground rent =715x317 = N22, 6655

ii. Premium fee =N13,000x317
total premium for the whole high density plot = N4121000

e. To get ground rent for 99 years
= N22,6655x99 years
= N22,438845

A. MEDIUM DENSITY

Total no, of medium density residential land coverage =205704sqm
Total no, of medium density plots =149
To find the average =205704sqm / 149
=1380.5637
=1381sqm

B. GROUND RENT

10,000SQM =1 HECTARE
X =1381
X =1381 / 1
= 0.13800,000
TO GET THE RATE = 11,000 X 0.1380
=N1518

C. TO CALCULATE PREMIUM

x =1381 / 10,000
=0.1380
to find the premium
0.1380 x 200,000
Pr = N27,600

D. To get the total amount for the whole plots

i. For ground rent = average ground rent x total no of plots
Total amount for grant =N1518x 149
=N226182

ii. Premium = average premium fee x total no of plots
= N27,600 X 149
=N 4112 400

E. THE GROUND RENT FOR 99 YEARS

Grand rent for 99 years = Total grand for the whole plots x 99 years

= N226182 x 99 years

Grand rent for 99 years = N223920.18

A. LOW DENSITY PLOTS

To find the average

Total area coverage = 148373 sqm

Total number of plots = 50

To find the average = 148373 sqm

50

=2967.46sq

=2968sqm

B. To find the Ground Rent

Average plot size = 2968 sqm

To convert to hectares x by 10,000

Ground Rent = 2968 sqm

10,000=0.296746 x 11,000 = N3264

C. To find the premium (200,000 - constant)

Plot size = 2968 sqm

On conversion to hectares = 0.296746

:. Premium fee = 0.296746 x 200.000 =N59349.2

D. To get the total amount for the whole plots

Total number of plot = 50

i. Ground Rent = Average Density of Grand rent x total number of plot = 3264.206 x 50 => N1632103

ii. Premium fee = Average premium fee x total number of plot.

=N59349.2 x 50

=N2967460

E. Grand Rent for 99 years

i.Ground rent for 99 years = N1632103 x 99 years

N16157819

A. RELIGIOUS INSTITUTIONS

Total land coverage = 12195sqm

To convert to hectares

10,000sqm - 1 hectare

= 12195 => 1.2195

10,000

B. To Find the Ground Rent

Constant fixed rate = N2,500
:. 1.2195 x N2,500
=> N3,049
To Find the Premium
(Constant fixed rate = N40,000)
:. 1.2195 x 40,000
=> N48780

C. To get the Total Amount for the Whole Plots

i. For the Ground rent = 3049 x 2
= 6098

ii. For the Premium = 48780 x 2
= 97560

D. Ground Rent for 99 Years

i. Ground Rent for 99 years = 3049 x 99
= 301851

A. EDUCATIONAL INSTITUTIONS

Total area of land coverage = 321577 sqm
Total number of plots = 5
To find the average = $\frac{321577\text{sqm}}{5}$
=64315.4sqm

B. **To Calculate Ground Rent** - 5,000 constant

Average plot size = 64315.4sqm

Change to hectares (10,000)

Ground Rent = 64315sqm = 6.4315400

10,000

Ground Rent = 6.4315400 x 5,000

= 32157.7

C. **To Calculate Premium fee** - 40,000 constant

Premium fee = 6.4315400 x 40,000

= 257261.6

D. **To get the total number of plots**

i. Ground Rent = 32157.7 x 5

= 160790

ii. Premium fee = 257261.6 x 5

= 1286305

E. **The total amount for 99 years Ground rent**

Ground Rent = 32157.7

Ground Rent = 32157.7 x 99 years

= 3183612.3

A. OFFICES AND RELATED USES

Total land coverage = 2305277sqm
Total number of plots = 40
To find the average = 2305277sqm
40=5763.1925 sqm

To Find the Ground Rent

55,000 - is constant rate
Convert to hectares i.e. x 10,000
=5763.2 = 5.7632
10,000
=5.7632 x 55,000
= 316.97
= 317

To Find the Premium Fee

350,000 constant
Convert to hectares i.e. 10,000
Average size of plot = 5763.1925
= 5763.1925
10,000
= 5.7632
Premium fee = 350,000 x 5.7632
= 20.17120

To Find the Total Amount of Plots

i. Ground rent = 317
Total ground rent = 317 x 40
= 12680

ii. Premium fee = 2017120
Total Premium fee = 2017120 x 40
=> 80,684 800

To Find the Total Amount for 99 years Ground rent

Ground rent for 99 years = 12680 x 99 years
⇨ 1255320

SHOPS, SUPER MARKETS AND RESTAURANT

Total area of plot coverage = 566357 sqm
Total number of plot = 41
To find the average plot coverage = 566357 sqm
41
=> 13813.585 sqm

To find the Ground Rent

Fixed rate = 75,000

13813.585 sqm convert to hectares = 10,000

= 13813.585

10,000

=1.3813585 x 75,000

=> 103601.88

To find the Premium

Fixed rate = 350,000

= 13813.585

10,000

= 1.3813585 x 350,000

=> 483475.47

To get the total amount on all the plots

i. Ground rent = 103601.88 x 41

=> 4247677

ii. Premium fee = 483475.47

= 483475.47 x 41

=> 19822494

To find the total Ground rent for 99 years

Total Ground rent = 4247677

Years = 99 years

:. Total Ground rent for 99 years = 4247677 x 99

=

To find the total amount for 99 years

FILLING STATIONS

Total area/land coverage = 15718 sqm

Total number of plots = 2

Average = 15718 => 7859 sqm

To find the Ground Rent

Grant rent = 7859 sqm

10,000

=0.7859 x 75,000

= 58943

To Find the Premium

=7857conversion

10,000

= 0.7859 x 250,000

=> 196475

To find the total amount of plot for Ground rent/premium

i. Ground rent = 58943 x 2

=> 117886

ii. For the premium = 196475 x 2

=> 392950

Total amount for 99 years will be

= Ground rent total x 99 years

= 117886 x 2

=> 235772

HOUSING ESTATE/STAFF QUARTERS

Total land coverage = 624447 sqm

Total number = 20

Average number of plot = 62447

= 31222.5sqm

To find the Ground rent

11,000 constant

Ground Rent = 31222.4 sqm

10,000

= 3.122235 x 11,000

= 34344.585

To find the premium fee

=31.222.35 sqm

10,000

=3.122235 x 20,000

= 624447

Multiple the total amount obtained for the Ground rent and Premium fee by the total number of plots

i. Ground rent = 34344.585

number of plot = 20

:. 34344.585 x 20

= 686891.7

ii. Premium fee = 624447

number of plot = 20

=624447 x 20

=> 12488940

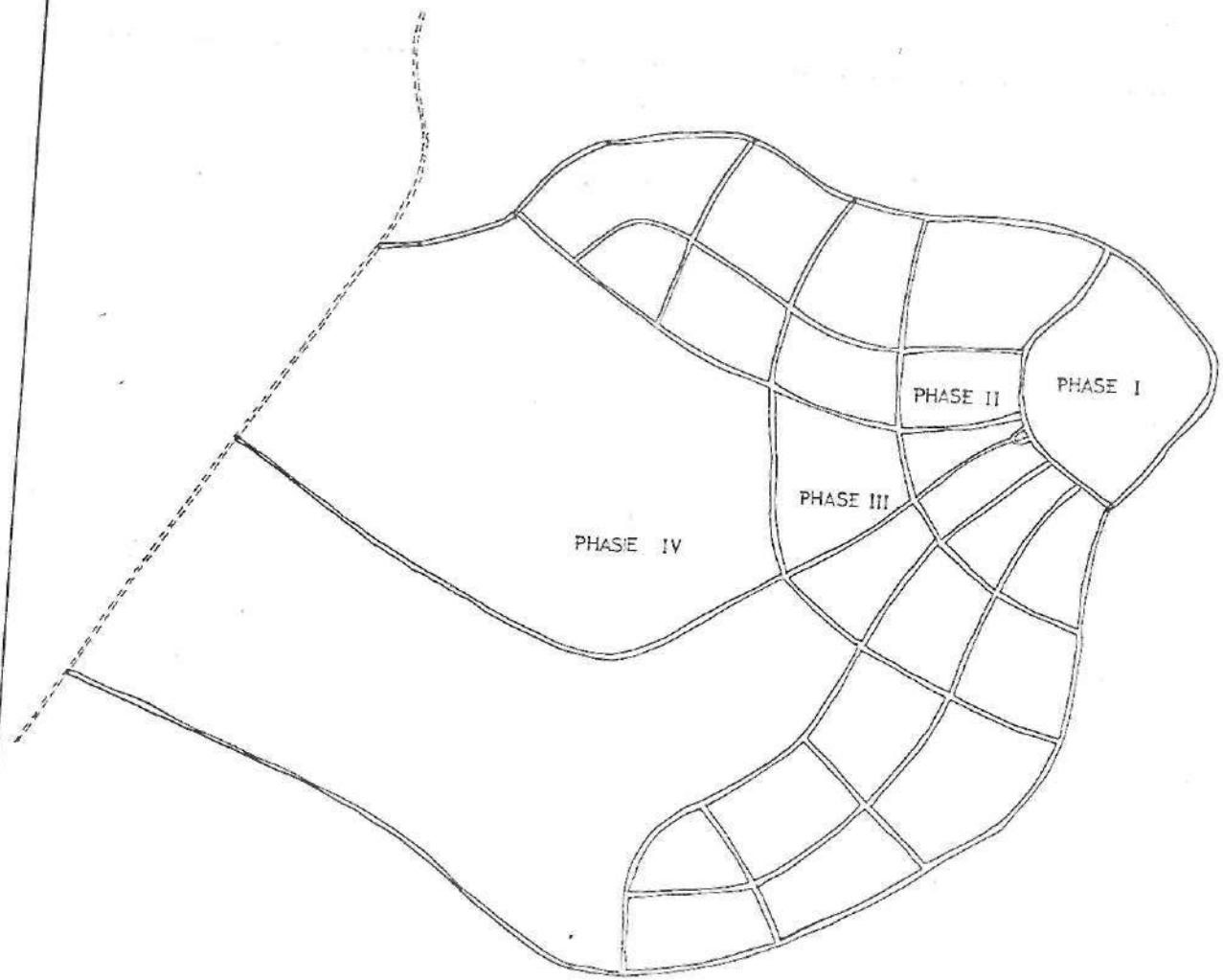
for 99 years (Ground Rent)

Ground Rent = 34344.585

= 34344.585 x 99 = 3400113.9

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Map 1 Showing the Four Diff. Phases of F.C.C. & Areas Provided With Infrastructures & Detail Physical Design Completed.

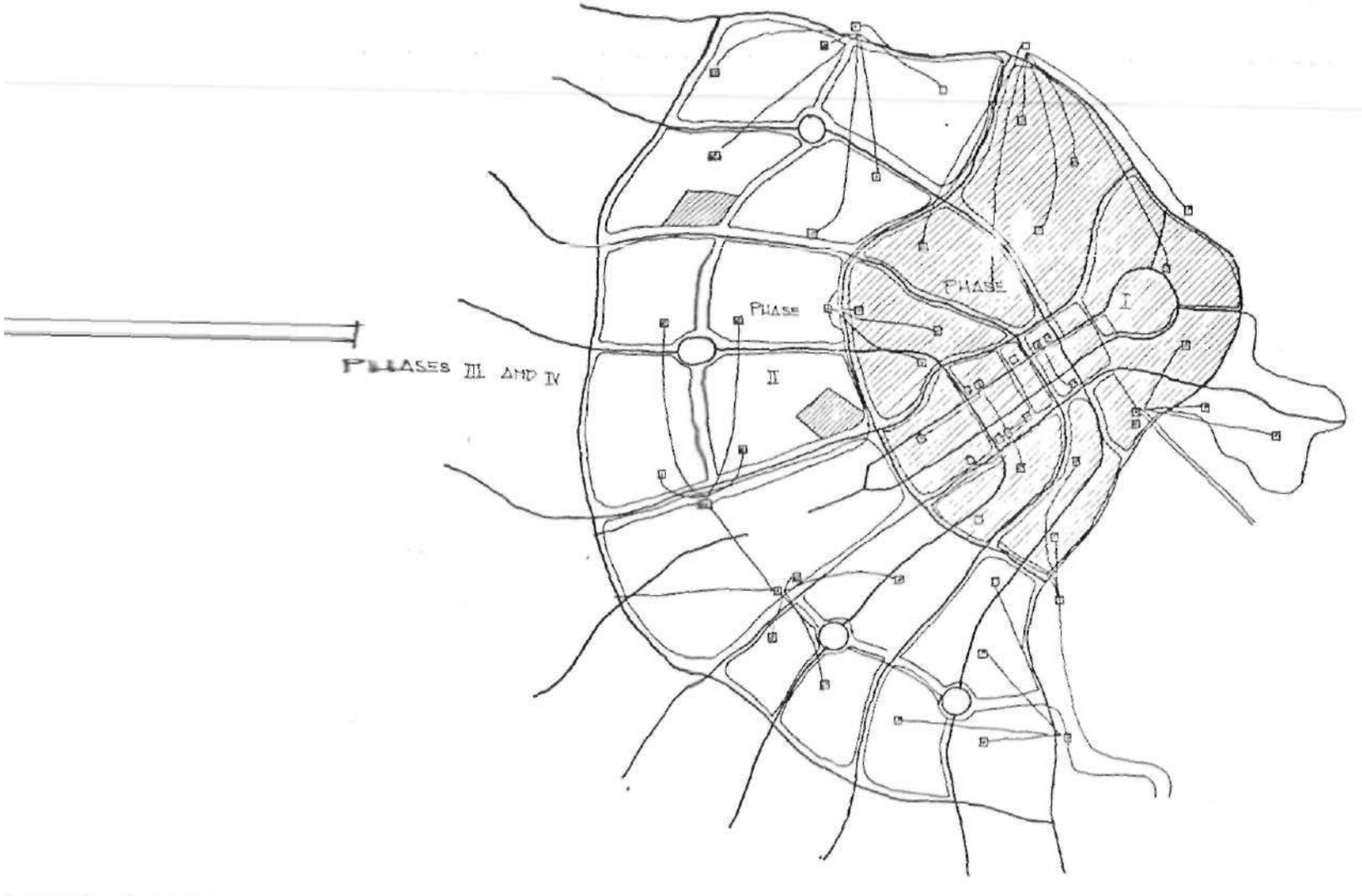
Phase I Detail Site Design Completed and Infrastures Provided.

Phase II Detail Site Design and Pockets of Infrastructure in Some Districts

Phase III, IV No Site Design and Infrastructures Provided.

Suleiman M. S.
M Sc.(URP) Thesis 1998
ABU Zaria.

Map 2 Showing Area of Electricity Supply within F.C.C.



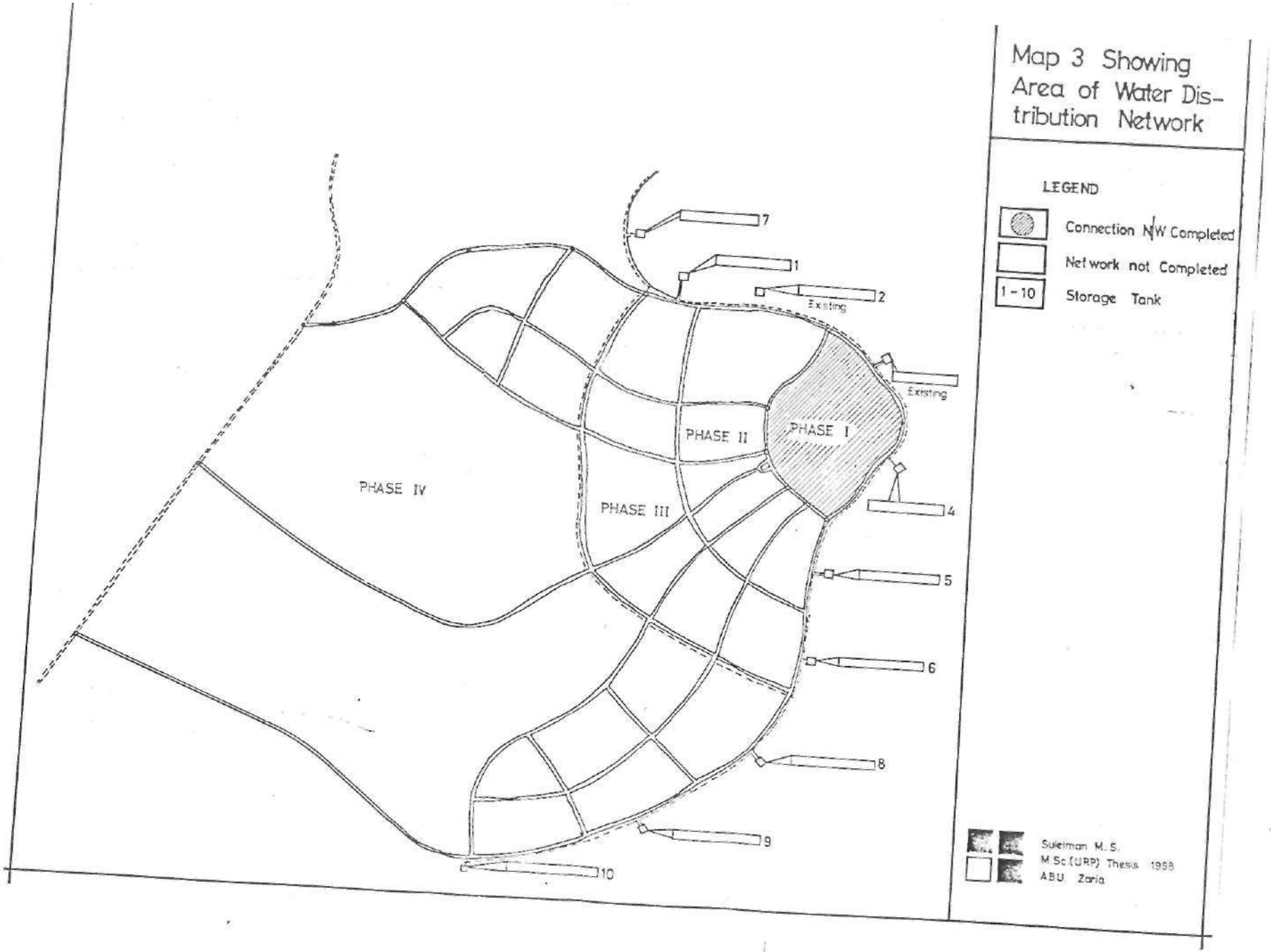
132/33KV Station

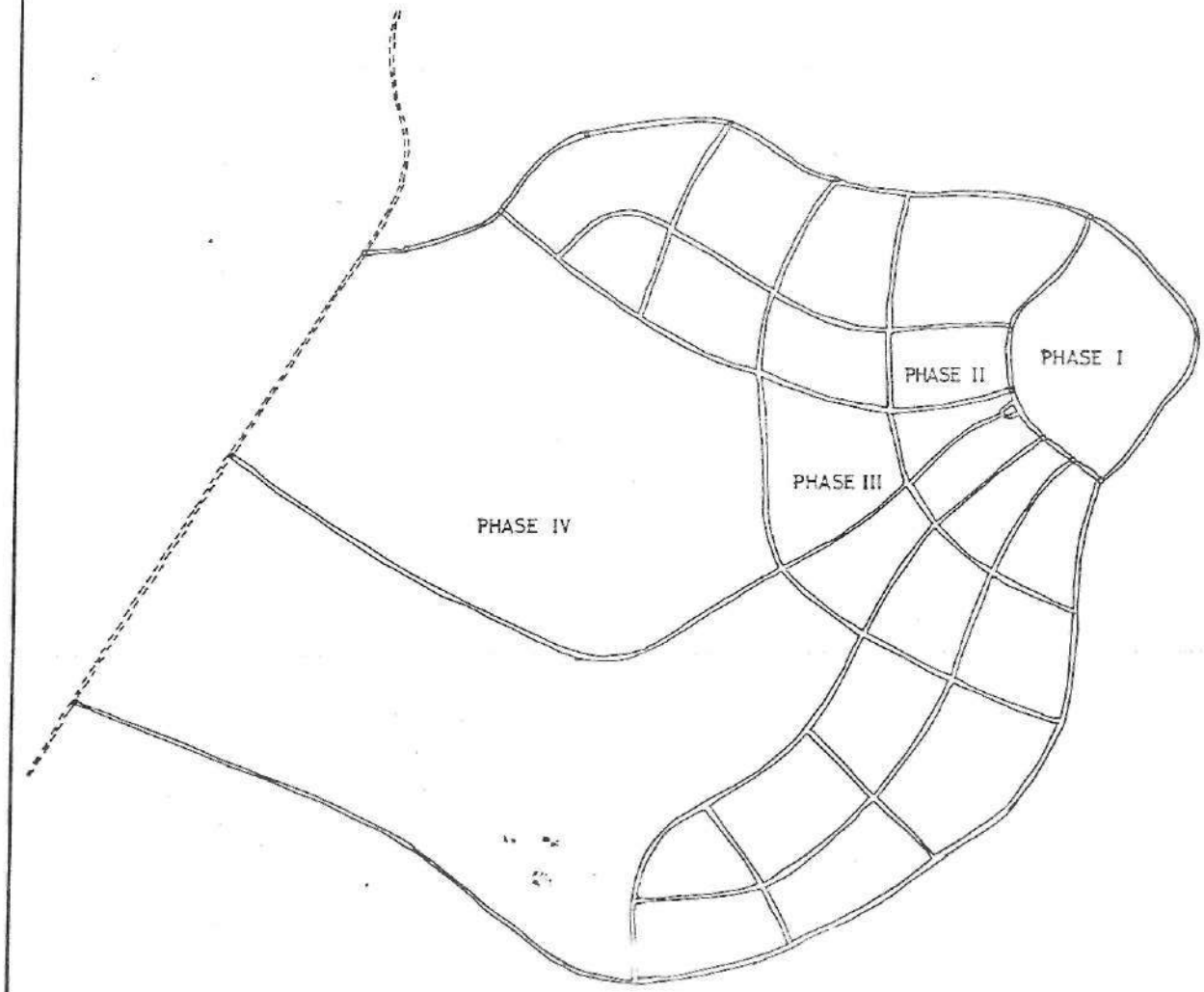
33/11KV Station

Area of Supply (Phase I)

Areas not Supply (Phases II-IV)

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A.B.U. Zaria


Map 3 Showing Area of Water Distribution Network
LEGEND
Connection N/W Completed
Network not Completed
1 - 10
Storage Tank
PHASE I
PHASE II
PHASE III
PHASE IV
Existing
Existing
1
2
4
5
6
7
8
9
10
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Map 4 Showing Phase I-IV Covered With Telecomm. Duct line.

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ABU Zaria