# DEMAND ESTIMATION FOR OUTDOOR RECREATIONAL ACTIVITIES IN KADUNA METROPOLIS

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**A thesis submitted to the Dean, Post Graduate School Ahmadu Bello University Zaria, in partial fulfilment for the award of a Master of Science Degree in Tourism and Recreation Planning**

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## DECLARATION

I hereby declare that the work in this thesis entitled Demand Estimation for Outdoor Recreational Activities has been performed by me in the Department of Urban and Regional Planning under the supervision of Mallam U.F Yaya and Mrs. J.E Ukojie. The information derived from the literature has been duly acknowledged in the text and a list provided. No part of this thesis was previously presented for another Degree or Diploma at any University.

..... ..... .....

NAME SIGNATURE DATE

## CERTIFICATION

This thesis entitled DEMAND ESTIMATION FOR OUTDOOR RECREATIONAL ACTIVITIES by IBRAHIM JIBRIN ABUBAKAR meets the regulations governing the award of the degree of Master of Science of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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# ABSTRACT

Amongst the crucial challenges faced by the recreation planner is that of translating the recreational needs of the population into reality. This the recreation planner does through preparation of recreation plans. In preparing a recreation plan the factors of demand ( population, education, income, mobility, employment) are largely considered in establishing demand, estimating demand, and projecting demand. However, considering these factors alone is not enough a basis for predicting the pattern of demand into various recreational pursuits especially in the future, as demand for recreation does change due to new status acquired by the people. This is evident in the high level of popularity of certain recreation activities at a particular point in time, while at the same time popularity into other recreational activities is declining, all as a result of the changing pattern of demand. The methodology of the research involves the use of primary and secondary sources of information. The primary source acquire information on the factors of demand, in establishing demand for recreation at present time (i.e. establishing demand through age, sex, income, education background, mobility etc.). The Secondary source of information is from obtained data (participation level) for various recreational pursuits which is subjected to the trend analysis of which the least square method is used to take care of external factors (such as climatic changes seasonal variations etc.) that can influence participation into the activities. The findings reveals that some outdoor recreational activities are showing signs of decline in their pattern of demand in the future, while others recreational activities are recording remarkable increase in their pattern of demand in the future. This changing nature of demand can only be understood through the trend analysis which predicts the pattern of demand into various recreational pursuit in the future, thereby giving the recreation planner an insight on the trend of demand over a long period of time. Hence, combining the demographic trends( population, education, income, mobility, employment) with the trend

analysis will go along way in establishing what is currently in demand( as regards recreation) and predicting what will eventually be demanded for over time.

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# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Study

Recreation may not be considered as a basic necessity of life outside food, clothing and shelter, but to a large extent can be regarded as part of human endeavor. This is because human beings are created in such a way that whether actively or passively, indoors or outdoors, organized or un-organized, alone or in groups participate in one form of recreational activity or the other in order to refreshing their physiological and psychological system which enables them face the challenges of life adequately (Adamu 1999). Recreation constitutes activity or (planned inactivity) undertaken because one wants to do it without economic incentives as a motivating force, emphasizing a fundamental prerequisite of willingness on the part of the participant. (Gold 1980).

Outdoor recreation on the other hand, is simply recreation that is typically performed outdoors although; there are a few activities like swimming that can take place either outdoors or indoors. Outdoor recreation is of particular significance geographically as it often requires the extensive use of areas of land or water which are often short in supply (Seeley 1973). For some, outdoor recreation is an integral part of their routine. For some it is an unintended consequence of another activity, while for others, it is a pursuit which holds few attractions. The demand for outdoor recreation is part of the overall demand for leisure. It is affected by the availability of an individualôs time, energy, and ability to access locations. An increasing population which is better educated, more prosperous and more mobile will place a heavy demand on many outdoor recreational activities.

The recreation planner is charged with the responsibility of translating the recreational needs of the population into reality. This can be achieved only when demand for various

recreational activities is known. The factors of demand (population, education, income, mobility, employment) are considered largely as the basis for establishing recreation demand, even though, changes do occur in life which ultimately influence the recreational way of life of the people. These changes which occur in status, income, education are partially responsible for the demand into various recreational activities resulting to why certain recreation activities are growing at an alarming rate while others are declining.

This unstable nature of demand for recreation poses a great challenge to the recreation planner as he must be careful in translating the recreational needs of the society into reality otherwise, he might end up providing what may eventually not be consumed. Studying recreation trends can perhaps be one of the ways in understanding the pattern recreation demand will assume now, and the near future, as such can serve as a basis for the recreation planners to predict the nature of recreation demand in the future.

### 1.2 Statement of Research Problem

The focus of most studies conducted on recreation planning in Nigeria has centred on the haphazard provision of recreational facilities and activities. The aspect of demand suffers more seriously in that conventional approach estimates requirements by the use of standards which gives no recognition to the changing recreational needs of the people.

These issues are contained in the works of Attah (1986) which determined demand for recreation from the demographic, socio-economic and time factor point of views. Bello (1987) equally considers demand for recreation from demographic, education and mobility perspectives and Hussain (1999) based his analysis of demand for recreational activities and facilities on economic characteristics as well as demographic considerations.

Researchers on recreation have been primarily concerned with demographic variables such as population, income, education, mobility with little attention given to the changing

recreational needs of the population (resulting from changing leisure habits) which subsequently influences leisure pattern. In determining changing recreation needs, the recreation use/trend information and the demographic trends are at play. While the latter have been used by researchers for recreational demand analysis, the former is completely left out. Leisure habits are heavily influenced by recreation uses and trends, this component is missing, hence, relying only on one component. This narrow focus can be misleading to the recreation planner and may result into poor patronage of master plans recreational provisions.

In addition, master plans provision like the Kaduna Master plan prepared forty two years ago earmarked 195 hectares of land for parks and Gardens and additional 125 hectares of land for other outdoor recreation activities (Max Lock 1967).Even at this, only 60 hectares has been utilized for the purpose. But not until recently, not much effort was made in reviewing the master plan so as to accommodate changing recreation needs. On the other hand, the recreational needs of the population are not constant, they are changing rapidly.

Observations in the metropolis have revealed that outdoor recreation needs of the population are tending towards new directions all in line with the changing recreational needs of the people. Participation rates in some activities is growing at much faster rate than others, while other participation rates are growing proportionately with the population and needs into some other recreation activities is declining. On this ground some recreational provisions made by the master plan may end up not been patronized due to changing needs. Therefore, analysis on information of recreation use and trends is essential for a proper estimation of recreational activities. This is the focus of the study which estimates demand based on recreation use and trends information. It is on this basis that this research seeks to answer the following question;

(i) What are the recreational activities in Kaduna Metropolis?

(ii) What are the habits and trends in recreational uses in Kaduna Metropolis?

(iii) What are the appropriate techniques for estimating demand?

## 1.3 AIM AND OBJECTIVES

### 1.3.1 AIM

The aim of the research is to analyze recreational uses and trends information as a basis for estimating demand for outdoor recreational activities in Kaduna Metropolis.

### 1.3.2 OBJECTIVES

1. To review the concepts and demand estimation techniques for outdoor recreation activities
2. To examine the characteristics of outdoor recreational activities in Kaduna Metropolis
3. To analyze recreational uses, trends and apply analysis in properly estimating demand for outdoor recreation activities in Kaduna metropolis
4. To Make suitable recommendations and suggestions for improvement.

## 1.4 SIGNIFICANCE OF THE STUDY

The justification of the study is that the demographic analysis alone is not consistent enough to give information on the changing pattern of demand (for recreation) especially in the future as such combining it with the recreation uses and trends analyses will assist recreation planners gain an insight on the pattern of demand in the near future.

## 1.5 SCOPE AND LIMITATIONS

The scope of the research covers demand aspects for modern outdoor recreation activities. The limitation of the research is however, in obtaining annual estimates of participation level into various outdoor recreational activities hence, only for five year period was used.

## 1.6 BACKGROUND TO THE STUDY AREA

The name Kaduna is derived from the Hausa word KADA, which means crocodiles and KADUNA is the Hausa plural word for crocodiles which abound in the river (Max locks 1967). Kaduna was established first as a garrison town, an operational base for the British West African Frontier Forces (WAFF) which have been moved with the administrative headquarters from Jebba to Zungeru in 1902 to facilitate the conquest of Northern Nigeria.

### 1.6.1 Geographical Location and Setting

Kaduna state occupies a central position in the map (Fig. 1.01) of the Federal Republic of Nigeria and has a land mass of about 30,118 square kilometers. Kaduna is located between latitude 10.4°N ï 10.7°N and longitude 7.2°E ï 7.6°E. The town is linked to a number of towns by ốTrunk Aô roads example Zaria which is the nearest, is 80km to the north, Jos, 230km to the North-East, Abuja (FCT) 160km to the south and Kano 176km to the North.

Kaduna Town, the study area (Fig. 1.02) was the capital of the former Northern Region (comprising the present nineteen Northern states). It retained the position until the creation of new states in 1967 when it became capital of the former North-Central state which was later changed to Kaduna state as a result of creation of more states in 1975.

### 1.6.2 Districts and Population

Kaduna metropolis has witnessed a sporadic population explosion since its inception. For instance, Kaduna had a population of 40,000 in 1952, which increased to 149,000 in 1963, while in 1963 it was 160,887. Based on the 1991 N.P.C figures, the population of the

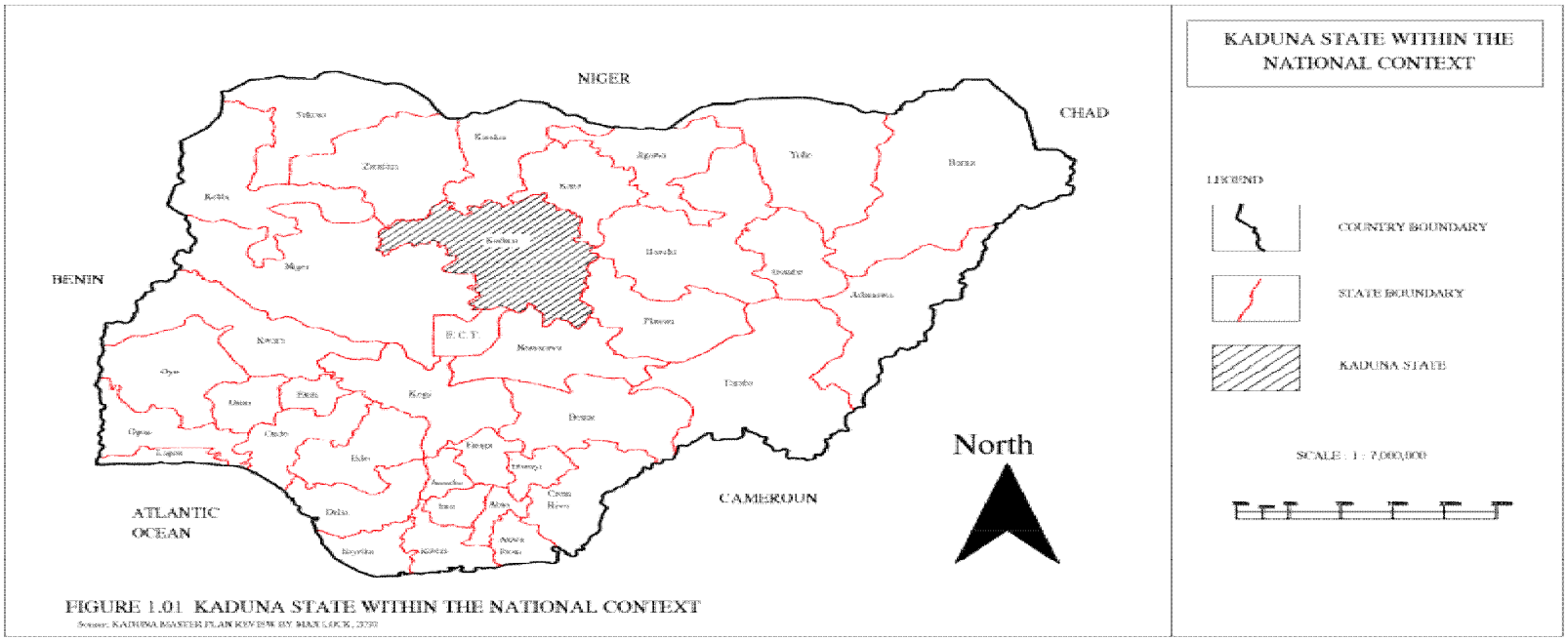



FIGURE 1.01 KADUNA STATE WITHIN THE NATIONAL CONTEXT

Source: KADUNA MASTER PLAN REVIEW BY MAX LOCK, 2030

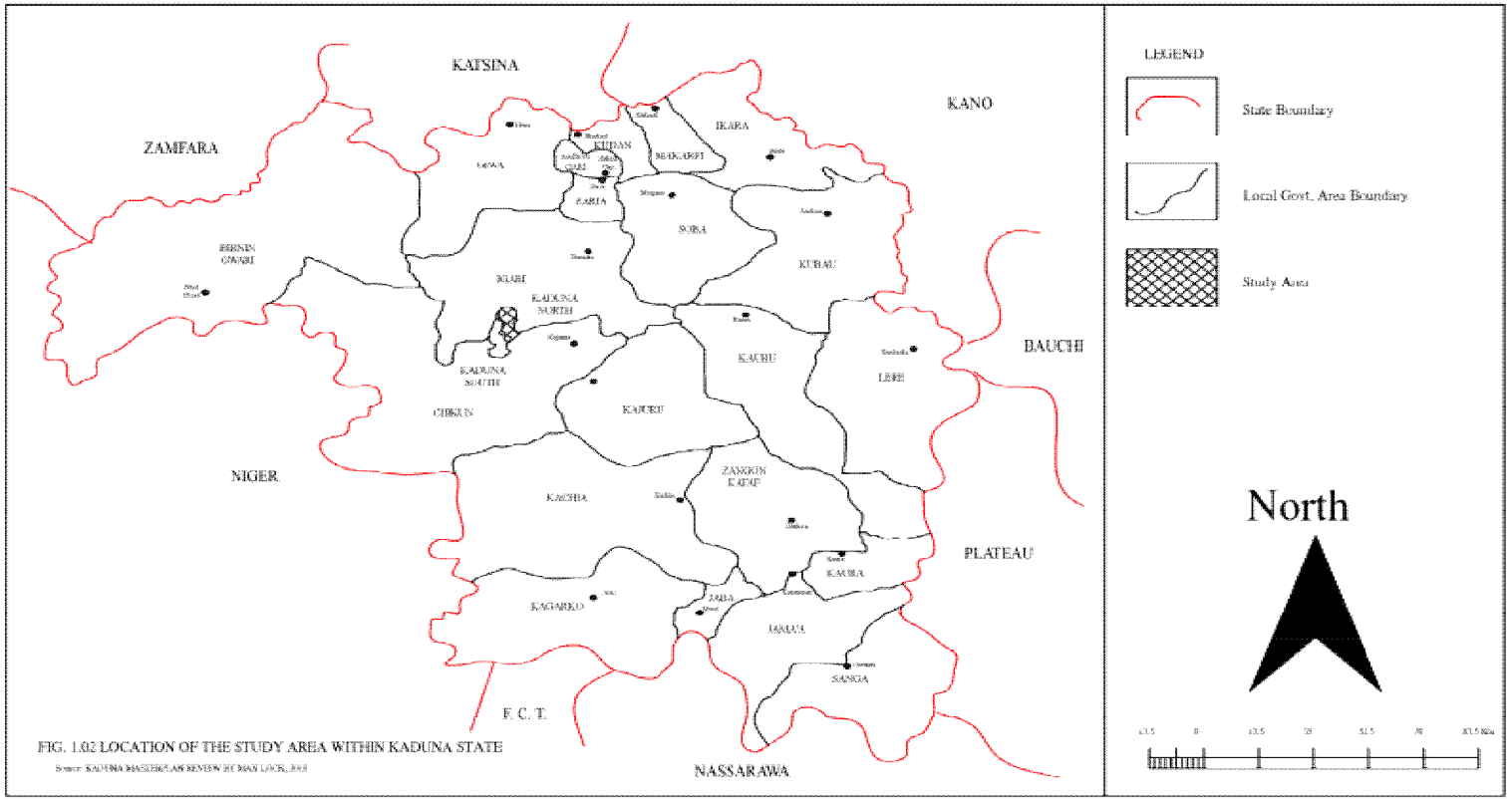



FIG. 1.02 LOCATION OF THE STUDY AREA WITHIN KADUNA STATE

Source: KADUNA MASTERPLAN REVIEW BY IBAN LOCH, 2013

metropolis stood at 774,903 while the 2007 census figures of the metropolis is giving as 1,652,844.This figure if projected at a 3.5% (N.P.C 2006) annual growth rate to give the metropolis a figure of 1,710,694 for 2009.

The metropolis is made up of five districts (Fig. 1.03) namely; Kawo, T/wada, Doka, Makera and Barnawa and each district is made up of a number of sections. The population figure for each of the district is given as Kawo 393015, T/wada 248288, Doka 559289, Makera 235311, Barnawa 216941 (N.P.C 2006).

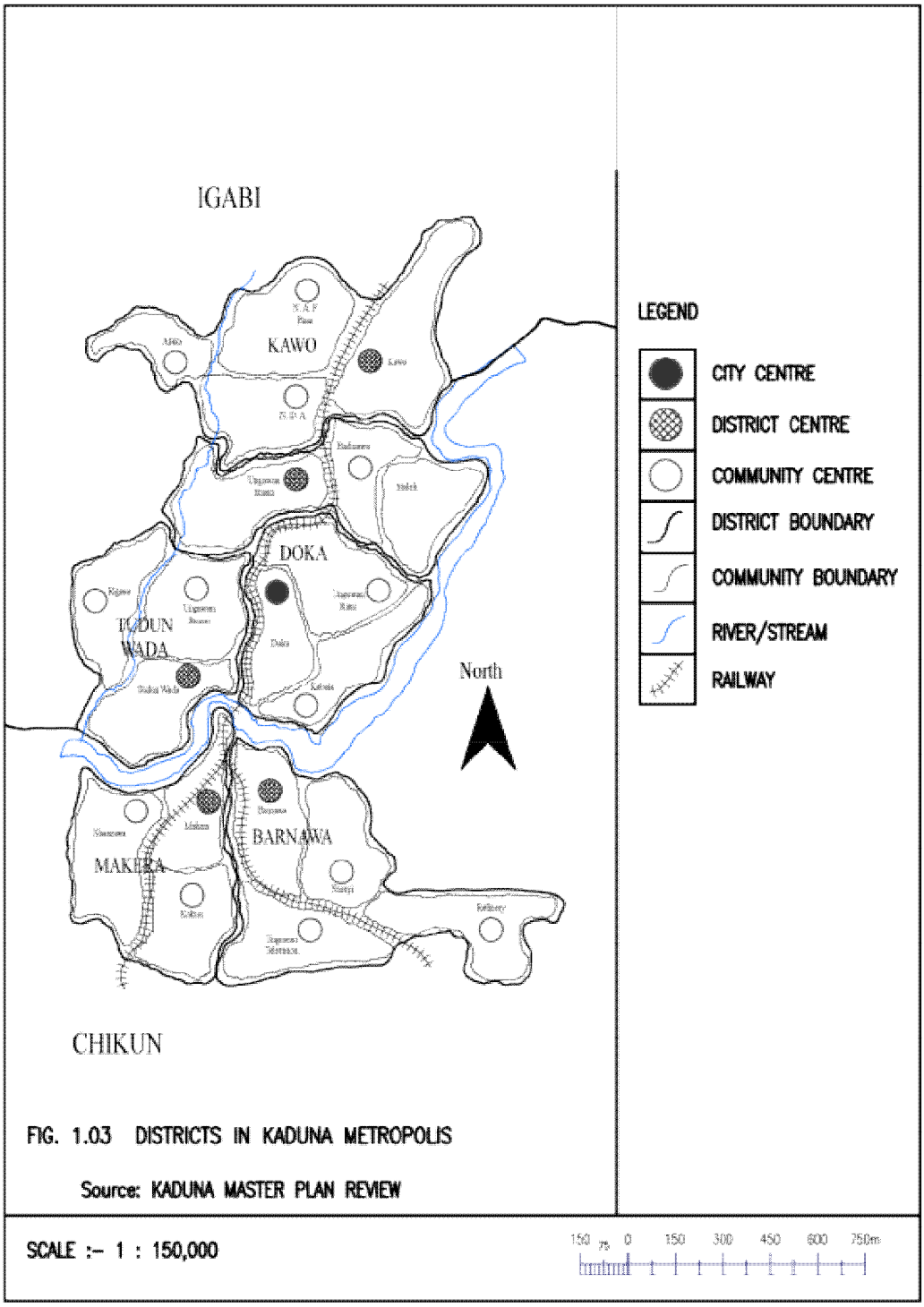



FIG. 1.03 DISTRICTS IN KADUNA METROPOLIS

Source: KADUNA MASTER PLAN REVIEW

SCALE :- 1 : 150,000

# CHAPTER TWO

# LITERATURE REVIEW

## 2.0 Introduction

This chapter review literature on the concepts and demand estimation technique for outdoor recreation. The chapter identify trends in outdoor recreation in Nigeria and identify the model for recreation demand.

## 2.1 THE CONCEPT OF RECREATION

Traditionally, recreation has been defined as an activity done in opposition to work which refreshes and restores the individuals, Godbey (1978). In addition, recreation is considered as the emotional condition of an individual being that flows from the feeling of well-being and self satisfaction that is independent of activity, leisure or social acceptance, Godbey (1978). It becomes clear that, the area of emphasis differs. While one view considers recreation as an activity such as football, relay, basket ball, badminton, hockey, chess, draft, cards, tennis which is undertaken during leisure time, another view considers recreation as an activity without regard to leisure time.

According to Clawson and Knetch (1966), recreation is basically a renewal or preparation for routine necessary work or means of escape from it. Thus, main purpose of recreation is to revitalise people so that they may efficiently return to activities which are economically and or intellectually gainful. The distinguishing characteristic of recreation is not the activity itself but the attitude of which it is undertaken. This approach shows how recreation contrasts with work which is done mainly for the purpose of existence and subsistence. Pilgrim (1983) states that recreation is considered to be activity voluntary undertaken primarily for pleasure and satisfaction during leisure time. Patmore (1983) describes recreation as a specific activity undertaken in leisure time. Chub and Chub (1981) consider recreation to be ñany type of conscious enjoymentò. In Burtons (1970), recreation is

defined as ñactivity which man engage in during his free time which does not include work, nor does it include certain personal and societal obligations that all people have, such as sleeping and washingò. Burtons then explained that recreation is any pursuit other than those associated with work and necessary tasks of a personal and societal nature, which a person undertakes freely for purpose of relaxation or entertainment or for his own personal or social achievement. Butler (1960) defined recreation as ñany activity which is not consciously performed for the sake of any reward beyond itself, which is usually engaged in during leisure, it offers man an outlet for his physical, mental and creative powers and he engages in because it elicits from him a pleasurable and satisfying responseò. Seeley (1973) attempts a summary of this view, he defined recreation as any form of experience or activity in which an individual engages from choice because of personal enjoyment and satisfaction which he receivesò. These two concepts as well as others identified the personal nature of recreation and these indicates why the concepts or recreational activities are as diversified as the interest of man. Some authors in the likes of Gold (1980) are of the opinion that recreation and leisure are related although, different things. In his view Gold (1980) sees leisure as context for pleasure and self expression and recreation as what happened to people as a direct result of activities or experiences.

Tribe (1995) define Recreation as a pursuit undertaken in leisure time. Recreation pursuits include home based activities such as reading and watching television and those outside the home include sports, theatre, cinema & tourism. The common problem which this definition however, according to Tribe is that it applied to the pursuit that people undertake in their leisure time, but what about things people do to support their employment in their spare time? For example is a computer programmer use of computers in non working time a leisure activity.

## 2.2 RECRETION ACTIVITIES

### 2.2.1 Classification

The wide range of leisure activities in cities can be classified in a way that acknowledges the concepts of quality and is useful in planning and management of urban recreation spaces. Most activities can be classified into four categories of recreation experience

i. Physical recreation, which requires exertion or physical effort as the major experience of the activity.
ii. Social recreation, which involves social interaction as the major experience of the activity.
iii. Cognitive recreation, which includes cultural, educational, and creative and aesthetic activities.
iv. Environmental-related recreation, which requires use of a natural resource such as water, trees, scenery, or wildlife to provide the setting, or focus, for an activity.

Because the total recreation system is not outdoor based both indoor and outdoor experiences are considered.

### 2.2.2 Modern Recreation Activities

Modern recreation activities refer to those recreational activities introduced into a society as a result of contact with other cultures, notably the west. In Nigeria, modern recreational activities were introduced about the same time as colonialism, such activities include, soccer, tennis e. t. c.

## 2.3 FACTORS INFLUENCING RECREATIONAL ACTIVITIES

Generally, the following are some of the factors influencing recreational activities: - Noticeable among them include physical, socio-cultural, economic, level of education, and mobility.

### 2. 3.1 Physical factors

Physical factors classified as land and water bodies have been particularly important determinants of pattern of recreational activities. Land (space) is needed for almost all kinds of recreational activities. Similarly, recreational activities such as swimming, sailing could take place only in the existence of water bodies.

### 2.3.2 Socio-cultural factors

Socio-cultural factors such as age, sex, and to some extent religion influences the pattern of recreation of groups and communities.

i. Age: - According to Burton (1970), age is significant with regards to outdoors recreation. He pointed out that ages between 18-25 years have maximum participation in outdoor recreation activities. There after, it declines progressively with age.

ii. Sex: - Another factor affecting recreation is the sex of participant. Once again, Burton (1970) observes that sex affects the ñtypeò rather than the ñlevelò of participation in recreational activities. Traditionally, games such as boxing, soccer are associated with males while games such as handball and volley ball with females.

iii. Religion: - Religious beliefs encourage and discourage certain recreational activities. Islam for example, discourages females from exposing their bodies; hence recreational activities such as swimming will not be in line with the Islamic doctrine.

### 2.3.3 Economic factors

Income level has some bearing to the level and type of participation in recreation. Those with higher income are more likely to participate more frequently in recreational activities. This is more so with recreational pursuits, such as polo, golf that require substantial amount of money for equipment.

### 2.3.4 Educational factors

Education level shows some relationship with leisure patterns. It affects both type and level of participation. Studies carried out by Shafalda (1982) and Inusa (1985) in Yola and Kaduna respectively have shown that those with western education tend to prefer modern recreation activities. As regard to the level of participation, a study carried out by the Outdoor Recreation Resource Review Commission (O.R.R.R.C) in U.S.A. found that those with college education engaged in greater number of outdoor recreational activities than those with less education. The contention here is higher education exposes one to a variety of ideas and experiences which broadens leisure interest and promotes variety of recreational habits.

### 2.3.5 Mobility

Transportation influences the level of participation in recreation. It is one thing to have a recreational facility developed at a place and it is another thing for people to get there. Therefore, people with means of mobility will tend to visit such centres more frequently than those without.

## 2.4 ADVANTAGES OF RECREATION

The advantages of recreation to the well being of humans cannot be over emphasis. Brightbill (1960) classified the advantages of recreation into four main categories:

1) To aid body development, movement and coordination through physical activities such as football, tennis and climbing
2) To contribute to safety and survival, as in swimming
3) To foster and extend an appreciation of the outdoors, through activities like hiking and camping

4) To promote mental stability and to provide a change in setting and pace from the highly competitive world of work. It constitutes a form of relaxation that is an aid to emotional stability.

## 2.5 OUTDOOR RECREATION

Seely (1972) defines outdoor recreation as recreation that is performed outdoors although there are a few activities like swimming that are either performed outdoors or indoors. Outdoor recreation is of particular significance geographically as it often requires the use of extensive area of land or water, involving the possibility of land use conflict through competitive claims. Location aspects of recreational resources are also important from the point of view of accessibility to the users of the resources. The resources range along a continuum from undeveloped wilderness areas to the highly artificial environments of urbanized resorts or landscaped parks.

Outdoor recreation activities have also been defined by Queensland outdoor recreational federation Q.O.R.F. (2009) as those activities that are undertaken outside the confines of buildings (i.e. in the outdoors) and do not involve organized competition or formal rules and can be undertaken without the existence of any built facility or infrastructure. It may require large areas of land, water and /or air.

Outdoor areas of predominantly unmodified natural landscape facilities, site modification or infrastructure may be provided to manage the impacts generated by the activities. However, outdoor recreation activities can be undertaken without facilities, site modification or infrastructure. Outdoor recreation activities include (but are not limited to) non-competitive activities.

### 2.5.1 Outdoor Recreation and Open space

The relationship of outdoor recreation to open space is based on a biological need to retain some association with the natural environment in an urban setting and a psychological need for contrast and change in special surroundings and activities that most indoors environment do not provide. When these needs are linked with the routine indoor jobs of most people and the sterile or stressful outdoor environments of many cities and suburbs, they generate strong desire for escape to open space, especially those with a natural character. This kind of scenario is equally applicable to developing societies like Kaduna city where people desire to seek recreation opportunities in regional parks or private resort parks.

## 2.6 RANGE OF OUTDOOR RECREATIONAL FACILITIES

Recreational facilities are needed for the vary young to the vary old, for beginners and for experts, for teams and for individuals, for indoors and for outdoor (Seely1973). Out door recreational facilities are grouped according to the report by the North West Sports Council U.S.A in Table 2.01

Table 2.01 Range of Outdoor Recreation Facilities

| S/N | AREA | ACTIVITY |
|---|---|---|
| 1. | Use of outdoor turf area | Cricket, soccer, rugby, Hockey, polo |
| 2. | Motor Circuit | Motor racing, Motor cycle racing |
| 3. | Other circuit | Horse racing, Pony racing |
| 4. | Use of coastal or other water area | Sailing, canoeing, diving, water sports, fishing boating |
| 5. | Use of hills & Rural areas for special activity | Hiking, climbing caving, camping skiing, picnicking & sightseeing |
| 6. | Use of general coastal area | Picnicking, sight seeing & day visit |
| 7. | Un-group | Tennis, golf, shooting athletic basketball, netball |
| 8. | Use of Roads | Motoring for pleasure rallying & cycling |

Source: Adopted from Seely (1973)

By way of contrast the California Public outdoor Recreation Plan list the main outdoor recreational pursuits as: use of scenic roads and water ways, gliding, visits to historic sites, picnicking, camping, riding, hiking, swimming, boating, fishing, hunting, winter activities and golf.

### 2.6.1 Classification of Activities for Outdoor Recreation

The many types of outdoor recreation areas and the numerous kind of activities performed on them require some form of classification for meaningful analysis. Classification of different recreation resources usually assist in the prediction of future demands for various kinds of facilities. The classification is based on Location, Use intensity and Characteristics then Other Methods of classification.

#### 2.6.1.1 Location Classification

This method was introduced by Clawson, Held and Stoddard (1962) based on three location groupings of facilities i.e. User oriented areas, Resource areas, and Intermediate areas. This is illustrated in Table 2.02

#### 2.6.1.2 Use intensity and other special characteristics

There are six types of recreation area classified as to the intensity of use and other special characteristics.

1. Higher density recreation areas- these are intensively developed and used. Typical examples are popular bathing beaches and town parks
2. General outdoor recreation areas ï these are substantially developed for a wide variety of specific recreational uses
3. Natural environment areas- these are suitable for recreation in a natural environment and usually in combination with other uses.
4. Unique natural areas-areas of outstanding scenic splendour or scientific importance.

Table 2.02 Classification of Recreation Areas

| S/N | ITEM | USER ORIENTED | RESOURCE BASED | INTERMIDIATE |
|---|---|---|---|---|
| 1. | GENERAL LOCATION | Close to user, on whether resources are available | Where out-standing resources can be found; may be distant from most users | Most not be too remote from users on best resources available within distance limitation |
| 2. | Most types of activity | Games such as golf, tennis, swimming, & horse riding; zoos etc; childrenôs games | Major sightseeing-scientific & historic interest, hiking & mountain climbing, fishing & hunting | Camping, picnicking Hiking, swimming, hunting & fishing |
| 3. | When major use occur | After hours (school or work) | Vacation | Day outing & weekends |
| 4. | Typical size of area | 1-100 hectares | Usually some thousand hectares | 50-1000or more hectares |
| 5. | Common types of agency responsible | City, county, private | National parks & national forests; state parks in some cases; private esp. For sea shore & major lakes | Federal reservoir; state parks: private |

Source: Adopted from Seely (1973)

5. Primitive areas-undisturbed road less areas of a wild character, term ówilderness areasô
6. Historic and cultural sites- sites which have strong association with history traditions or cultural heritage.

Four other classifications of outdoor recreational areas based on the intensity of use are identified as follow:-

Very heavy, with perhaps 4000 or more total uses or visit per hectare per year. A large portion of municipal parks would fall into this classification, in whole or in part and perhaps some highly popular areas within national or regional parks.

Heavy, with typically 100-250 uses or visits per hectare per year. Camps and picnic areas, popular lakes and river banks would fall into this class

1. Moderate, with typically two to eight uses or visits per hectare per year. Many fishing, hiking and riding areas could fall into this class.
2. Light, with typically 0.33use or visits per hectare per year. This class could include the óback countryô of national parks.

**2.6.1.3 Other Methods of Classification**

This classification of recreational areas is subdivided into five groupings on the basis of their demand on land and other resources:-

1) The passive enjoyment of rural beauty, which requires little direct access to land.
2) Informal activities, like walking which need access to the countryside at large
3) Traditional rural sports, like grouse shooting and fox hunting, which generally involve either game or land management.
4) Sport, such as cricket or motor racing for which a pitch or other specially constructed facilities are required.

5) Aquatic sports, like fishing and canoeing, which are practiced in both coastal and inland waters and make only limited (though very localized) demands on land.

Some approaches to the classification of recreational resources have had regard to the physical characteristics of the resources. These recreational resources are in the form of water, wetland and significant topography. Other major physical components of this classification include vegetation cover, a suitable terrain or slope, an area of sufficient size for development and protective purposes as well as accessibility.

## 2.7 TRENDS IN OUTDOOR RECREATION

Clearly, the past century represented an era of immense growth and change in every respectð dramatic population expansion, the shift from rural to urban environments, and business development. The 1900s saw a steady improvement in educational opportunity, the elimination of many aspects of racial and gender- discrimination, a growing environmental concern, and steady improvement in the quality of life for most people. Leisure has been an important element in this progress. Today, increasing numbers of individuals and families take part in recreation on every level: sports, hobbies, entertainment and cultural activities, social programs, and travel and tourism.

Numerous other research reports by the U.S. Department of Commerce and other agencies confirm that public participation in varied leisure pursuitsð including the purchase of books, musical recordings, and lawn and garden supplies; the care of pets; outdoor recreation, cultural arts, and tourismð also climbed steadily in the final years of the $20^{th}$ century. At the same time, a number of significant economic and social trends that gained momentum in the recent past seem certain to influence the role of organized leisure services in the years ahead.

### 2.7.1 Trend in outdoor recreation: The Nigerian experience

Outdoor recreation in Nigeria in the early 20th century has focused mainly on the traditional forms of recreation. Different ethno-cultural festivities are held year round to satisfy the recreational ego of the people e.g. the Argungun fishing festival, the new yam festival etc. Though, not all forms of outdoor recreation activities are held on festive basis e.g. hunting and moonlight stories for children.

On the account of colonial and post colonial periods that were accompanied by the diversification of occupational activities ( engagement in secondary and tertiary occupation), introduction of western education, and the introduction of efficient and convenient forms of transportation resulted in increase in discretionary time and income for workers, recognition of leisure hours in the forms of schools holidays and additional opportunities to pursue outdoor recreational activities away from home. This has created a new trend for outdoor recreational activities in Nigeria especially in those termed as modern. Physical fitness activities, Team sports, and outdoor social visits were introduce to replace a significant components of the traditional form of outdoor recreation.

## 2.8 RECREATION DEMAND

One of the least understood and most abused aspect of recreation planning is the concept of demand. This is because at one extreme, there is growing skepticism about the role of quantitative techniques for public decision making and design. At the other extreme, some regard the quantitative aspect of demand as a meaningful reflection of interest or participation in recreation. This school of thought is expressed in interpretation of ñdemandò as what people will or can do given the opportunity. Proponents asserted factors such as the supply or distribution of resources, cost, access and other factors can be objectively measured and

projected for decision making and design. They believe models have qualification, but are useful in assessing the consequences of alternatives.

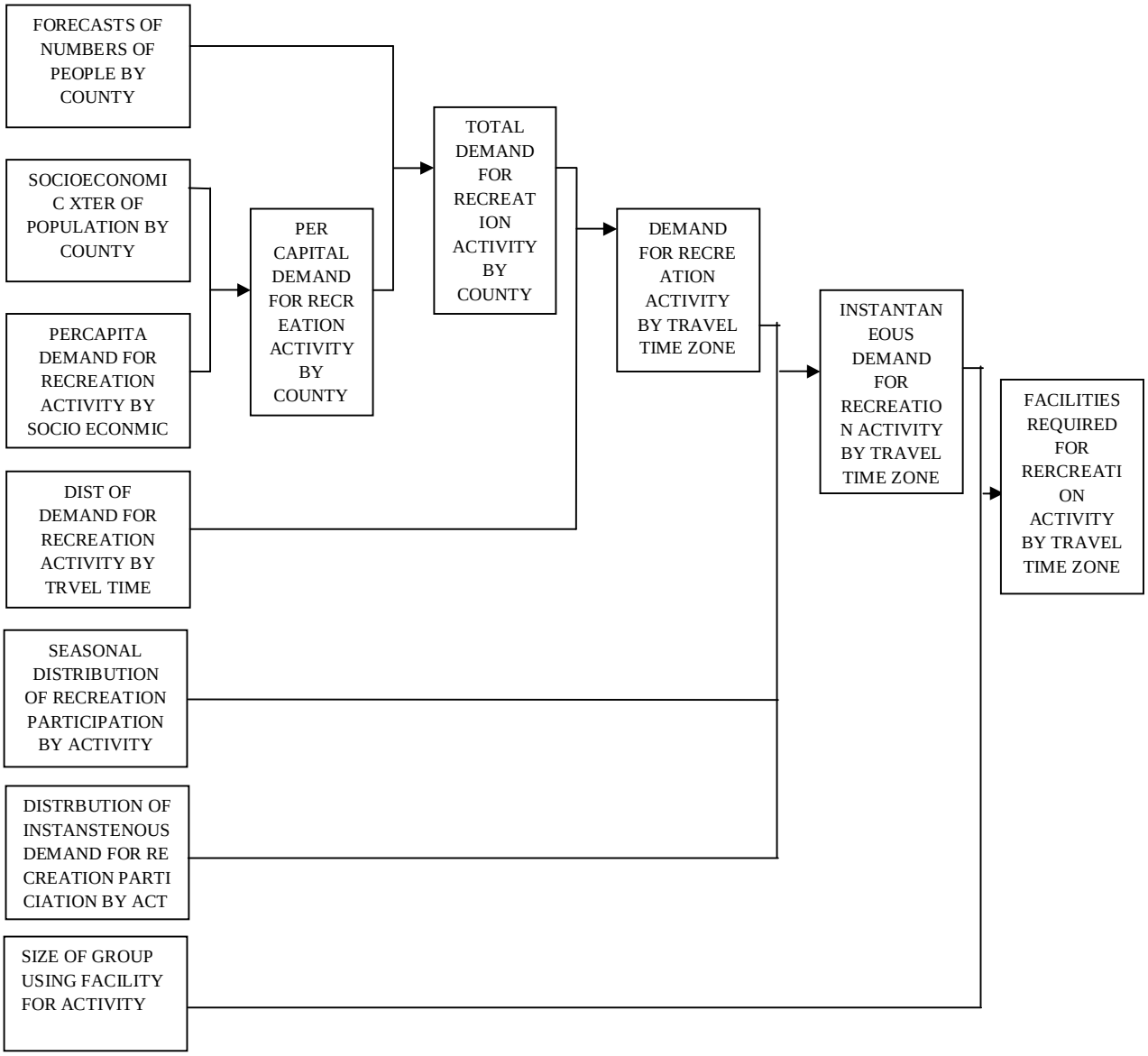



Fig.2.01 Model of Recreation Demand
Source: Adopted from Gold (1980)

The model estimates the peak demand for facilities at any one time; demand in each travel zone is multiplied by the percent of total participation in recreation activities during the summer months and by the percentage of total peak season use. The number of facilities

needed for each recreation activity within a travel time zone is determine by dividing the total demand for that activity by the average size of the group using one facility.

### 2.8.1 LEVELS OF RECREATION DEMAND

Three levels of demand are conspicuous in the planning process (Gold 1980). All are related but have different measures, methodology and variables. Each level also has related, but different, implication for the planning, design and management of recreation systems and sites.

### 2.8.2 THE DEMAND FOR OUTDOOR RECREATION IN THE CONTEXT OF BROAD SOCIAL AND ECONOMIC POLICY

Recreation is a social activity, and policies with regard to recreation must be viewed as affecting, and affected by, other social and economic policies. Outdoor recreation decisions affect not only the availability of resources, facilities, and programs for a set of "leisure" activities, but a range of diverse elements, including economic, industrial, and population growth, the development and use of transportation systems, and the nation's international trade and payments ledgers. The interaction of outdoor recreation with other broad areas of societal concern can be identified with relative ease. The coordination of recreation with other policy issues to arrive at a cogent, responsive, and effective overall social and economic policy (at all levels of government) is, however, an enormously complex and probably unattainable objective. There is a need, nevertheless, to view recreation planning in the context of social policy and to estimate the demand for recreation (in particular, outdoor recreation) in terms that permit comparisons with the demand for other social and economic goods and services.

### 2.8.3 THE DEMAND FOR ALTERNATIVE TYPES OF OUTDOOR RECREATION

Within the resources available for outdoor recreation, choices must be made with regard to the types, quantities, and general location of opportunities to engage in recreation; strategies for implementation; and timing. To make these allocation decisions, recreation planners need to know what recreation activities people wantð for example, the demand for basketball, for tennis, for sailingð and what opportunities would allow those wants to be satisfied.

### 2.8.4 THE DEMAND FOR SITE-SPECIFIC OUTDOOR RECREATION

Planning for a specific site requires estimates of demand both in choosing the site and in selecting the kind and quantity of recreation resources, facilities, and programs to provide. Identification of potential users and the alternative recreation sites available to them, and the consideration of site characteristics that bear on development, forms the basis for inferences about the demand for a specific site, facility, or program, and the value of providing it.

## 2.9 TYPES OF DEMAND

There are three types of demand which conditioned the use, design and management of recreation resources.

1. Latent demand is the recreation demand inherent in the population, but not reflected in the use of existing facilities. Participation can be expressed if adequate facilities, access and information are provided. This type of demand is based on the model of leisure choice. It translate the hierarchy of human needs into resources, image or leisure directed desire that can be described with measures of users preference and satisfaction. Latent demand is the basis of that supply creates demand. This argument suggests people will use available opportunities if they are provided.
2. Induced demand is latent demand which can be stimulated by public conditioning through the mass media or the educational process. Induced demand exploits latent

3. demand by encouraging people to change their recreation patterns. Although the media and the educational process are commonly thought to be the most effective ways of inducing demand, planning and management methods can change recreation use patterns.
4. Expressed demand is consumption or participation in terms of existing recreation opportunities. It describes what people do instead of what they would like to do (latent demand) or can be conditioned to do (induced demand). The differences between expressed and latent demand can also be described in terms of participation and preference for selected activities. Expressed demand is often the expression of latent or induced demand but not always. It only indicates participation at prevailing opportunity conditions and normally omits consideration of price, supply access, skill or equipment necessary and user satisfaction with the recreation experience.

## 2.10 FACTORS OF DEMAND

Factors of demand can be classified into categories at either the site level or the system level. Both categories show the type and range of factors that generate changes in the demand patterns. The weight or importance of any factor might vary for different populations and geographical areas. It can also vary for different ages, life styles, and social or economic conditions, which is why it is so difficult to forecast the future demand for recreation. For example, the major factors for increases in recreation demand have been population growth, youth, rising incomes, rising education levels and increased mobility. All these factors are subject to change in the near future.

Table 2.03 Demand Factors for a Specific Recreation Area

| | |
|---|---|
| **Factors relating to the potential recreation users** | Carrying capacity and design load of area |
| | Microclimate of the area |
| | Natural and physical characteristics of area |
| Total population in the service area | |
| Geographical distribution of population | **Factors relating potential users to the recreation area** |
| Demographic characteristics of population | |
| Time budgets of population | |
| Leisure habits of population | Travel time and distance |
| Awareness levels of recreation opportunities | Travel mode, cost and convenience |
| **Factors relating to the recreation area** | Cost of supplies or equipment to use area |
| | Cost of fees and charges to use area |
| | Information about area |
| Attractiveness as judged by the user | Status or image of area |
| Management levels and practices | Regulations to control behavior |
| Availability of alternative sites | |

Source: Adopted from Gold (1980)

## 2.11 ESTIMATING RECREATION DEMAND

Several methods exist for estimating outdoor recreation demand, although there are several variations. The following eight methods of estimating demand are commonly used:

1. Application of standards
2. Extension of past trends
3. Extension of trends in causal forces
4. Application of the satisfaction principle
5. Estimates of the socioeconomic factors
6. Informed judgment
7. Gravity models
8. systems models

### 2.11.1 Application of Standards Technique

The most popular technique used by public planning agencies for estimating demand is the application of population-based standards, for example 10 acres of park land per 1000 residents. These standards have traditionally been used to determine the relative presence, absence or ñneedò for a resource or a facility. They arbitrarily establish ratio between the user and the resource, regardless of difference in geography, population characteristics, leisure patterns or the feasibility of implementing these standards. Despite its short comings, however, the technique has some value for comparing similar communities and determining the physical design load of an area for a site-specific activity, for example activity day or hours per tennis court. It also has merit in establishing human or social carrying capacity to avoid physical damage to the site or the detrimental effects of crowding.

### 2.11.2 Extension of past trends

Extension of past recreation use trends has been widely used to forecast demand level. This technique is simple to apply and may provide reasonable accurate use estimates for short time period of up to five years. It is most useful where the geographic or service area has a relatively stable population and where the supply of recreation opportunities or the participation rate is constant. Extrapolation of use counts e.g. visitor-days to predict future demand, assumes a model of the future which omits possible changes in the causal factors of demand. It assumes the factors that operate in the past will continue to operate in the future, which may not be so. For example, this method takes the recreation activities shown in Figure 2.02 and projects them without qualification to the year 2000. The method ignores the interaction of social or economic conditions, for example, inflation or an energy crisis. It also provides no information on the value or benefit of providing additional opportunities. It simply assumes that more is better and should be provided, regardless of the tangible benefits or economic feasibility of providing these opportunities. Fig. 2.02

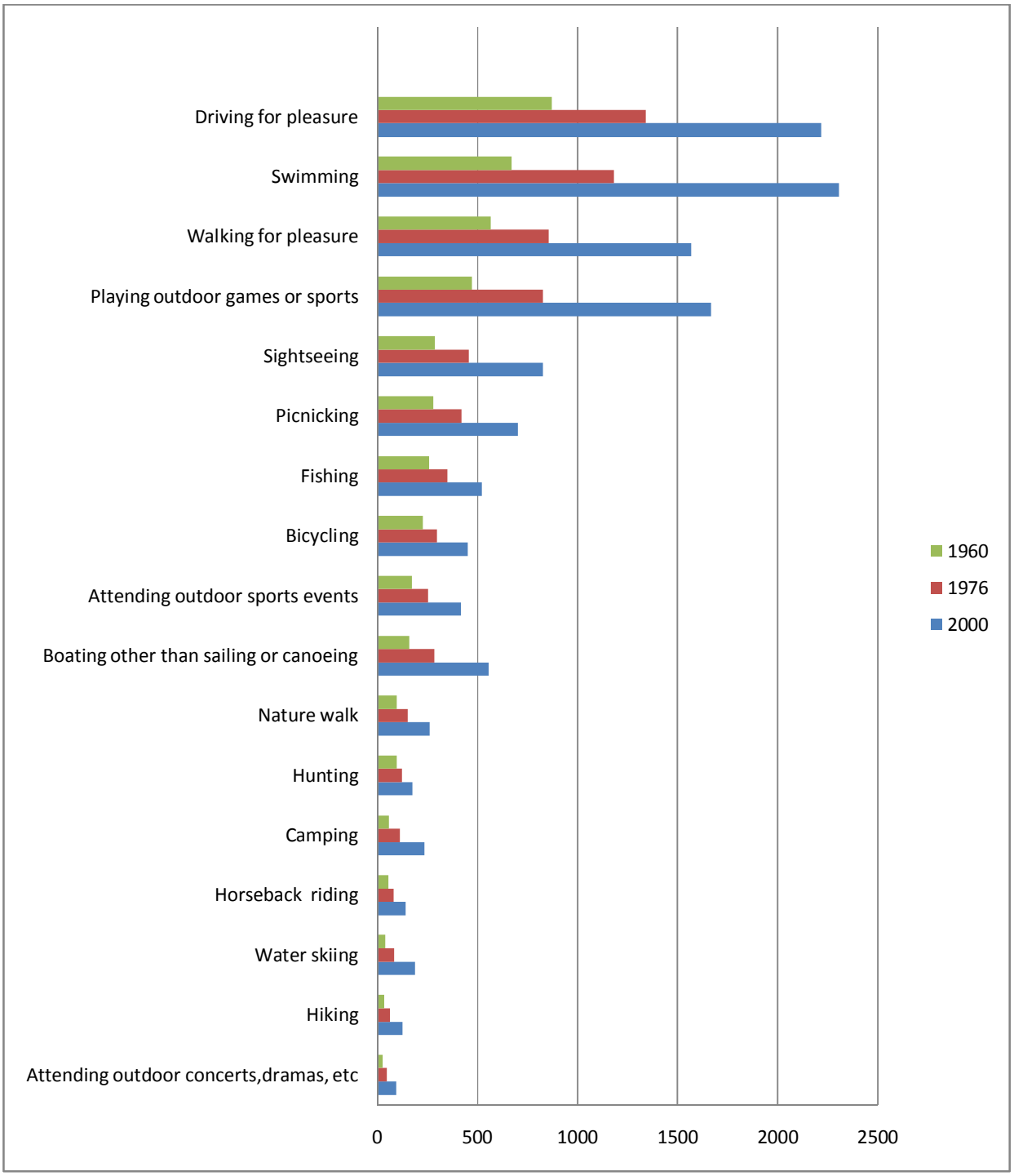



Fig. 2.02 Number of occasions of participation in outdoor summer recreation 1960 compared with 1976 and 2000 (by millions)

A number of outdoor recreational activities were selected by 1960 in which the level of participation in different activities indicates the relative popularity of that activity. Then, as contained in the technique maintained that the factors of demand that operate in the sixties

will continue operate in the future as such projecting demand on that basis. The expectation of technique is a positive development on the forces which shaped demand. It assumes that outdoor recreational activities in the likes of Driving for pleasure will have an increase in participation levels by about 2,215,000 by the year 2000 as against the 872,000 participation rates registered in 1960.

The model can for some extend be applied in Kaduna metropolis for some selected outdoor recreation pursuits for short term planning periods going by the fact that long term planning periods are in most cases over taken by events and which resulted in frequent changes.

### 2.11.3 Extension of trends in causal factors

Gross estimates of future recreation demand or consumption have been developed using the causal factors shown in Table 2.04 below. This approach assumes changes in levels of consumption for specific activity. It acknowledges past trends, but weights these to reflect forecasts in causal forces such as population growth, increases in leisure time, increased mobility or more disposable income. This method has some merits in short-term forecasts. However, a major limitation is that many time-related variables reflect only past growth in recreation consumption. Because a variable say mobility or income correlates with recreation consumption in the past does not mean it will do so in the future. This approach assumes all factors influencing recreation behavior are known and the relationship between causal factors and recreation consumption will remain unchanged in the future.

Table 2.04 Causal Factors of Recreation Demand/Consumption

| POSITIVE | NEGATIVE |
|---|---|
| Population increase | Competing activities: television |
| Leisure time | Complacency |
| Mobility | Poverty |
| Income level | Religious attitude |
| Education levels | Generation Gap |
| Age | Discrimination |
| Health/Physical conditions | Lack of opportunities |
| Urbanization | Physical conditioning |
| Mass media conditioning | Commuting |
| Outdoor leaving | Crime |
| Easy credit | Racial tension |
| Technology & automation | Pollution |
| Social statues | Inflation: competing needs |
| Work ethics decline | Cultural heritage |
| Boredom of jobs | Crowding/peak use |
| Environmental quality of cities | Poor access |
| Environmental stress | Lack of program |
| Inflation: low-cost vacations | Deviant behaviour |
| Experience levels | Civil disorder |
| Habit/custom/heritage | Fees and charges |
| Early retirement | Energy shortages |
| Flexitime work schedules | Natural disaster |
| Extended weekends/holidays | Second jobs |
| | Working wives |

Positive inducements, motivation, or conditions that tend to increase the relative levels of expressed demand for most recreation activities. Negative constraints, influences, conditions that tends to decrease the relative levels of expressed demand for most recreation activities

Source: Adopted from Gold (1980)

### 2.11.4 Application of the satisfaction principle

No matter how much income or leisure a person has, there are limits to the amount of recreation desired or expressed. These limits apply to specific activities and location. They also relate to age, leisure periods and lifestyle. These limits can be determined by survey with reasonable predictability. For example, there is evidence to suggest participation in many forms of outdoor recreation increases with increase income and education to a point where the demand of some occupations begins to decrease participation levels.

Other studies point to the saturation levels for particular activities according to social statues, region, and family composition. The results are not conclusive, but they do indicate upper limits to levels of demand for particular activities. Conservative estimates of the upper limits of demand for particular activities may make it possible to extend participation levels of population groups for selected activities.

### 2.11.5 Estimates of the Socioeconomic Factors

This method is a refinement of the extension of the causal factors method which manipulates the variables in sophisticated models. The basic approach is quantitative and lends itself to simulation for planning or decision making. It can be applied to most activities and situations with relative ease and predictability if the quality or quantity of opportunities does not change.

This method is particularly useful in estimating the demand for remote reservoirs or wilderness areas where the resource is limited and the access controlled. It can also be used with reasonable accuracy to predict short range changes in participation levels for selected activities. See Fig 2.03

This method must be carefully qualified, however, because it normally

a) Gives all factors the same weight

b) Does not take into account the relative quality of the recreation resources or experience

c) Produces results that are no better than the data to describe complex socioeconomic trends




Fig. 2.03 Estimate of Socio-economic Factors
Source: Adopted from Gold (1980)

The socioeconomic technique is of the opinion that occupation has a considerable influence on leisure habits. It estimated that on the average the working class has more time engaging in outdoor recreational pursuits as compared to the nonï working class.

### 2.11.6 Informed Judgment

Clawson (1966) describes a method called ñinformed judgment,ò which acknowledges the short comings of other methods and adds the dimension of professional insight based on experience. This method is based on two concepts (1) the trend in demand levels for most activities will continue to increase for some time and (2) the upward trends of the post war years cannot continue indefinitely because it leads to absurd projection. The basic short

coming with this approach is lack of agreement on when present trends will peak for what activities, where and why. Another problem is this approach is base on

a) Historical trends for a particular area or activity
b) Probable future desires of people for certain area or activity
c) Probable future capability of people to afford the time or money that such recreation will require
d) The projected supply of areas in which the desired activity can take place.

### 2.11.7 Gravity Model

A model is a simplified version of something complex used in analyzing and solving problems or making predictions. Models are essential as they tend to guide into knowing the nature of issues. The gravity model on the other hand, is a mathematical model which establishes relationship between the relative location of population and the frequency of visits to a given recreation site or system. The model evaluates the use of an area as a function of distance in miles or time travelled from a population centre to the recreation area. It suggests that as distance to the recreation area increases, the use of the area decreases. The procedure involves two steps: First a demand curve is constructed for the entire recreation experience. The distance travelled from zones surrounding a recreation resource is used as an index to cost. This method assumes distance is the major cost and recreation is priced at near zero level. A schedule is derived that relates the number of visitors per 1000 base population within a distance zone to travel cost per visit per party. Second, under the assumption that increases in admission prices will influence consumption equally across distance zones; an economic demand curve for the recreation experience is constructed.

### 2.11.8 Systems Models

The systems model approach to forecasting recreation demand for a site, or region incorporates many of the complex relationships and problems of the other methods. The systems approach views a recreation system in terms of supply, demand and access. Origin and destination of users, time-distance -mode of access, population characteristics and the carrying capacity of resources are combined in a model of the system. See Fig.2.04. Once the system is operational it can be manipulated to determine the effects of different variables on recreation demand pattern. Fig. 2.04 illustrates the conceptual stages of system analysis.

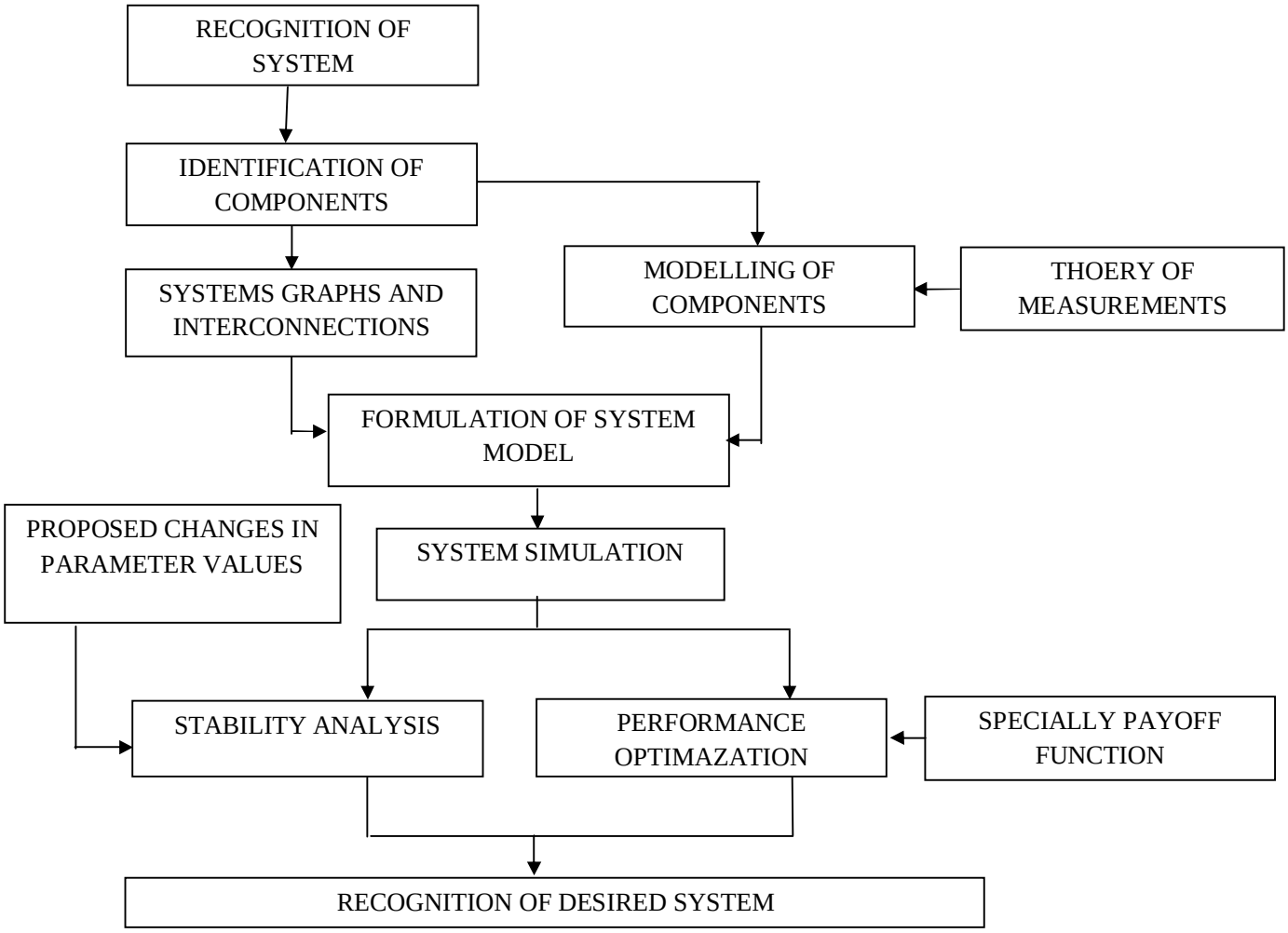



Fig. 2.04 System Analysis
Source: Adopted from Gold

## 2.12 DEMAND ESTIMATION TECHNIQUES ADOPTED BY THE STUDY

The literature review has identified Several Techniques for estimating demand for outdoor recreational activities. However, going by the trend of outdoor recreational activities in Kaduna metropolis which is showing rapid changes in the pattern of demand for various outdoor recreational pursuits, applying only the application of standard technique in estimating demand for outdoor recreation will only give the recreation planner an idea as to what will be in demand at present. But a combination of the standard approach technique of estimating demand with a trend analysis will succeed in giving the recreation planner an insight of what to expect now (the present) and what is expected into the near future. Hence the study will adopt a combination of the standard approach technique of estimating demand and a trends analysis.

## 2.13 BENEFITS OF OUTDOOR RECREATION

### 2.13.1 HEALTH BENEFITS

Personal health, including psychological health, is one of the important outcomes of outdoor recreation participation. Psychological health can be demonstrated as:

1) Stress reduction
2) Good self-esteem and positive self-image
3) Life satisfaction, inspiration and self-realization

### 2.13.2 ENVIRONMENTAL BENEFITS

Outdoor recreation participants have historically demonstrated their willingness to: -

1) Preserve the conservation values of sites through substitution, maintenance and rehabilitation projects arising through an active communication and consultation process with landholders.
2) Contribute to management strategies that reduce impact on environment.

3) Contribute to successful communication of and compliance with restrictions on sites with conservation values.

### 2.13.3 SUSTAINABLE RECREATION; A MINIMAL IMPACT CODE

The following sustainable practices are recommended for outdoor Recreational activities.

1) Considerable group sizes
2) Protection of wildlife
3) Protection of habitat
4) Protection of waterways and lakes
5) Proper disposing of waste

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.0 Introduction

This chapter covers the conceptual framework of the study, the relevant data, data collection method, sampling procedures and the data analysis technique.

## 3.1 Conceptual framework

The issue under discussion in this research emanates from the argument that the factors of demand (population, education, income, mobility, employment) are used in establishing demand for recreation. But the technique for estimating demand as well as projecting demand for recreation (especially in future) is rigid in that it operates strictly on population/ratio structure which does not take cognizance of the changing recreation needs of the people. Therefore a trend analysis for demand will be conducted on the different recreational activities so as to obtain a trend (pattern) of demand for the future. The conceptual framework is shown in Fig 3.01. The study covers five aspects; the statement of research problem, significance of the study, literature review, research methods using secondary data in estimating demand, application of the trend analysis in properly estimating explanatory demand, and recommendations and conclusion.

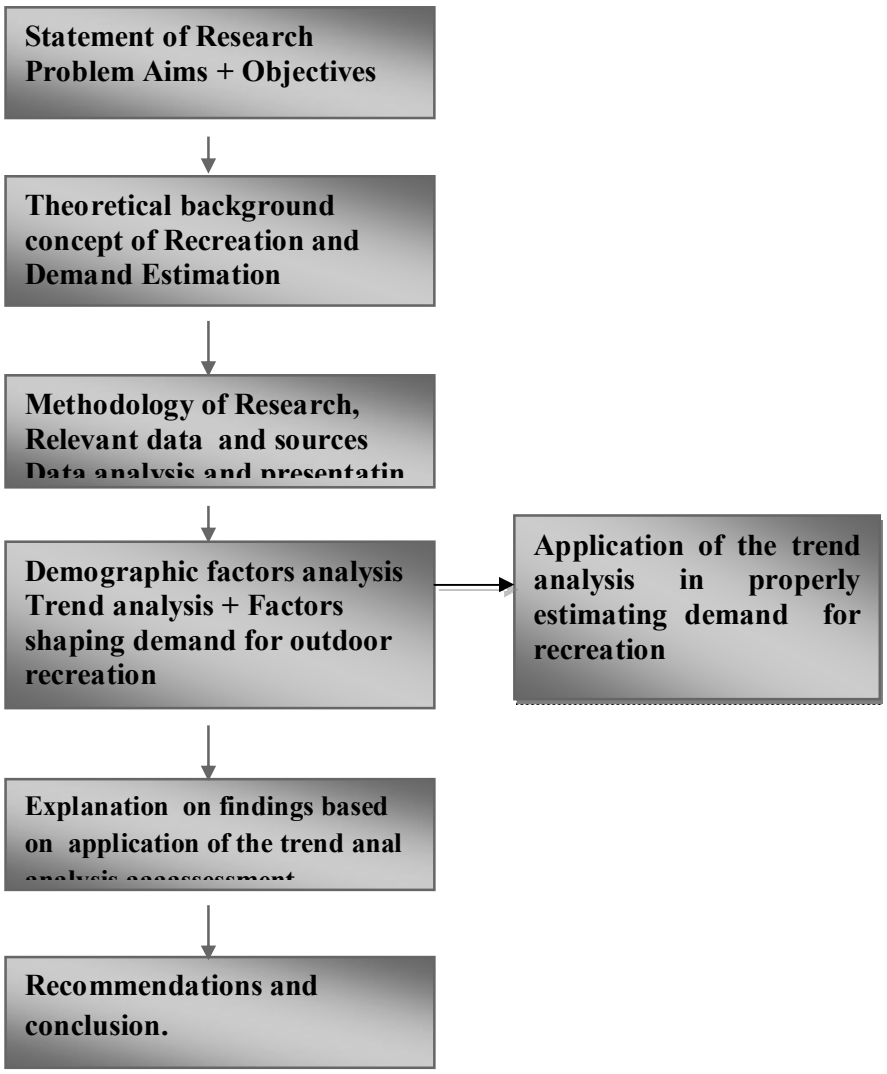



Fig. 3.01 Structure of the Thesis

### 3.2 RELEVANT DATA

In conducting researches, numerous types of data are required in providing the researcher with information on the situation at hand and expectations on the issue under study. The relevant data, the accompanying variables and the sources of the information are all very important to the researcher. Information on the study area, inventories of resources, information on characteristics of participants with variables ranging from maps, facilities, as well as validated sources are required to facilitate the research as contained in Table 3.01

Table 3.01 Relevant data

| S/N | RELEVANT DATA REQUIRED | VARIABLES | SOURCE OF DATA |
|---|---|---|---|
| 1. | Information on the study area | Maps, showing recreation resources | Min. of lands KASUPDA Min. of Culture & Tourism |
| 2. | Inventory of recreation resources | Recreation areas and facilities, activities. | Min. of Culture & Tourism Min. of sports Min. of Education Field survey |
| 3. | Information on the socio-economic characteristics of population & recreation participants | Age, sex, income, education, employment levels | House/Hold & Recreation area questionnaire |
| 4. | Information on the physical characteristics of recreation sites | Location, size, activity, ownership, agency responsible for management, club houses, swimming pools, hiking or nature trails, tennis or basketball courts, condition of facilities | Min. of Culture & Tourism Min. of sports Min. of Education |
| 5. | Information on the usage of recreation sites | Capacity of facilities, periods of intensive use, proximity to facilities, types & availability of transportation, user fees | Min. of Culture & Tourism Min. of sports Min. of Education |
| 6. | Information on Leisure habits of the population | participation, priorities preferences, and desire for improved opportunities, | House/Hold & Recreation area questionnaire |
| 7. | Information on expressed Demand | What people do for recreation. Preferences. Priorities, | House/Hold & Recreation area questionnaire |

### 3.3 SOURCES OF DATA

The questionnaire, informal interviews, recognisance survey, and observations are the primary means of data collection. Secondary sources are extracts from published and unpublished materials.

### 3.4 METHOD OF DATA COLLECTION

The Survey method has been established as the most appropriate and comprehensive means for determining community demand and needs for open space and recreation (MAPC 1979). Surveys enable the recreation planner to effectively isolate the variables he wishes to study and present a means for obtaining direct answers to the often complex questions which arise in the process of analyzing community demand and need for recreation. Surveys can give the recreation planner insight into what motivates recreation behavior, what inhibits recreation participation, and what importance the community places on recreation and the provision of recreation resources hence, the survey method will be adopted for the research.

#### 3.4.1 Instrument for Data Collection

The structured questionnaire and oral interviews are the main instruments for data collection. Two sets of Questionnaires were administered, one set of questionnaire administered in residential (house holds) areas while the other set administered to recreational (users) areas. The questionnaires provided data on the demographic, Socio-economic characteristics of the population and recreation participants.

(i) Recreation area questionnaire: In recreational areas one hundred questionnaires (100) were administered on a random sampling basis aimed at seeking the opinion of participants in recreational activities (85 questionnaires where returned with responses).The process involves identifying all areas that provide opportunity for outdoor recreation in the metropolis. These areas are largely under public, private

and institutional outfits. After the identification, a list was compiled and each recreation area was serially numbered and a table of random numbers was used to select areas from the number pool.

(ii) In the residential areas a cluster sampling technique was used. Kaduna metropolis was sub-divided into districts (clusters) Fig. 3.02. The political boundary of each district was used to demarcate the clusters. Clusters were numbered serially and Households within each selected group were numbered and a stratified sample was drawn from each cluster to form the final sample. There are 145,123 households in Kaduna metropolis (Midland Consultancy Services Ltd). Overall, 290 questionnaires were administered based on 0.2% sample size of the total households in the metropolis.

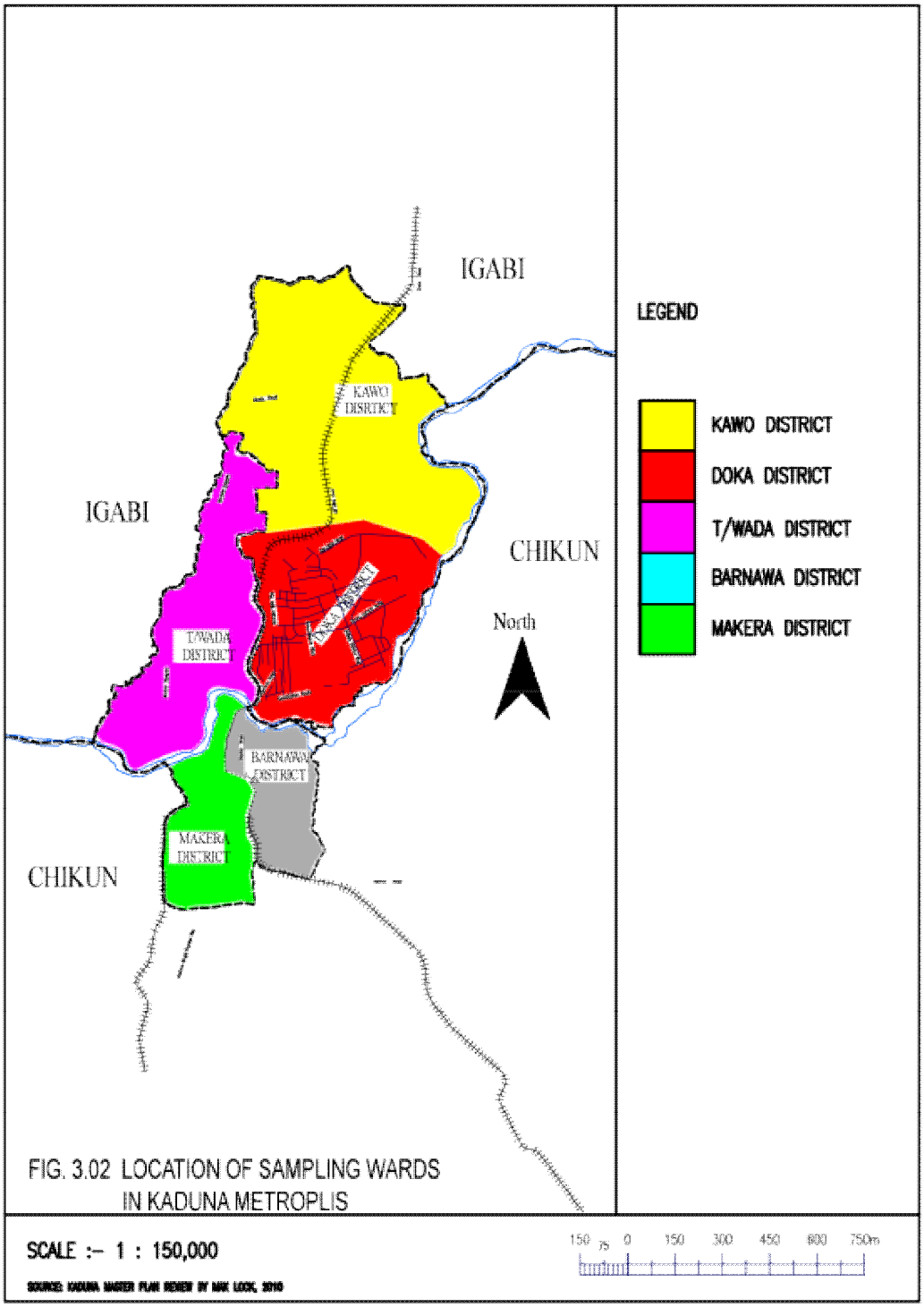



FIG. 3.02 LOCATION OF SAMPLING WARDS IN KADUNA METROPLIS

SOURCE: KADUNA MASTER PLAN REVIEW BY MIK LOCK, 2010

### 3.4.2 Sample Population Size

A total of two hundred and ninety (290) questionnaires were administered in the five (5) districts of the metropolis base on the projected population of 2009, each district given a proportion of the questionnaire in relation to the size of the district population. Two hundred and fourteen (214) questionnaires were returned with responses as contained in Table 3.02

Table 3.02 Sample Population Size

| DISTRICTS | POPN NPC 2006 | PROJECTED POPN 2009 | QUESTIONAIRES ADMINISTRED | RETURNED QUESTIONAIRES WITH RESPONSE |
|---|---|---|---|---|
| KAWO | 393,015 | 406,632 | 80 | 58 |
| T/WADA | 248,288 | 256,946 | 40 | 29 |
| DOKA | 559,289 | 578,899 | 105 | 83 |
| MAKERA | 235,311 | 243,603 | 35 | 22 |
| BARNAWA | 216,941 | 224,614 | 30 | 22 |
| **TOTAL** | 1,652844 | | 290 | 214 |

Source: Field survey 2009

**(2) Informal interviews**: - An Informal interview was conducted on the officials of the Kaduna State Ministry of Culture and Tourism, Kaduna State Ministry of Sports, Kaduna State Ministry of Education.

(i) Interviews with the officials Kaduna state Ministry of Culture & Tourism with the sole aim of obtaining information about recreation facilities that are under the Ministry, outdoor recreation programmes that can be of benefit to the metropolis.

(ii) Interviews with the officials Kaduna State Ministry of Sports: - The essence of the interview was to find out outdoor recreation facilities (sporting ) that provide opportunity for recreation.

(iii) Interviews with the officials Kaduna State Ministry of Education.

This interview will furnish the researcher with vital information on the various provisions been made by schools under the ministry with respect to the type, kind and nature of outdoor recreation facilities in place.

**(3) Reconnaissance survey**: - Direct Field inspection of sites, facilities and resources to ascertain their condition, and compare with expressed demand or preferences for various spaces or services.

**(4) Observations**: - Systematic Observation of recreation habits and recreation pattern was used to evaluate expressed demand and preference for various spaces and services.

**(5) Secondary Sources**: - Secondary sources of information on past records of participation and attendance into the various recreational activities which indicates demand was used to project demand into the future.

### 3.5 METHOD OF DATA ANALYSIS

Data for the research was analyzed using Time series analysis of which least square technique was used to predict the frequency of participation and use of outdoor recreation facilities. The goal of the time- series analysis is to identify the swings and fluctuation of a Time and then sort them into various categories by the arithmetic manipulation of the numerical values obtained. The method analyses past pattern of growth and changes that are used to predict future patterns and needs. The result was presented using line graphs to representing trend pattern. Other results were presented in tabular and graphical forms like bar charts, and pie charts.

# CHAPTER FOUR

# DATA PRESENTATION, ANALYSIS AND DICUSSIONS

## 4.0 Introduction

This chapter presents analysis of the collected data and explanations for the results obtained in the course of the study. The chapter further draw inferences from the analyzed data.

## 4.1 INVENTORY OF OUTDOOR RECREATIONAL FACILITIES IN KADUNA METROPOLIS

An inventory of outdoor recreation facilities in kaduna metropolis can provide important indications of the communities recreation participation and ultimately the adequacy of existing recreation resources. The inventory shows that some outdoor recreational facilities are public, others private and some institutionally owned. The Public recreation facilities are open for public. This class is further sub-divided into Passive recreation facilities and Active recreation facilities. The Private recreation facilities are for use (after payment of entrance fees or user charges) exclusively by individuals or groups (Table 4.01). They consist of different types of recreational facilities provided and maintained by private individuals.

Institutional recreational facilities on the other hand, are those facilities provided for the exclusive use of specialized groups or organization such as schools, military or the police force. Further investigations in the metropolis revealed that outdoor recreational activities exist in this nature, that is passive or active, outdoor or indoor, land based or water based activities (Table 4.02)

TABLE 4.01 INVENTORY OF OUTDOOR RECREATION FACILITIES IN KADUNA METROPOLIS

| S/N | NAME OF FACILITY | STATUS | NO OF FACILITY | EXAMPLES |
|---|---|---|---|---|
| 1. | Stadia | Public | 2 | Ahmadu Bello Stadium /Ranches Bees Stadium |
| 2. | Recreational Parks | Public/Private | 2 | Hassan Usman Katsina Park/Pixie Dixie Amusement Park |
| 3. | Golf Course | Private | 1 | Kaduna Golf Course |
| 4. | Polo | Public | 1 | Kaduna Polo club |
| 5. | Swimming Pool | Public/Private | 5 | Hamdala Swimming Pool/ Murtala Square Swimming Pool/ NNPC Swimming Pool/ NAF club Swimming Pool |
| 6. | Recreational Clubs | Private | 4 | Kaduna Club, Zaki Club/ N.N.P.C Sports Club/ NAF Club |
| 7. | Primary Schools Play Grounds | Institutional | 78 | Faki Rd. L.E.A Primary School/ Kargi Rd L.E.A Primary School e.t.c. |
| 8. | Post Primary Schools Play Fields | Institutional | 10 | Govt. College Kaduna/ Sardauna Memorial College/ Command Secondary School/ Rimi College/ Queen Amina College / Federal Government College Kaduna/ Maimuna Gwarzo Secondary School etc. |
| 9. | Tertiary Institution Play Fields | Institutional | 1 | Kaduna Polytechnic |
| 10. | Police Play Field | Institutional | 1 | Kaduna Police College |
| 11. | Army Play Fields | Institutional | 3 | Nigeria Defense Academy/Comilla Barracks,/Artellary Barrack |
| 12. | Sports Complex | Public | 1 | Murtala Square |

Source: Field Survey 2009

TABLE 4.02 CLASSIFICATION OF OUTDOOR RECREATION ACTIVITIES IN KADUNA METROPOLIS

| | DEGREE OF PHYSICAL ACTIVITY | | PLACE OF ACTIVITY | | RESOURCE FOR ACTIVITY | | |
|---|---|---|---|---|---|---|---|
| | ACTIVE | PASSIVE | OUTDOOR | BOTH IN-OUTDOOR | LAND | AIR | WATER |
| ACTIVITY | Football | Relaxing | Soccer | Swimming | Soccer | Ballooning | Swimming |
| | Tennis | Lido | Tennis | Tennis | Canoeing | | |
| | Hockey | Cards playing | Sightseeing | Scrabble | Tennis | | |
| | Swimming | Recreational Parks | Swimming | Basketball | Hockey | | |
| | Golf | Picnicking | Golf | Snooker | Golf | | |
| | Squash | Camping | Boxing | Clubs | Squash | | |
| | Boxing | Sight seeing | Squash | Lido | Boxing | | |
| | Cricket | Scrabble | Cricket | Dart | Cricket | | |
| | Polo | | Polo | Scrabble | Polo | | |
| | Basketball | | Basketball | Card playing | Basket ball | | |
| | Athletics | | Athletics | | Athletics | | |
| | Snooker | | Snooker | | Snooker | | |
| | Fives | | Fives | | Fives | | |
| | Volley ball | | Volleyball | | Volley ball | | |
| | Rugby | | Rugby | | Rugby | | |
| | Skating | | Skating | | Skating | | |
| | Hunting | | Hunting | | Badminton | | |
| | Horse racing | | Horse racing | | | | |
| | Motor cycling | | Motor cycling | | | | |
| | Badminton | | Badminton | | | | |

Source: Field Survey 2009

## 4.2 DISTRIBUTION OF EXISTING OUTDOOR RECREATION FACILITIES IN KADUNA METROPOLIS

Outdoor recreation facilities are widely spread within Kaduna metropolis; this gives residents ample opportunities to engage in various forms of outdoor recreational pursuits. The hierarchy of these recreational facilities varies from one district to the other. Some districts have state of the arts outdoor recreation facilities like Doka district with two Stadium and one Sports complex, while others like Tudun Wada district has institutional and special bodiesô outdoor recreational outfits, all provide opportunities for outdoor recreational activities. Table 4.03 shows the distribution of existing outdoor recreation facilities in the metropolis and Fig4.01 shows the number of outdoor recreation facilities district within the metropolis.

TABLE 4.03 DISTRIBUTION OF EXISTING OUTDOOR RECREATIONAL FACILITIES IN KADUNA METROPOLIS

| **OUTDOOR RECREATIONAL FACILITIES** | | **LOCATION IN THE METROPOLIS** | | | | |
|---|---|---|---|---|---|---|
| TYPE | DESCRIPTION | KAWO DISTRICT | T/WADA DISTRICT | MAKERA DISTRICT | DOKA DISTRICT | BARNAWA DISTRICT |
| Public | Stadium | - | - | - | 2 | - |
| | Sports Complex | - | - | - | 1 | - |
| | Recreation Parks | 1 | 1 | - | 1 | - |
| | Polo | - | - | - | 1 | - |
| Institutional | Prim. Sch. Playgrounds | 13 | 17 | 15 | 20 | 13 |
| | Sec. Sch. Play Fields | 4 | 4 | 3 | 7 | 5 |
| | Tertiary Fields | - | 1 | - | - | - |
| | Special Bodies (Army/Police Fields) | 2 | 1 | - | 1 | - |
| Private | Recreation Club | 1 | - | 1 | 1 | 1 |
| | Swimming Pools | - | - | 1 | 2 | - |
| | Golf Course | - | - | - | 1 | - |
| **TOTAL** | | 21 | 24 | 20 | 37 | 19 |

Source: Field Survey 2009

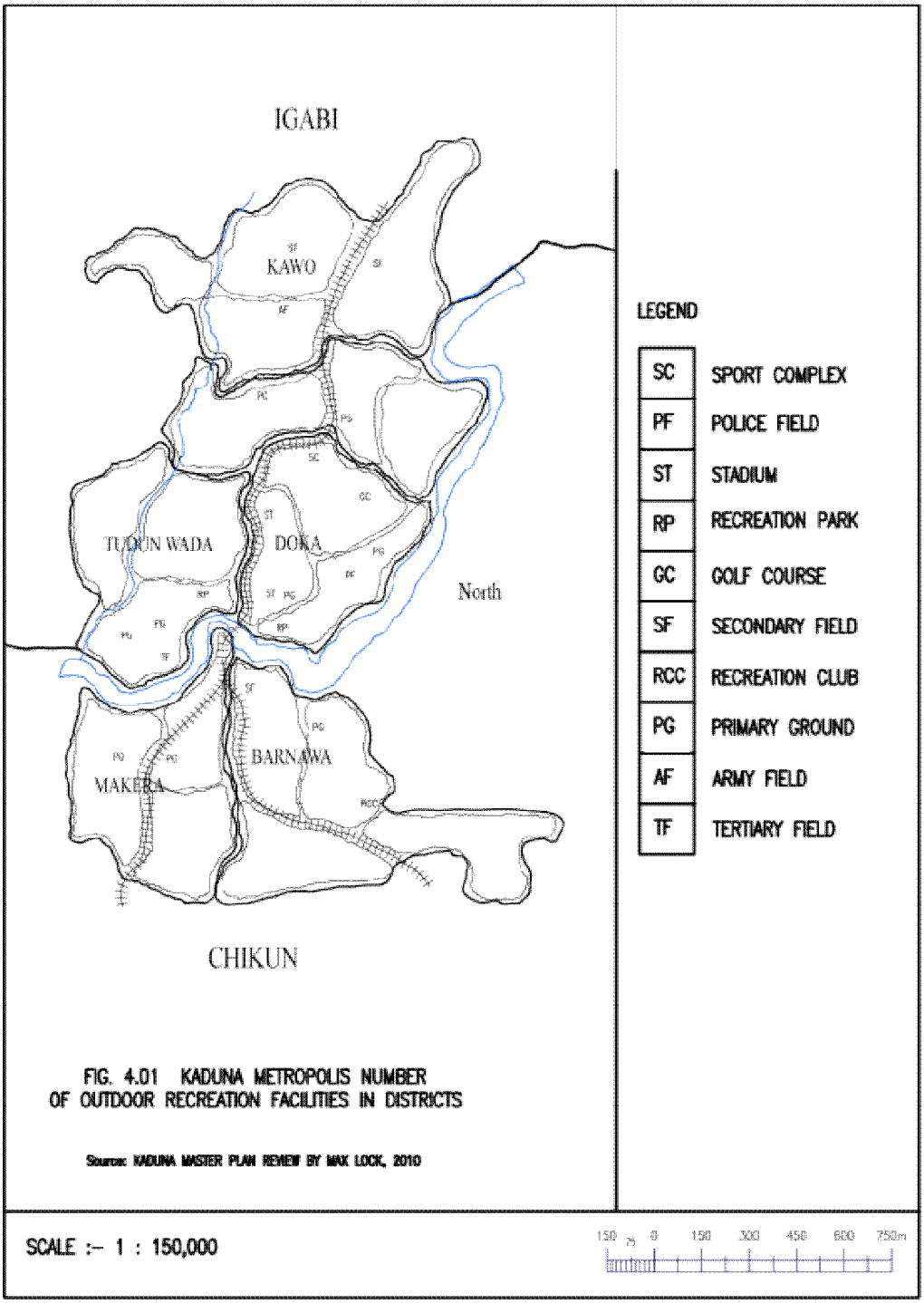



FIG. 4.01 KADUNA METROPOLIS NUMBER OF OUTDOOR RECREATION FACILITIES IN DISTRICTS

Source: KADUNA MASTER PLAN REVIEW BY MAX LOCK, 2010

## 4.3 POPULATION SPACE STANDARDS FOR OUTDOOR RECREATION FACILITIES

The space standards for the six outdoor recreational activities are highlighted in table 4.04 below

Table 4.04 Space Standards for Outdoor Recreational Activities

| S/N | FACILITY | SERVICE POPULATION | SPACE REQUIRED IN HECTERS |
|---|---|---|---|
| 1. | STADIUMS | 100,000-250,000 | 6.0 HA |
| 2. | RECREATION PARK | 20,000-100,000 | 2.0HA |
| 3. | PICNIC SITE | 20,000-40,000 persons | 1-2HA |
| 4. | BASKETBALL COURT | 20,000-30,000 | 0.2-0.3HA |
| 5. | SWIMMING POOL | 50,000-70,000 | 0.5-1HA |
| 6. | GOLF COURSE | For each 54,000 persons | 18 holes |

Source: MAPC (1979) & OBATERU (2003)

These space standards to a large extent form the basis of translating the recreational needs of the population conventionally. The concept of the space standard is that it operates on the basis of ratio, as such any increase in the population will warrant a change in the ratio.

## 4.4 ANALYSIS OF DEMOGRAPHIC AND SOCIO-ECONOMIC VARIABLES

The characteristics of outdoor recreational activities in kaduna metropolis can be established from first an analysis of demographic structure of the metropolis which focuses on standard demographic variables that have a potential to affect recreation demand and use of recreational facilities in the metropolis. These variables include population, age, sex, income and Education. Each of these variables of interest could affect demand and utilization of recreation facilities. Secondly through an analysis of information of recreation participants in the metropolis.

### 4.4.1 POPULATION

Information on the population of the study area to be considered is that of the existing present and future population. Analysis of the existing and projected population in the study area reveals that the population statistics of the various districts in the metropolis currently stood at 1,710,694 (projected from N.P.C 2006 figures). This figure is expected to grow considerably over the next five years from 1,710,694 by the year 2009 to 2,102,819 by the year 2015, an increase of about 27%. Note: A growth rate of 3.5% per annum was used for the projection of the population N.P.C.2006. Table 4.05 gives a breakdown of the population statistics of the districts in the metropolis.

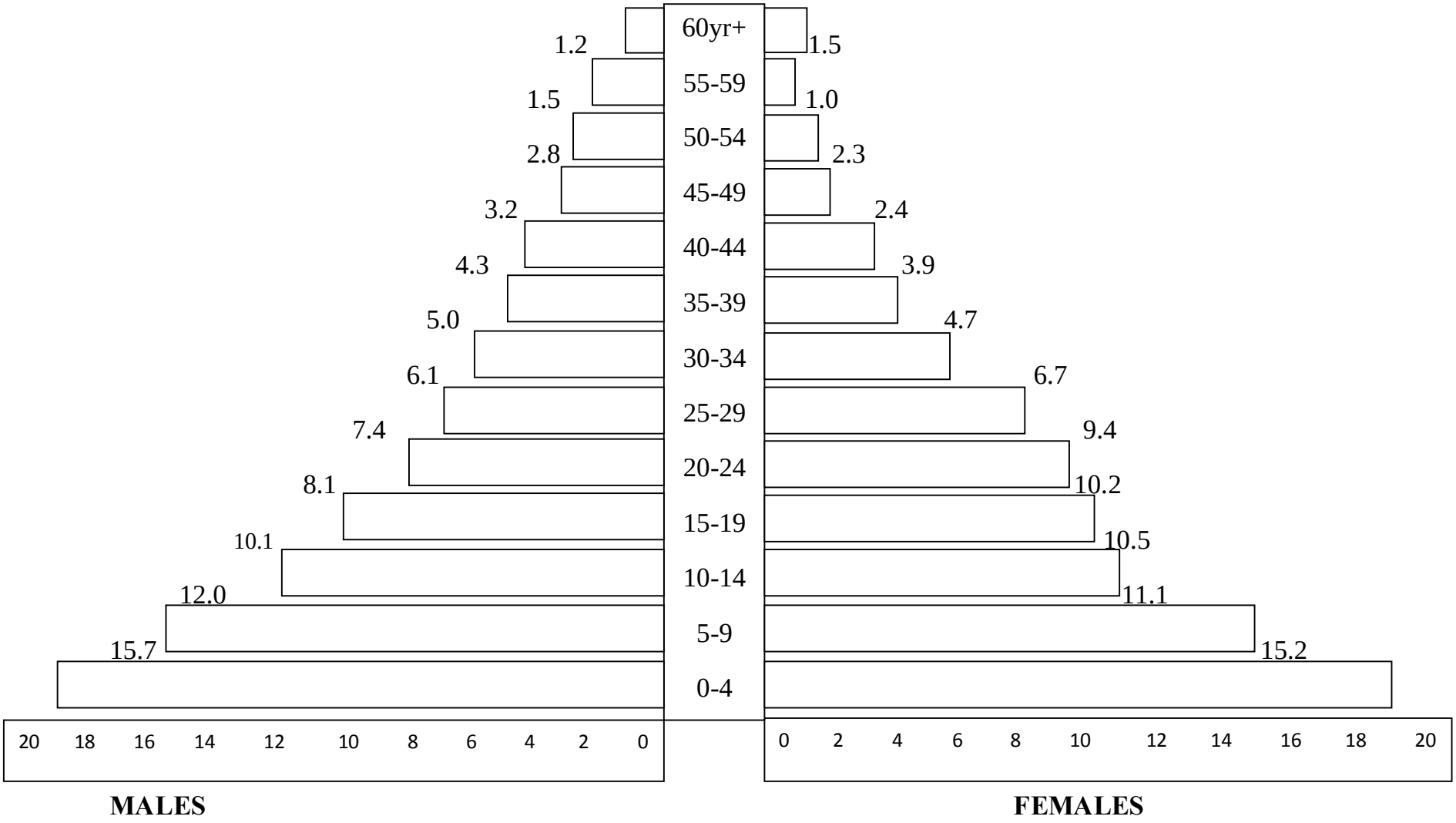
Table 4.05 Population/Projections Statistics of the Districts Kaduna Metropolis

| **DISTRICTS** | **POPN NPC 2006** | **PROJECTED POPN 2009** | **PROJECTED POPN 2012** | **PROJECTED POPN 2015** |
|---|---|---|---|---|
| KAWO | 393,015 | 406,632 | 450,840 | 499,846 |
| T/WADA | 248,288 | 256,946 | 284,876 | 315,842 |
| DOKA | 559,289 | 578,899 | 641,825 | 711,591 |
| MAKERA | 235,311 | 243,603 | 270,083 | 299,441 |
| BARNAWA | 216,941 | 224,614 | 249,030 | 276,099 |
| **TOTAL** | **1,652844** | **1,710,694** | | **2,102,819** |

Source: Field Survey (2009)

### 4.4.2 Age structure

Age and gender are some of the important factors influencing recreation. The population as a whole displays a largely youthful profile about 25.6% of the total population in the metropolis constitutes the age brackets of between 15-29years (males).While 30.1% of the population between the age brackets 15-29years are females. In all, 55.7% of the whole population exhibits an active youthful age group. This shows that a good percentage of the population belong to the age bracket noted to have active demand for outdoor recreation. Fig.4.02


60yr+
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
1.2
1.5
1.5
1.0
2.8
2.3
3.2
2.4
4.3
3.9
5.0
4.7
6.1
6.7
7.4
9.4
8.1
10.2
10.1
10.5
12.0
11.1
15.7
15.2
20 18 16 14 12 10 8 6 4 2 0
0 2 4 6 8 10 12 14 16 18 20
MALES
FEMALES

### 4.4.3 Marital status

The data on marital status of respondents shows that 50% of the respondentôs are married representing 107; 96 respondentôs equivalent to 45% of the respondentôs are singles, while 5 respondents representing 11% are widows. Table 4.06

Table 4.06 Marital Status of Respondents

| **STATUS** | **NO.** | **PERCENTAGE%** |
|---|---|---|
| MARRIED | 107 | 50 |
| SINGLES | 96 | 45 |
| WIDOWS | 11 | 5 |
| **T0TAL** | **214** | **100** |

Source: Field Survey (2009)

### 4.4.4 Educational structure

Education attainment is a significant aspect that affects outdoor recreation pattern generally. Thus the survey revealed that 38% of the respondents have tertiary education qualification; 47% have Secondary Schools education qualification; and 15% have a primary school qualification. Inference drawn here with respect to demand for outdoor recreational activities is that the demand will be dominated by the literate class and towards modern outdoor recreational activities. Fig. 4.03

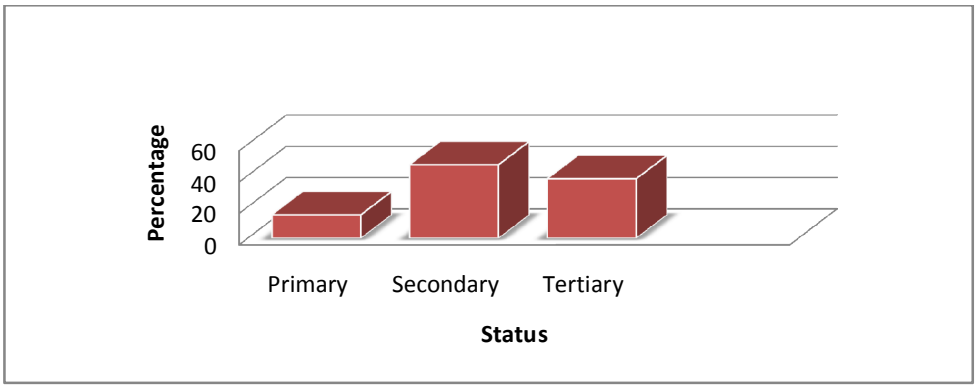



Fig.4.03 Educational Status of Respondents
Source: Field Survey (2009)

### 4.4.5 Income structure

The income structure of the residents in the metropolis was determined through the use of household questionnaire. Average annual income of the respondents was estimate to fall within the ranges as contained in Fig. 4.04

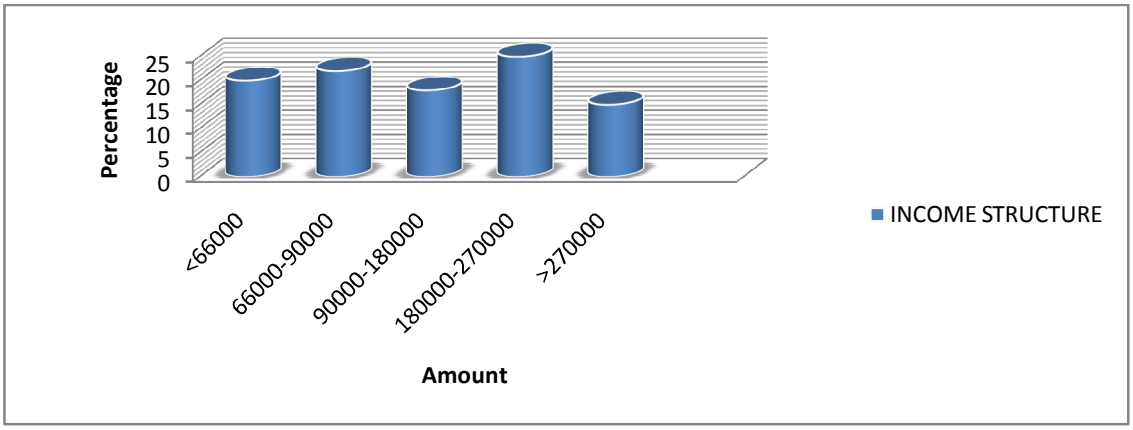



Fig. 4.04 Income Structure of Respondents
Source: Field Survey (2009)

The result shows that 20% representing 42 respondents earn an annual average income of less than ₦66000 that is less than ₦5500 monthly. While 22% of the respondents earn between ₦66000 ï ₦90000 that is ₦5500 & ₦7500 per month.18% earn between ₦90000 ï ₦180000 that is ₦7500 & ₦15000per month and 15% earning more than ₦270000 that is ₦22500. Inference here is that there is disparity in income as such the ability to pay for outdoor recreation will vary considerably.

## 4.5 THE IMPORTANCE OF OUTDOOR RECREATION TO PARTICIPANTS

Outdoor recreation activities have been identified by recreationists in the metropolis as part of their ways of life. The recreation area survey revealed how participants perceived outdoor recreation with 55% representing 47 respondents indicating that recreation is very important aspect of their lives; 32% representing 27 respondents indicates that outdoor recreation is somewhat important to their lives and 10% representing 9 respondents indicates that outdoor

recreation is not very important to them. Inference here is that outdoor recreation activities will be highly demanded.

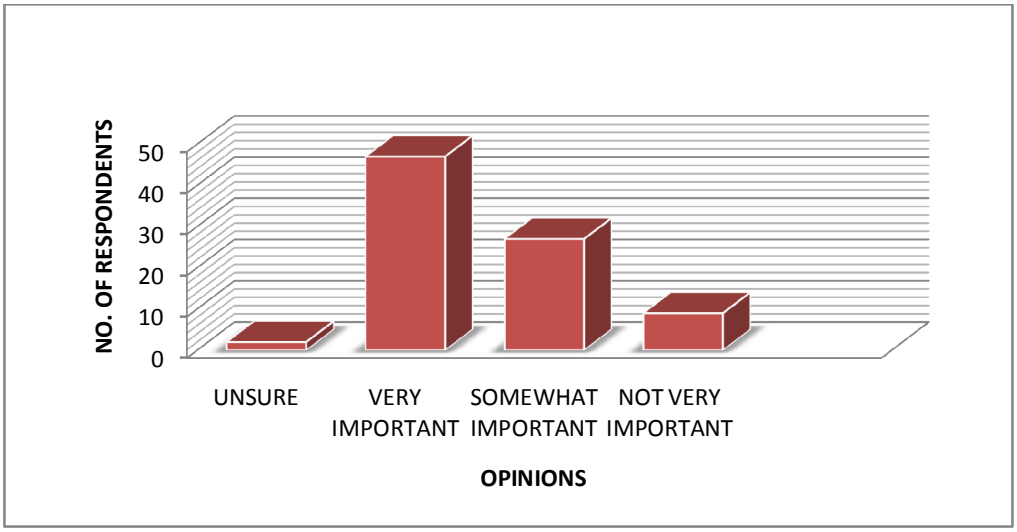



Fig. 4.05 Perception of Respondents towards Outdoor Recreation
Source: Field survey (2009)

### 4.5.1 Frequency of Participating in Outdoor Recreation activities

The frequency of participation in outdoor recreation activities in the metropolis was established through the recreation area questionnaire. The survey reveals that 40% of the respondentôs engage in outdoor recreation activities on daily basis; 28% on weekly basis; 18% on monthly basis while 5% indicates that they rarely engage in outdoor recreation activities. Inference drawn here is in the regularity of demand for outdoor recreation activities.

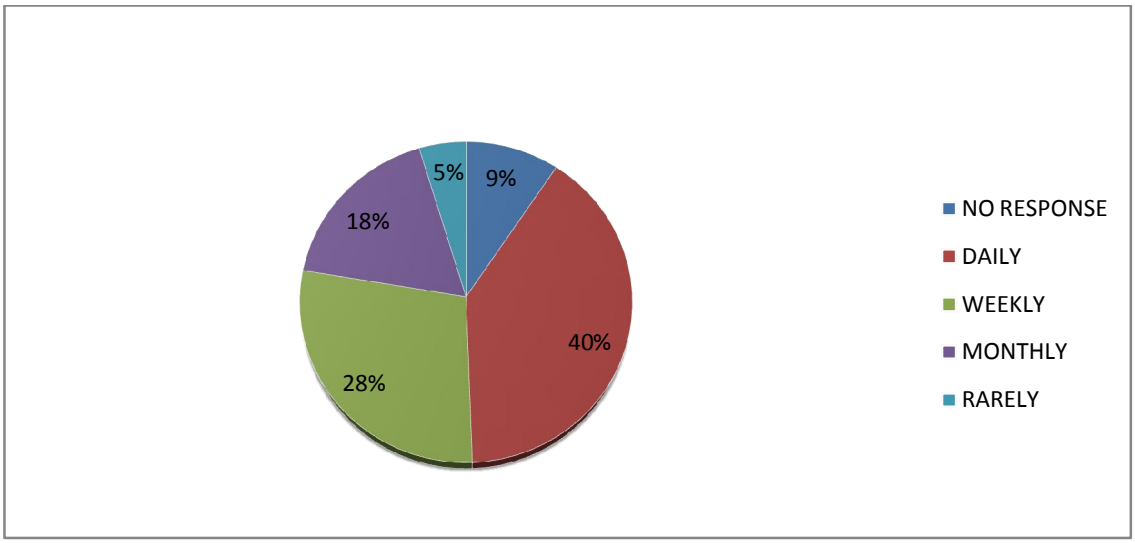



Fig. 4.06 Frequency of Participation in Outdoor Recreation Activity
Source: Field Survey (2009)

### 4.5.2 Facilities Used in Participating in Outdoor Recreation

In the event of participation in outdoor recreation activities, the data gathered from the field reveals that 47% of the respondents use public facilities; 28% use institutional facilities while only 17% use private facilities for outdoor recreation activities and 8% did not respond (Table 4.07). Inference drawn here is that public facilities for outdoor recreation activities will be the beehives of activities for outdoor recreation in the metropolis.

Table 4.07 Facilities Used in Participating in Outdoor Recreation

| **FACILITY** | **USERS** | **PERCENTAGE %** |
|---|---|---|
| Public | 40 | 47 |
| Institutional | 24 | 28 |
| Private | 14 | 17 |
| No response | 7 | 8 |
| **TOTAL** | **85** | **100** |

Source: Field Survey (2009)

### 4.5.3 Expenditure on Outdoor Recreation

The survey conducted shows that 40% of the respondents spent between ₦500 and ₦1000 naira monthly on outdoor recreation; 25% spent between ₦1000-₦1500 monthly while 16% spent between ₦1500-₦2000 monthly and only 11% spent above ₦2000 on outdoor recreation activities. Inference drawn is that the residents can afford to pay for what ever form of outdoor recreational activity they demanded. Fig. 4.07

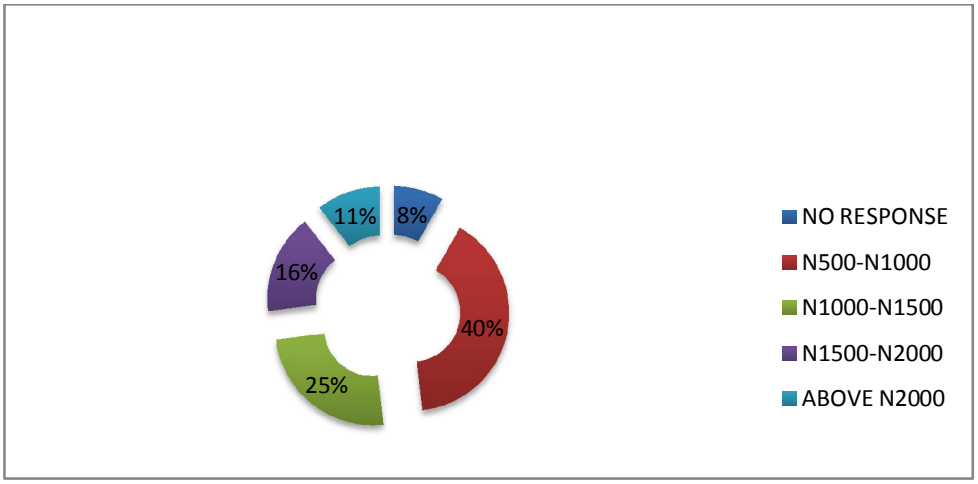



Fig. 4.07 Amount Spent on Outdoor Recreation Activities
Source: Field Survey (2009)

### 4.5.4 Distance to Outdoor Recreation Areas

Distance covered to reach outdoor recreation areas in the metropolis was established from the survey. The result shows that 58% of recreation participants representing 49 respondents cover less than a kilometre for their outdoor recreation pursuits; 22% representing 19 respondents cover a distance of 2-3kms; 11% equalling 9 respondents travel 4-7kms for their outdoor recreational pursuits and only four (4) of the respondents representing 5% outdoor recreation participants travel more than 7kms for their outdoor recreational pursuits. Inference drawn here is that recreation participants heavily rely on recreation activities around their respective districts. Although to a large extent, certain activities in the likes of festivities or sporting activities pull people to other districts.

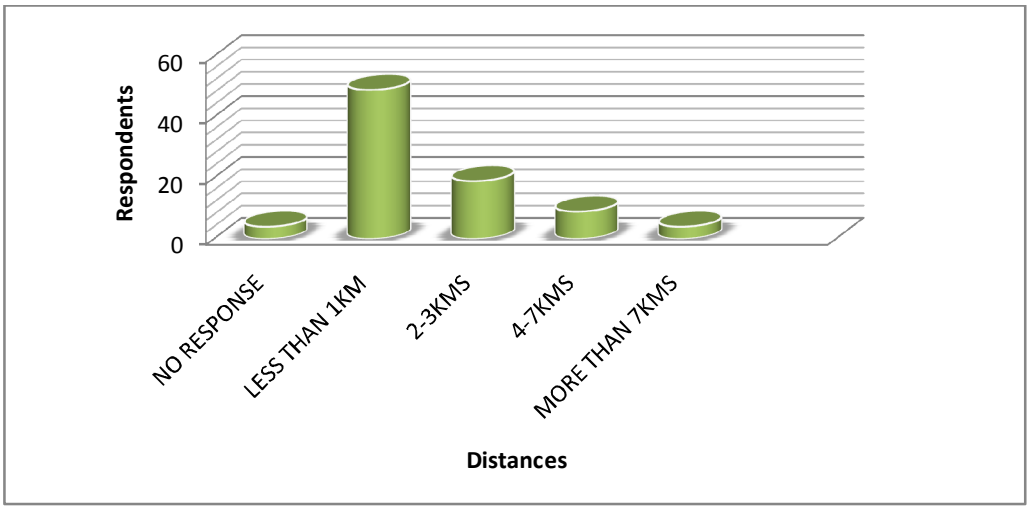



Fig. 4.08 Distance Covered to reach Outdoor Recreation Areas
Source: Field Survey (2009)

## 4.6 CHARACTERISTICS OF OUTDOOR RECREATION ACTIVITY IN THE METROPOLIS

Examination on the characteristics of outdoor recreation activities is determined through the use of recreation area questionnaire which provides information on the characteristics of activities. Other criteria such as Location of activity, Space utilization for the activity and the Operational basis for the activity are used to examine the characteristics of outdoor recreational activities in the metropolis.

### 4.6.1 Activity characteristics:-

**1. Age**: - Outdoor recreation activities in Kaduna metropolis are dominated by the Youth. (See Table 4.08). They partake in active recreational activities in the likes of football, basketball, volleyball, and swimming although equally participating in passive outdoor recreational activities in the likes of outdoor social visits, picnicking, parks activities etc. Again, the youth monopolize most active and away from home recreational activities (Fig.4.09) and (Fig.4.10). The children and the elderly participate mostly in the passive activities. The elderly are in dominance of the close to home outdoor recreation activities in the likes of relaxing, cards, scrabble games, etc. While the children partake in the passive

outdoor recreation activities. They too sometimes engage in the away from home activities e.g. parks especially when accompanied by adults.

Table 4.08 Age Characteristics of Participants

| AGE | NO. | PERCENTAGE % |
|---|---|---|
| 15-25YRS | 32 | 38 |
| 26-35YRS | 25 | 29 |
| 35-45YRS | 15 | 18.5 |
| 45-55YRS | 8 | 9.5 |
| >55YRS | 5 | 5 |
| **TOTAL** | **85** | **100** |

Source: Field Survey (2009)

Cumulatively, 67% of the age brackets of between 15-35years partake in outdoor recreation. This is not far from the fact that this same age group constitutes the highest percentage in the metropolis population structure.

**Age Versus Type of Participation in Outdoor Recreation**

The result of the survey reveals that up to 35% of the ages between 15yrs and 25yrs participate in active sports outdoor recreational activities in the likes of football, swimming, etc This does not however, mean they do not participate in passive outdoor recreational activities. 40% the elderly participate more in passive outdoor recreational activities.

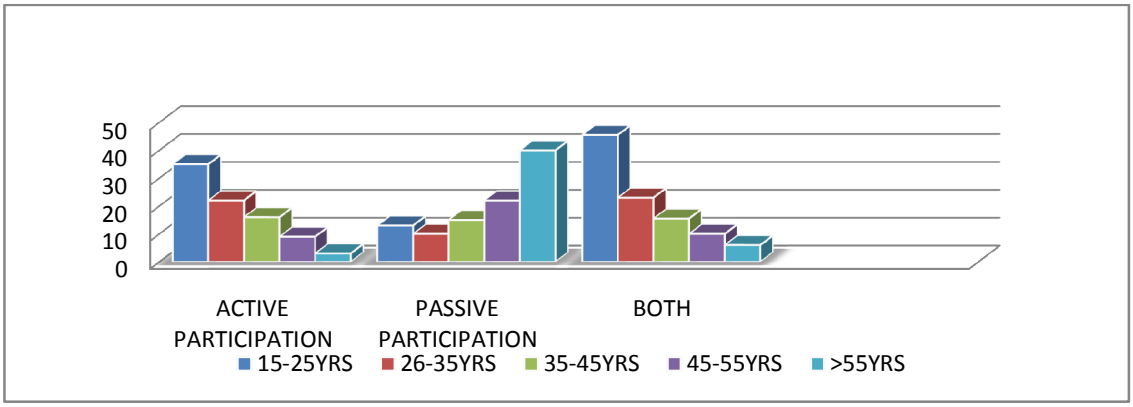



Fig. 4.09 Age versus Type of Participation in Outdoor Recreation

**Preference of Participation in Outdoor Recreation Activities**

The survey reveals that the characteristics of participants with regards to place of recreating vary from one age group to the other. The age brackets of less than 55yrs to 45yrs participate in outdoor recreation activities close to home. On the other hand, the age brackets of less than 26yrs to 35 yrs participate in outdoor recreation activities away from home as in Fig 4.10.

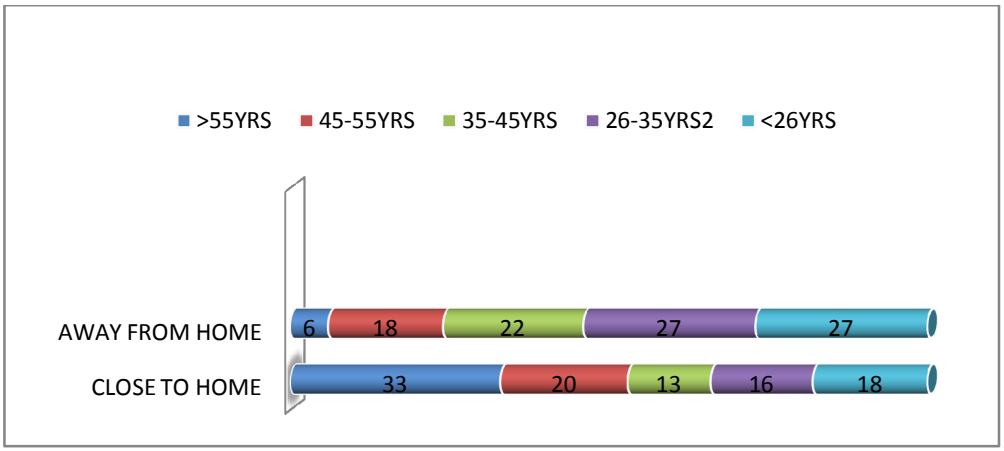



Fig. 4.10 Preference of Participation in Outdoor Recreation Activities
Source:Field Survey (2009)

**2 Sex**: - Males participate more than females in almost all active outdoor recreation activities (sporting activities) in the likes of football, Basket ball, Jogging, Swimming etc (Fig.4.11) in the metropolis while the females engage more in the passive close to home outdoor recreation activities, although a growing interest of females is noticed to be increasing in active recreation activities such as football and jogging.

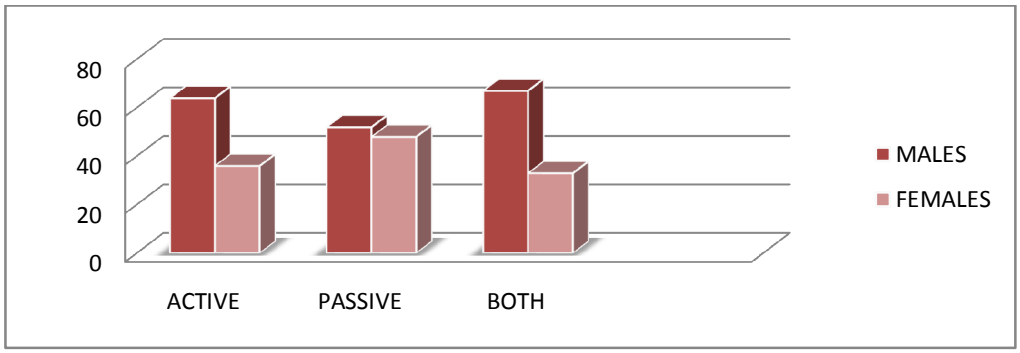



Fig. 4.11 Sex Versus Type of Participation in Outdoor Recreation
Source:Field Survey (2009)

**3 Education**: - Characteristically, people with higher Educational background in the metropolis engage in outdoor recreational activities different from those engaged by people with less educational background. The survey revealed that individual fitness active recreational activities in the likes of Jogging, Walking, Squash, Polo, and Golfing are mostly patronized by the class with higher(Tertiary) educational background. While those with other Education background engage active sporting outdoor recreational activities in the likes of Football, Basketball, Swimming, Recreational parks activities etc.

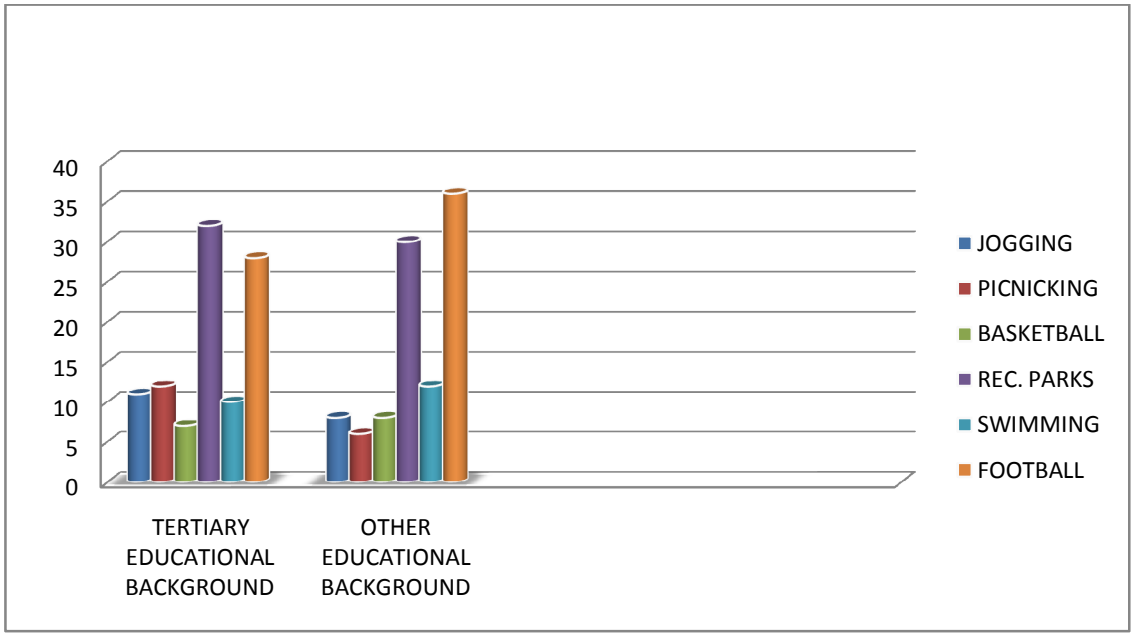



Fig. 4.12 Education Versus Preference of Outdoor Recreation Activity
Source:Field Survey (2009)

**4. Income**: - Certain outdoor recreation activities in Kaduna metropolis in the likes of golfing, polo, and membership of some recreation clubs are extraordinarily expensive. The reason, not far away from the fact that equipments for such activities are very expensive to acquire thereby limiting participation in such activities to a particular class. Recreational activities that are patronized most are those that do not translate into monetary terms (materials, or equipments) or require small amount of monies e.g. Football, Swimming, Recreational parks etc.

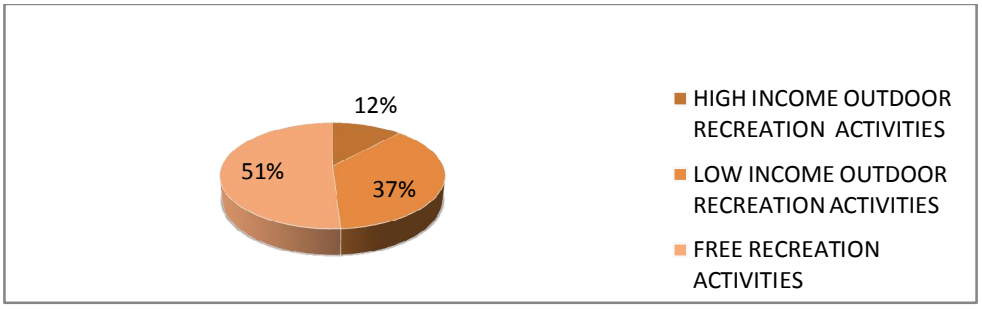



Fig. 4.13 Income Versus Outdoor Recreation Activity Patronage
Source:Field Survey (2009)

**4.6.2 Location of activity: -** Outdoor recreation activities in Kaduna metropolis are characteristically land-based (The 195hectares for Parks and Gardens and additional 125hectares for other outdoor recreational activities as earmarked by the master plan). A few areas that provided these opportunities are water-based (e.g. River Kaduna) with a length of about 3460meters cutting across the metropolis. The location (See map) of most key public outdoor recreation areas within the metropolis is within the Central Business District C.B.D (e.g. Murtala Square, Ahmadu Bello Stadium, and Ranch Bees Stadium). Two of the recreation parks are also located within the heart of the metropolis (Hassan Usman Katsina park and the Pixie Dixie park). The golf course and the polo club plus a number of recreation clubs are also located within the Central Business District (C.B.D) therefore making these

activity areas easily accessible from different parts of the districts in the metropolis (See map).Appendix II

Opportunities for Outdoor recreation activities at the neighborhoods and community level within the metropolis are provided by institutional recreation areas (Tertiary play fields, Post Primary play fields and Primary schools playgrounds). Hence, the location of such activities is within the easy reach population.

**4.6.3 Space utilization for the activity: -** Spaces for outdoor recreational activities in Kaduna metropolis increases with level of hierarchy. Activities that are outdoor close to home require little space for utilization, while activities at the city level require large spaces for utilization. Spaces that provide opportunities for outdoor recreation activities in the metropolis at the community and ward level are usually small in size (Primary playgrounds, and some Post Primary Playfields). The spaces for recreational activities at these levels are mostly playfields with sizes of between 100×64 meters and 96×60 meters as such opportunities for outdoor recreation activities are limited. Tertiary fields (e.g. Kaduna Polytechnic, N.D.A) provides larger space utilization opportunities, as those recreational arenas have been design to cater for a wide range of outdoor recreational activities. The Sports Complex (Murtala square) is approximately three (3) square km radius as it is the largest recreation activity area within the metropolis. The complex has recently been renovated meeting adequately not only space standards but also facility standards meeting both national and international criteria. As such Space utilization for various outdoor recreational activities in the complex is adequate.

The Ahmadu Bello Stadium is of international standard with a capacity of 20,000 spectators meeting adequately space utilization opportunities for outdoor recreations. The Ranch bees Stadium with a capacity of 6000 seats is of national standard and capable of

meeting the needs of outdoor recreationists in the metropolis. The Pixie Dixie Park is approximately 4500meters offering adequate space for utilization as it is provided with facilities for childrenôs relaxation and enjoyment, childrenôs sports as well as an ideal serene for picnic. But parking spaces are limited especially during festive seasons when the activities are at their peak.

The Hassan Usman Katsina park (Gamji Gate) occupies an area of about 7000meters.It has a natural setting of trees and mangrove, orchard and dotted small islands from river Kaduna which flows majestically besides it. The park has a multi purposed theater with a 900 seats capacity, Two (2) 100 seats capacity conference halls and an Art Gallery. This ample space provides opportunities for adequate space utilization for various recreational activities in the park.

**4.6.4 Operational Basis: -**

Most organized outdoor recreation activities in kaduna metropolis operate on a subscription basis. This is evident in the fees charged by recreation activity areas in the likes of recreation parks, recreation clubs etc. This is contrary to outdoor recreation activities opportunities provided at the community and wards level (play fields playgrounds) whereby operation is purely on a free of charge basis. ( Table 4.09)

TABLE 4.09 CHARACTERISTICS OF OUTDOOR RECREATION ACTIVITIES IN KADUNA METROPOLIS

| TYPE OF ACTIVITY | LOCATION OF ACTIVITY | HIRACHY OF RECRETATIO N SPACE | TIME OF ACTIVITY | RANGE OF SPACE UTILIZED FOR ACTIVITY | CHARACERISTICS OF PARTICIPANTS | OPERATIONAL BASIS |
|---|---|---|---|---|---|---|
| Relaxing, Just staying outdoors Lido, card playing, Snooker, Scrabble | Could be indoors or outdoors | Close to home oriented space | During the day or night | 2 x 2 - 6 x 6 meters | Both sexes | For the purpose of passing away time and refreshment |
| Football, handball, basketball, hokey, Volleyball, Athletics, Recreation parks Squash, Cricket, Fives, | Mostly located outdoors | Space could be at district & city level | During the day or night | 10 x20ï 70x 100meters | Both sexes | For the purpose of refreshment, organized sports operate on subscription basis |
| Hunting Mountaineeri ng<br>Picnicking<br>Camping, Social visits | Outdoors usually at the country side | City level | During the day or night | Areas left in natural state | Male and females adults | Not organized on subscription basis |
| Swimming | Could be indoors or outdoors | District and city levels | Daytime and during weekends as well | 50x70 meters | Both sexes | For the purpose of refreshment, organized sports operate on Subscription basis |

Source: Field Survey 2009

## 4.7 OUTDOOR RECREATION PARTICIPATION IN KADUNA METROPOLIS

Analysis of participation rates are widely used to make inferences regarding recreation demand. Participation rates enable the recreation planner gain an insight into the relative popularity of individual recreation activities, the relative preferences of different user groups, and ultimately the adequacy of existing recreation resources. Data concerning rates of recreation participation is generated through the household survey (questionnaire). The result extracted from the questionnaire reveals that the eight most popular outdoor recreation activities in kaduna metropolis are attending outdoor sports events (playfield), football, recreational parks, jogging or running, picnicking, swimming, basketball and golf.

Table 4.10 Ranking of Outdoor Recreation Activities by Popularity

| RANK | ACTIVITY | PERCENTAGE OF HOUSEHOLDS PARTICIPATING |
|---|---|---|
| 1. | Attending outdoor sports events (speculators) | 68 |
| 2. | Football | 65 |
| 3. | Recreational parks | 56 |
| 4. | Jogging or Running | 34 |
| 5. | Picnicking | 26 |
| 6. | Swimming | 22 |
| 7. | Basketball | 12 |
| 8. | Golf | 5 |

Source: Field survey (2009)

From the analysis of the survey almost seven out of every ten households in the metropolis participated in attending outdoor sporting activities at least once in the past 12months.The survey results provide a good insight in the current participation in a wide range of activities in the metropolis.

## 4.8 TREND OF PARTICIPATION IN OUTDOOR RECREATION ACTIVITIES

This section looks critically at the trends of participation in outdoor recreation activities in the metropolis. A trend is the general pattern of fluctuation of outdoor recreation activity data over time. A close look at outdoor recreation activities in the metropolis reveals that while the trend of participation in certain activities is growing, it is as well declining for other outdoor recreation activities. The trend for some seven (7) outdoor recreation activities was obtain using the Time series analysis of which least square technique was used to predict the frequency of future participation (indicating demand) in the activities. The goal of the time-series analysis is to identify the swings and fluctuation of a Time series and then sort them into various categories by the arithmetic manipulation of the numerical values obtained. The method analyses past pattern of growth and changes that can be used to predict future patterns and needs.

### 4.8.1 Trend of Participation in outdoor recreation park activities

In obtaining the trend of participation in recreation park activity data on the number of people patronizing recreational parks for the past six years (2005-2010) was used as the basis for establishing the trend of the activity ten years to come from now i.e. by 2020 as shown in Fig.4.14. The original data (number of participants) for the year 2005-2010 was subjected to the time series analysis, the result reveals the pattern of demand the activity will assume by the year 2020. The upward straight line shows a positive trend of participation in the activity (after process of smoothing which takes care of factors such as seasonal changes, irregular variations etc. have been taken into consideration) meaning that demand for the activity will be on the increase ten years from now.

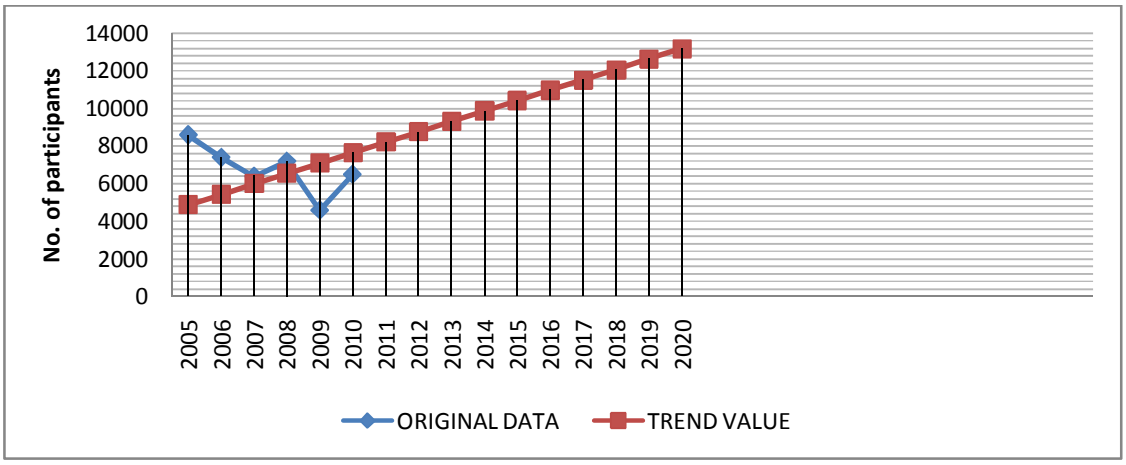



Fig. 4.14 Participation in Recreational Park Activities
Source: Field work 2009

### 4.8.2 Trend of Participation in attending outdoor sporting event

The same procedure as in above was used to determine the trend of demand in attending outdoor recreation sporting event. Fig.4.15 shows the trend of the activity plotted from the year 2005. After the smoothing process, the straight upward line indicates a positive trend in demand for the activity for the next coming Ten years (2020).This can serve as a basis of estimating the demand for the activity in the near future.

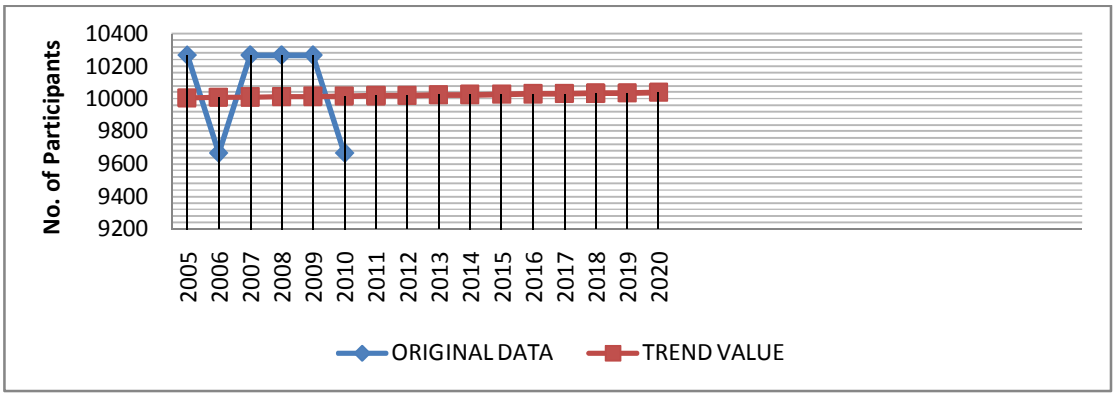



Fig. 4.15 Participation in attending Outdoor Sporting events
Source: Field work 2009

### 4.8.3 Trend of Participation in Picnicking

The trend of demand in picnicking in the metropolis for the year 2020 reveals a gradual decline of demand in the activity. After the participation (demand) rates in the activity (original data) for the past six year (i.e. from 2005) was subjected to the Time series analysis, the trend of demand in the activity shows a gradual downward sloping indicating a less interest for the activity in Ten years time to come 2020 as contained in Fig. 4.16

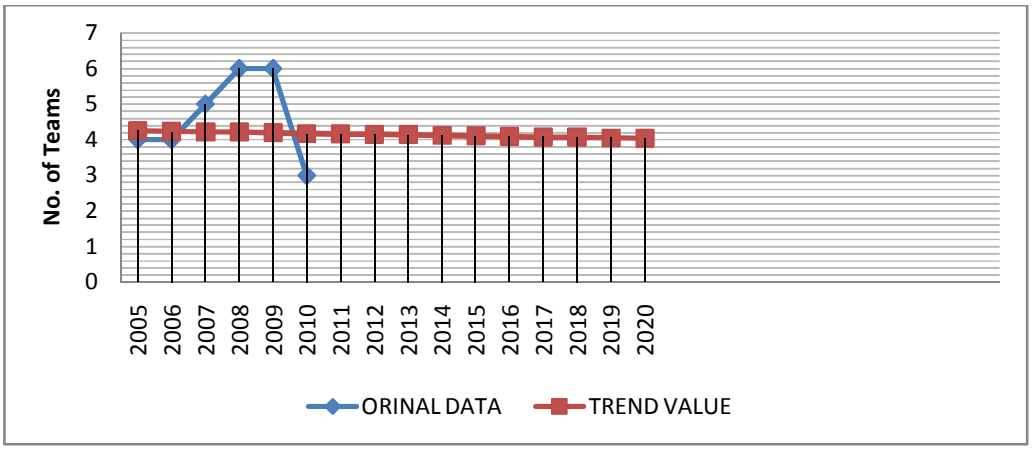



Fig. 4.16 Participation in Picnicking
Source: Field work 2009

### 4.8.4 Trend of Participation in Swimming activities

Likewise, the demand in swimming activities in the metropolis by 2020 shows a decline in demand for the activity as indicated by the result of trend analysis subjected to the Time series analysis. This is happening after the smoothing processes (which consider all the factors that can influence the activity) have been taken into consideration. Fig.4.17

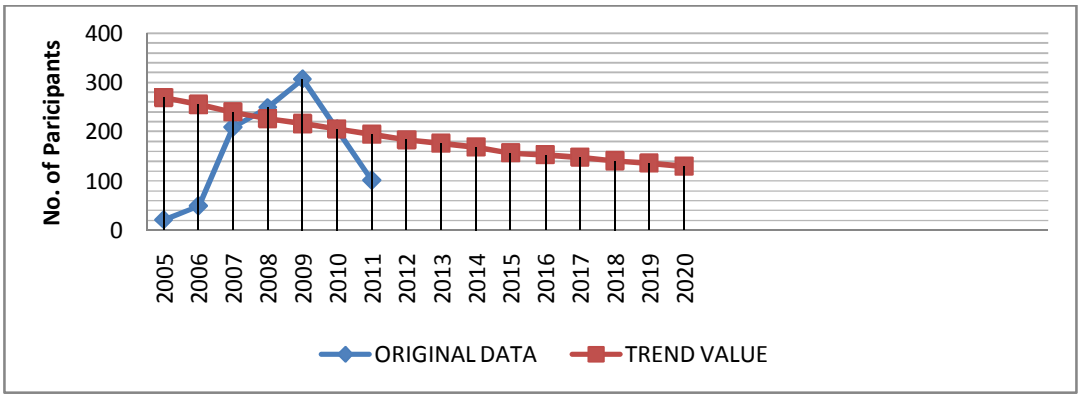



Fig. 4.17 Participation in Swimming Activities
Source: Field work 2009

### 4.8.5 Trend of Participation in Basket ball activities

Demand for Basketball games in the metropolis Ten years from now (i.e. 2020) indicates a positive trend. This indication is obtained from the trend analysis of the activity base on participation in the activity for the past six years i.e. from 2005.

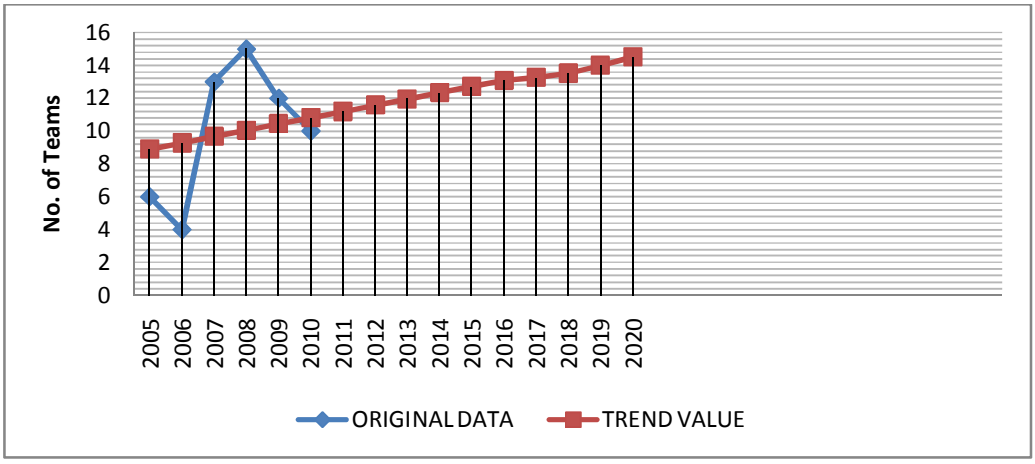



Fig. 4.18 Participation in Basketball
Source: Field work 2009

### 4.8.6 Trend of Participation in Golfing activities

Similarly, the demand for Golf as an outdoor recreation activity in Kaduna metropolis is expected to decline by the year 2020. The trend analysis reveals a downward slope indicating a negative trend for the activity after the smoothing process have been considered.

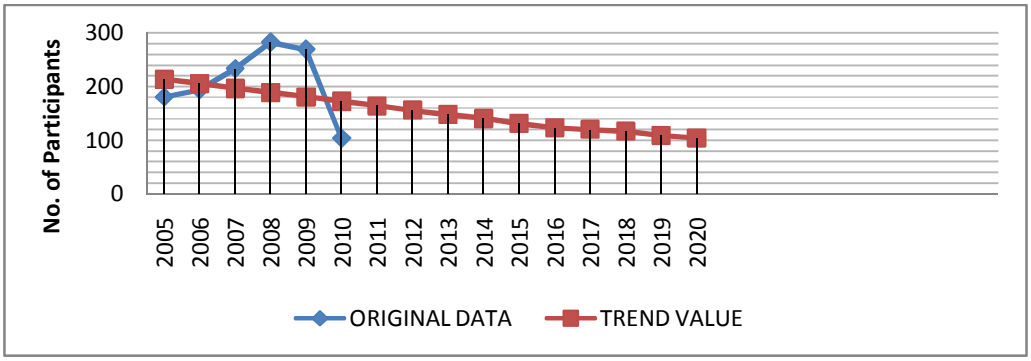



Fig. 4.19 Participation in Golfing
Source: Field work 2009

### 4.8.7 Trend of Participation in Jogging

Jogging as an outdoor recreational activity in Kaduna metropolis is similarly going to witness a positive trend come 2020. This result was obtained after the activity was analyze using the Time series analysis. The forecast shows increase in demand in the activity, as such given the recreation planner an insight into the pattern of demand for the activity in the near future.

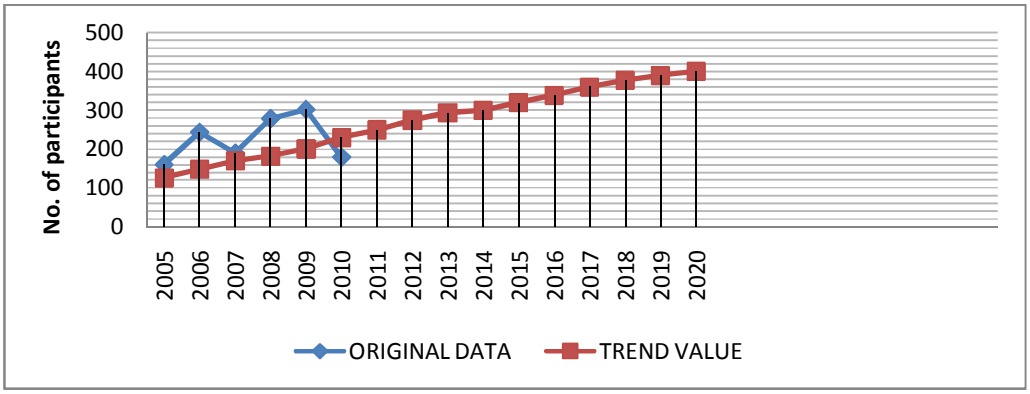



Fig. 4.20 Participation in Jogging or Running
Source: Field work 2009

## 4.9 APPLICATION OF THE TREND ANALYSIS IN ESTIMATING DEMAND FOR OUTDOOR RECREATION PARK ACTIVITIES

The trend analysis for recreation parks as obtained in Fig. 4.14 shows a positive trend for outdoor recreation park activities. The projected population figure of Kaduna metropolis for 2009 is estimated at 1,710,694. On the other hand, the population space standard for a district recreational park is in the ratio 1:100,000 (Table 4.04) This signify a short fall in supply of the facility for the activity, over what is demanded compared to the two(2) existing parks in the metropolis. Now, on applying the result of the trend analysis which indicates a positive trend for recreational park activities for up to the year 2020 will go along way in further justifying the need for additional recreational parks as they are highly demanded in the metropolis.

## 4.10 APPLICATION OF THE TREND ANALYSIS IN ESTIMATING DEMAND FOR ATTENDING OUTDOOR SPORTING ACTIVITIES

The Kaduna Township Stadium and the Ahmadu Bello Stadium are amongst the few formal areas where the population attending outdoor sporting activities can be quantified. The result of the trend analysis conducted with regards to demand for this activity for the year 2020 reveals a positive trend for the activity, meaning that as the population increases so does demand for this kind of outdoor recreational activity. This is happening when only two stadiums are available to service the entire 1,710,694 (2009 estimate).

## 4.11 APPLICATION OF THE TREND ANALYSIS IN ESTIMATING DEMAND FOR PICNICKING

Figure 4.16 shows the trend analysis of demand for picnicking in the metropolis for up to the of the year 2020. The figure indicates a slightly negative trend meaning that demand in that recreation activity is gradually declining. Now, taking into consideration the space standard (population ratio) for picnic areas of 1:20,000-40,000, (Table 4.04) in relation to the

only one picnic site in the metropolis with respect to the population figure of 1,710,694 (2009 projected), it will obviously be concluded that there is a remarkable shortfall in this facility taken into consideration the increase in population. But on the application of the result of the trend analysis, it means that no new such activity area may be needed in the near future as demand in the activity is decreasing.

## 4.12 APPLICATION OF THE TREND ANALYSIS IN ESTIMATING DEMAND FOR SWIMMING POOL ACTIVITIES

The projected population of Kaduna metropolis for 2009 base on the 2006 census figure stood at 1,710,694. This figure if compared with the five existing swimming pools, and on the account of the application of standard approach technique for estimating demand, will declare gross inadequacy as the space standard earmarked a ratio of 1: 50,000 -70,000 (Table 4.04) swimming pools to the population. Hence, applying the result of the trend analysis for swimming activities as obtained in Fig.4.17 which indicates a negative trend (demand) in the activity, for up to the year 2020 will mean that, it is not necessary to provide for additional swimming facilities in the metropolis in the near future as demand for swimming activities is declining.

## 4.13 APPLICATION OF THE TREND ANALYSIS IN ESTIMATING DEMAND FOR BASKETBALL ACTIVITIES

Many areas exists in Kaduna metropolis that provide opportunity for basketball game as an outdoor recreation activity. Outdoor basketball courts are noticed to be attached mostly to sport complexes, tertiary institutions, military, police and post secondary sites. The population space standard for basketball activities stipulates a ratio of 1: 20,000-30,000 (Table 4.04) while the current population of the metropolis stood at 1,710,694 (2006 projected). Going by this, it means that a total of about 57 outdoor basketball courts are required at designated areas in the metropolis to meet the basketball demand needs of the population in the metropolis. Also, the trend of participation in basketball activities for up to

the year 2020 reveals a positive trend in demand for the activity meaning that, on application of the result of the trend analysis, the recreation planner has to increase site allocation (base on demand) for outdoor basketball activities.

## 4.14 APPLICATION OF THE TREND ANALYSIS IN ESTIMATING DEMAND FOR GOLFING

The trend of golfing in Kaduna metropolis as highlighted by the trend analysis recorded a negative trend for the activity (Fig.4.19) for up to the year 2020. This trend is happening despite the fact that a golf course of international standard exists in the metropolis. The population space standard for golfing earmarks an 18 hole golf course in the ratio 1: 54,000 (Table 4.04) meaning that a gross inadequacy exist in terms of the facility that provide that kind of recreational opportunity. But applying the result of the trend analysis (Fig.4.19) for up to 2020 which reveals decreasing demand for such activity, it then means that no new golf course will be required despite increasing population of the metropolis as demand for golfing is decreasing.

## 4.15 APPLICATION OF THE TREND ANALYSIS IN ESTIMATING DEMAND FOR JOGGING ACTIVITIES

Currently, Murtala square in Kaduna metropolis is amongst the few organized areas that provides opportunity for this form of outdoor recreational activity. The trend analysis for this activity reveals a positive trend for up to the period of 2020 (Fig.4.20) meaning that demand for this form of outdoor recreational activity is on the rise. This will go further in justifying the need for additional facilities to meet the jogging needs of the population.

## 4.16 SOCIETAL TRENDS SHAPING PARTICIPATION IN OUTDOOR RECREATION

Our society is constantly changing and so are trends in our communities. Many of these trends have significant implication for outdoor recreation, as such understanding these trends can give the recreation planner an insight on the changing recreation pattern of the people,

thereby enabling him/her to properly estimate demand and to develop strategies that will suit the changing recreational needs of the people. These trends include Social trends, Economic trends, Urbanization trends and Technological trends.

### 4.16.1 The Social Trends

Social trends in our societies have a great deal of influence over the recreational way of life of the people. Social structure in terms of family composition i.e. whether, married, divorced, singles or widows, all are structures that influence leisure habits which subsequently results in changing recreational needs of the present and future generationôs way of outdoor recreation. Family structure with regards to marital status as revealed by the N.P.C 2006 census indicates that

- The óNever Marriedô population is 46.4% whereas óMarried population 50%. The widowed population is 2%.
- The proportion of population óNever Marriedô has increased since 1991 census from 42% to 46.4%

What these social trends mean as revealed by the NPC 2006 census is that the figure of the óNot Marriedô has increased by about 4.4% since 1991, meaning that if this trend is to continue in the future participation in outdoor recreation activities will be dominated by the óNot Marriedô (singles) whom show more interest participating in sporting and the physically active forms of outdoor recreational activities.

### 4.16.2 The Economic Trends

Under the economic trends issues of concern here include employment status, living standard; Hours and pattern of work, as all impact on outdoor recreation subsequently influencing participation and leisure habits.

#### 4.16.2.1 Employment and living standard

Statistics regarding employment status revealed by the N.P.C (1991) Census indicates that approximately 43.5% of Nigerian population aged 10years and above were currently at work. The labor force comprised 27.5 million men and women who were either employed or actively seeking employment. The information concerning Employment status in Kaduna metropolis is established through the primary data source (questionnaire).

Table 4.11 Employment status

| **Status** | **No.** | **Percentage %** |
|---|---|---|
| Unemployed | 39 | 18 |
| Self employed | 62 | 29 |
| Private sector employees | 30 | 14 |
| Civil servants | 50 | 23 |
| Students | 33 | 16 |
| **Total** | **214** | **100** |

Source: Field Survey (2009)

The survey recorded some proportion of the population in Kaduna metropolis as unemployed (18%). What these trends mean is that these proportion of population that is unemployed whom are mostly young people within the age range of 20-35years, have high outdoor recreational demand but with little ability to pay for it (where subscription is required). As such changing recreational needs will be more towards the free of charge outdoor recreational activities.

#### 4.16.2.2 Hours and pattern of work

The employment status in societies where both parents are engaged in one form of occupation or the other does influence greatly, their leisure habits, hence changing the recreational pattern of the families and the larger society. Statistics on the employment status of both parents in Kaduna metropolis is generated through the primary source of information. The survey revealed that 29% of the households have both parents engaged in one form of

occupation or the other. This will mean dual source of income for the households but with limited time for outdoor recreation activities, hence changing the demand pattern for a closer to home outdoor recreation leisure activity. Also, as employees work longer weeks (8 working hours for the civil servants and 9hours plus Saturdays for the organized private sector, as well as the new policy of 30calender days of leave against 30 working days) all create a trend of shorter vacation involving outdoor recreation and close to home. This trend impacts the need for a variety of outdoor recreation opportunities near the populations.

**4.17 Urbanization trends**

The 1991 N.P.C Census data shows that there is a dramatic increase in the number of urban centers in Nigeria, an increase in the share of the urban population, and a rise in the total number of individuals living in settlements of over 20,000. It notes that between 1952/53 and 1991, the rural population grew at a rate of about 1.70% in comparison with 4.52% for the urban population.

Kadunaôs population is growing, with most of that growth occurring in the metropolitan areas. Urbanization has reduced the amount of land available for outdoor recreation in the same areas where it is needed mostð and the remaining available land is rapidly increasing in cost. The population of the five districts that made up the metropolis is 1,652,844 (2006 census).These figures if projected to 2009 based on an annual growth rate of 3.5% will total the population of the five districts that made up the metropolis to 1,710,694. By 2015 the population is expected to grow to a figure of 2,102,819. This Increase in population triggers the process of urbanization which takes a tremendous toll on the physical environment thereby affecting the leisure habits of the population leading to changes in the recreational needs at both the city and neighborhood levels. The recent creation of curve out plots in Kaduna metropolis from areas designated as low density areas (connected with the heavy urbanization trends) has tremendously led to the loss of natural and recreation

resources, the disappearance of green open spaces and natural areas at city and neighbourhoods levels due to developments. Plot sizes in low density areas ranges from 45mx45m ï 60mx45m and 60mx60m respectively to include a wide variety of open spaces for outdoor recreational activities.

This situation (wide variety of open spaces for outdoor recreational activities) has been overtaken by curve out plots that were created out of these areas, thereby compelling the people using such outdoor recreational resources for various activities to develop new forms of outdoor leisure habits. What these trends mean is that the so long new areas have not been opened up for habitation in the metropolis, rapid rate of urbanization will continue to eat up spaces earmarked for leisure activities.

**4.18 Technological trends**

The history of recreation and leisure during the past century has been one in which technology created entirely new kinds of play and entertainment possibilities. The invention of radio, motion pictures, television, sound recordings, tape recorders and players, CDs, and similar devices clearly expanded the leisure lives of young and old people. During the past two decades, video games and other computer-based pastimes have become a major preoccupation, with the Internet giving millions of individuals the opportunity to explore new hobbies and interests or engage with others in chat rooms that provide contact at a momentôs notice.

Technological innovation will continue to have a major impact on every element of society, including business, education health care, and government. Within the recreation, parks, and leisure field, it will have one kind of effect that is the creation of new and exciting forms of recreation, made possible by scientifically-based invention;

Increasingly, the computers and the internet are becoming a part of every day life for many Nigerians; those who have access to the internet are able to take advantage of increasingly diverse range of activities. Between 1990-2005 the number of households in Nigeria with computers doubled, and between 1995-2005 the number of households with internet access increases almost nine fold (Cyber Africa A.I.T Television). Also, the increase use of computers has led to less engagement in outdoor recreation activities. Technology is radically challenging sporting and physical outdoor recreation pursuits as a main source of entertainment resulting in a diversity of life style and leisure pattern.

## 4.19 INFERENCES

From the analysis of data the following inferences could be drawn;-

1. A population exists that has a high demand for outdoor recreation activities. This is noticed in terms of the 55.7% of the youthful age group that are involved in outdoor recreational activities in the metropolis.
2. The Locations for various outdoor recreation activities exists at different hierarchies i.e. neighbourhood, district and city levels with adequate spaces for utilization of activities.
3. The trend of participation in outdoor recreational activities revealed that, activities in the likes of recreational parks, attending outdoor sporting events, jogging, basketball games all shows a positive trend (i.e. demand pattern) ten years from now up to 2020. This is revealed by the trend analysis in figures 4.14, 4.15, 4.18 and 4.20
4. The trend of participation in outdoor recreation activities revealed that activities in the likes of picnicking, swimming, and golfing, shows a negative trend (i.e. demand pattern) in the future for up to the year 2020 as analyzed by the trend analysis in figures 4.16, 4.17, and 4.19.

5. The social trends (societal trends) reveals that the number of singles (not married) is on the increase, so if these trends continue it will mean that the demand for outdoor recreation activities will be dominated by this class.
6. The economic trends as regarding unemployment in the metropolis will mean demand for outdoor recreation activities will be tailored towards the free of charge recreation activities. Likewise, hours and pattern of work for those whom are employed will create a trend of shorter vacation involving outdoor recreation and close to home.
7. The rapid rate of urbanization experienced in the metropolis can jeopardized spaces earmarked for outdoor recreation activities especially at the neighborhood levels thereby creating a trend that can redirect outdoor leisure needs of the population to a particular activity e.g. Recreation park activities.
8. Rapid changes and continued technological innovations will potentially mean that outdoor recreation planners need to accommodate new activities in the near future to face the challenges of technology.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATION

## 5.0 Introduction

This chapter contains the summary of the entire study and a brief outline of the specific contribution of the study to knowledge.

## 5.1 SUMMARY OF THE STUDY

Outdoor recreation is essential for restoring the bodyôs mental and physical health after the stress of work as such demand into various kinds of outdoor recreation pursuits is inevitable. The study has identified the factors of demand (population, education, income, mobility, employment) as very vital in establishing demand for outdoor recreational activities. The analysis of demand based on these factors reveals that their is a growing population that has a high demand for outdoor recreational pursuits in the study area with locations at different hierarchies to satisfy the outdoor recreation pursuits. The study however, reveals that utilization of these spaces for different activities varies, as neighbourhood and community spaces are predominantly utilise for limited activities (e.g. football & physical fitness activities).While on the other hand, the utilization of spaces for city recreation activity areas are for ample outdoor recreational pursuits. Although, operation basis for some outdoor recreational activities is on subscription, the study reveals that residents can afford to pay for the charges. Also, in the course of the study, several techniques have been identified for estimating demand but researchers on recreation planning have always been keen on the application of standards technique approach to estimate the demand requirements of a population, this is because the technique is simple to apply, straight forward and administratively expedient. However, going by the way demand is estimated by researchers using the application of standard technique, the study reveals that the recreation planner can

only gain an insight on the pattern of demand into various recreational activities for the present time (now) which can change in the near future, thereby changing leisure habits. The study reveals that the application of the trend analysis to the way of how demand is estimated (using the standard approach technique) has succeeded in predicting the anticipated pattern of demand into the various outdoor recreational pursuits in the future. The logic behind the trend analysis is to identify those activities where demand is growing, demand is constant or where demand is declining and then translate demand into space needs with facility standards.

Recreation planners need to know on regular basis which activities (and as a result of what) are growing much faster than the others and which activities are declining (over a period of time), since all recreation activities are not expected to grow at the same rate.

The summary of the results of trend analysis conducted on seven outdoor recreational activities reveals interesting findings contrary to the way demand is estimated using the application of standard technique. The trend analysis shows that increase in population does not automatically suggests an increase in demand for various recreation activities rather it is the trend analysis that shows the actual pattern of demand more especially in the future. Hence, the application of the trend analysis as revealed by the study has gone along way in justifying demand estimates based on the application of standard technique since the true pattern of demand for the future is known. It is with this result that prediction have been made so as to ascertain which recreation activities will be much more demanded in the future as such need additional facilities in order to meet demand estimates adequately.

## 5.2 BASIC CONTRIBUTION OF THE STUDY

The basic contribution of the study to knowledge is in the area of conducting a trend analysis which gives the recreation planner a better understanding on the pattern of demand in the

future. The study adds to the fact that, the recreation planner through the factors of demand can know the pattern of demand presently, but whether that pattern will be maintained or changed towards another direction can only be known through the trend analysis

## 5.3 RECOMMENDATIONS

The following recommendations have been suggested in the course of the research: -

1. A trend analysis is necessary to compliment the way demand is estimated using the standard approach technique, since recreation planners are keen on using the technique in estimating and projecting demand on one hand, the trend analysis on the other hand can predict the pattern of demand for outdoor recreational activities in the future.

2. A survey of demand for outdoor recreation (participation) is vital at regular interval of time(say ever 5years). This is to gather data on demand (participation) that will eventually be used for the purpose of forecasting demand into various recreational activities in the near future. The methodology of the survey will employed a simple random sampling technique aimed at drawing a sample of demand for the various outdoor recreational pursuits in the Metropolis.

3. Assessments and records of participation levels and rates in outdoor recreation activities must be kept intact and made a continuous process because of the rapid changing nature of the population life-style so as to assist in projecting anticipated trends for various outdoor recreation activities. This will give the recreation planner an insight on the very changing nature of demand for various outdoor recreational activities.

4. Societal trends must be taken into consideration in establishing demand by recreation planners as they have been identified to have a great influence in shaping the recreational way of life of the people.

5. Since hours and pattern of work for those whom are employed has created a trend of shorter vacation involving outdoor recreation close to home, then provision for outdoor recreation activities must be directed towards close to homes.

## 5.4 CONCLUSION

The result of the study has shown that the application of standard technique in estimating demand for outdoor recreation activities is indeed rigid as it operates on the basis of population and ratio structure, which does not take into consideration the changing recreation pattern of the people. The trends analysis have proven to be of significant importance as it gives information on demand (now and the future) in various outdoor recreational pursuits which can serve as the basis for apportioning outdoor recreational needs. As such a combination of the technique (application of standard technique) of estimating demand with the trends analysis will go along way in establishing demand, estimating demand and projecting demand properly. This will enable optimal utilization of spaces more especially in the future earmarked for outdoor recreation activities.

## 5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

The following areas are proposed for further research work:

a) An analysis of the impact of Societal trends in outdoor recreation demand
b) Recreation Needs analysis

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## APPENDIX I

## DEMAND ESTIMATION FOR OUTDOOR RECREATIONAL ACTIVITIES IN KADUNA METROPOLIS

### HOUSE-HOLD QUESTIONNAIRES

This questionnaire is administered purely for academic research purpose. Information given will be treated as private and confidential. Your honest opinion on the issues raised will be highly appreciated.

### SECTION ONE

1. District of residenceé é é é é é é é é é é é é é é é é é é
2. Sex (a) Male (b) Female
3. Age (a) <20yrs (b) 20-39yrs (c) 40-59yrs (d) 60yrs
4. Marital status (a) Single (b) Married (c) Divorced (d) Widowed
5. Number of children Malesé é ..Agesé é . Femalesé é .Agesé é
6. Education Level (a) No-formal Education (b) Koranic Education only
   (c)Primary (d) Post Primary (e) Post Secondary
7. Occupation (a) Civil/Public Servant (b) Private Sector employee
   (c) Self-employed (d) Unemployed (e) Others (specify)é é é é
8. Annual income (a) <₦ 12000 (b) ₦ 12001-24000 (c) ₦ 24001-48000
   (d) ₦ 48001- 84000 (e) > ₦ 84000

9. Do you partake in outdoor recreation activities (a) Yes (b) No
10. How important is recreation to you and the members of your Households
    (a) Very Important (b) Somewhat Important
    (c) Not Very Important (d) Unsure
11. How much do you spend on recreation per month (a) ₦ 500-1000
    (b) ₦ 1001- 1500 (c) ₦ 1501-2000 (d) Specifyé é é é é é é é é .

12. If no, why? (a) Lack of finance (b) Lack of time (c) Lack of facilities
    (d) Any other reason specifyé é é é é .....
    é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é é

13. How often do you or members of your household participate in outdoor recreation activities?

    (a) More than once a week (b) About once a week (c) About twice a month
    (d) About once a month (e) Less than once a month (f) Never

14. What five (5) active outdoor recreational activities do you or members of your household participate in most often? (List 5 activities) (a)é é é é é é é é é é é .. (b)é é é é é é é é é é é é é é é (c)é é é é é é é é é é é é é é é .

(d)é é é é é é é é é é é é é é é (e)é é é é é é é é é é é é é é é

15. What five (5) passive outdoor recreational activities do you or members of your household participate in most often? (List 5 activities) (a)é é é é é é é é é é é é (b)é é é é é é é é é é é é é é é (c)é é é é é é é é é é é é é é é ..

(d)é é é é é é é é é é é é é é é (e)é é é é é é é é é é é é é é é ..

16. How far do you go from home to most outdoor recreation areas (a) Less than 1km (b) 2-3kms (c) 4-7kms (d) More than 7kms

17. When participating in outdoor recreation activities do you usually Use

(a) Public Facilities (b) Private Facilities (c) Institutional Facilities (d) Other (specify)

18. Where do you prefer to engage in outdoor recreation activities?
(a) Close to home (b) Away from home

Thank you