



## Modern landscaping and medicinal plant loss as a legacy of colonialism in Nigeria (Lokoja as case study).

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### Abstract

This paper aims to trace the history of colonial urban planning in Nigerian cities, its legacies of urban design and beautification of the environment. In Nigeria the town planning institutional frame works was established under the colonial rule which persisted to the post colonial period. In this sense the colonial era was a phase in which European institutions and values systems were transferred to Nigeria, one of which is the concept of environmental beautification with the use of plants. An investigation is carried out on the influence of colonial rule on landscaping and urban design. Findings show that the introduction of deliberate landscaping to city planning have over the years systematically led to loss of valuable indigenous plants partly due to the introduction of exotic plants. These are plants that initially were seen as sources of cure for several ailments. There is therefore the need for a rethink as to the type of plants to be used for landscaping.

### 1.0 Introduction

Historical accounts show that cities existed in Nigeria long before colonization by the British Empire. The inhabitants so called the natives lived in organic communal villages. Iweke (2004) identified traditional pre-colonial cities that existed before the colonialists entered the cities such as Kano, Enugu, Lagos, Ibadan, Sokoto and Benin. Records show that most of these pre-colonial cities were fenced mainly for defense purpose, where gardens were situated at the edge of the fence for provision of food during the period of siege. Gardening was encouraged where food and herbs were produced for subsistence and surplus. However organized planting of trees for the beautification of open spaces can be traced to the early period of colonization, where the British colonial masters came in with a new socio-political and economic structure. They came with the idea of town planning. Town Planning in Nigeria is a modern phenomenon, which is traceable to an Act on housing in 1909 in Lagos, a city which had a distinct urban design pattern that followed traditional styles typical of fishermen village settlers (Aduwo, 1999). This is evident in the style reflected in the street alignment of the Lagos Island today in term of socio-economy and political organization of the settlers.

In 1924 the township improvement schemes were introduced to be undertaken by the Town Council through Town Planning Committee to initiate planning schemes. By 1926 Apapa was developed in Lagos as a self contained residential community to provide relief to Lagos Island of its original port functions and to focus on being the Business District Centre (Aduwo, 1999). However in 1927 the Town Planning Committees were dissolved and replaced by Health Boards.

Then in 1928 Lagos Town Planning Ordinance was enacted in response to the fundamental drawback of 1917 Township Ordinance with no provisions extended to native towns and consequently no feasible planning ever took place in the native areas. The physical development problems arising from congestion in the native areas that were planless led to the outbreak of bubonic plague in the later part of 1920s, precisely 1928. By 1945 it was obvious to the Colonial administration that urban planning was missing from the country's constitution and this omission called for urgent attention. Thence in



1946, the Town and Country Planning Law, Cap. 155 (Ordinance No.4 of 1946) was promulgated. The law was made to "make provision for the re-planning, improvement and development of different parts of Nigeria" by means of planning schemes and planning authorities.

As the first nationwide framework for Urban and Regional Planning in the country under the colonial administration, the Nigerian Town and Country Planning Act of 1946 was widely adopted throughout the country. The 1946 Planning Act was restricted to the European Reservation Areas to the detriment of those living in native towns and as such it was difficult to see how the Act ever prepared the country for modern planning scheme in all settlements in the country.

Oduaye (1998) describes the areas occupied by the colonialists and their work places as areas bedecked with ornamental plants, flowers arranged in a functional, formal manner. This trend however continued after the colonialists have gone. The phenomena of rapid urbanization also help to propagate the concept of landscaping; this led to gradual depletion of the indigenous plants that once adorn the traditional landscape of the country. As exotic plants were gradually being introduced, the traditional and indigenous plants were being neglected and as a consequence led to loss of medicinal plants and biodiversity.

## 1.1 Pre Independence period

The appointed a Governor for Lagos and the establishment a botanical garden at Ebute-metta, and Moloney's Botanical garden was an early expression of the need for preservation of plants. In this period physical planning was skeletal and indeed restricted to towns and localities where the colonial administrators and European expatriates were residing. The earliest legislation on this was the Lagos 1863 Town Improvement Ordinance which introduced the basis for control of development and urban sanitation in Lagos protectorate. The Lord Lugard's Land Proclamation of 1900 then provided for indirect rule in respect of land administration and settlement development in the country at large. This was important in that urban settlements in native areas were to be administered by the native rulers (NITP, 1991). Even though there were no rules to landscaping, there were series of legislations in place after 1900 that guided physical planning across the country and five notable ones may be highlighted as:

(i) The Cantonment Proclamation of 1904 ushered in the segregation of expatriate officials and Europeans from the native areas. The 1904 Ordinance was passed to tackle the problem of public health such that the European Reservation Areas in few selected urban centres were segregated from where the local and natives were residing.

(ii) Ordinance No. 9 of 1914 enacted for the purpose of Government acquisition of land compulsorily for public use, irrespective of the status of the land method occupied or not.

(iii) Township Ordinance No. 29 of 1917 enacted to classify urban settlement into different grades of cities as well as established broad physical layout of towns. Lagos was made a first class township with a Town Council empowered with ranging sets of functions. The Ordinance provided for improvement schemes to be undertaken in the second class categorised cities that were also given prominence such as Port - Harcourt, Enugu, Jos, Minna and Kaduna (Mabogunje, 1968). The 1917 Township Ordinance further advanced the segregation tendency of major Nigeria cities along ethnics and colour lines; European Reservation Areas for the expatriates and Europeans and native areas further subdivided into indigenes and non indigenes (Oyesiku, 2007).

This period coincided with the colonial period where people plants trees, shrubs for medicinal purpose around their buildings, plants were tendered for either food or medicine or both. Trees were not just planted or allowed to grow for beautification but for personal benefits. Plant uses were planted for medical, cultural, fodder, food, construction, fuel wood, and shade and soil protection.

However the people's idiosyncrasy began to change after the town improvement ordinance was promulgated to control development and to improve sanitation as aforementioned. This ordinance brought about the segregation of the European abode from that of the natives, which was described as the Government Reserved Area. Here standards of land use to be adhered to were given, hedges in the form of plants were used to demarcate land boundaries, as fences, residential houses were surrounded by vast expanse of land and functional open spaces planted with trees and flowers. This concept of GRA then spread to other major cities in the country from here.

At this period the supervision of landscape planning and urban development was carried out by officials of the health management board. By 1946 the Nigerian town and country planning law was promulgated after the British town planning law of 1932, with chapter 123 for western region, chapter 130 for the northern region and chapter 155 for the Eastern region. It was to be concerned with the improvement and development of landuse in the major cities of Nigeria, this was valid up to independence in 1960.

## 1.2 Post Independence

Modern planning as understood in line with Western culture and tradition may be described as a recent phenomenon that emerged in the early 1960s after independence.

After the Nigeria independence in 1960 the foot print of landscape left by the colonial masters was still vividly visible in all establishments they left behind and in the area of former residences, also represented in parks, playgrounds. Like in every city they left squares and race courses, which were used for horse racing and other sporting activities, even though some now have their names changed to indigenous names, like the race course in Lagos have its name changed to Tinubu square, that of Kaduna now bear the name Murtala Mohammed square. Even areas for leisure like the government garden in Kaduna created during the reign of lard Lugard, is now called Gamji. Not to mention street names that were once boulevards with colonial names now bear indigenous Nigerian names. Never the less the relics of the colonial inprints still persist to this day in these cities (Alabi, 2012). However the scenario is different in the residential areas Outside the former European setting, where residents try to mimic the landscape of the GRA's. Here exotic plant were being introduces which have little or no known benefit to the people, also little space is now given for landscaping unlike in the days of old. Some scholars in recent times have attempted to take inventories of the importance of different plants found in different parts of Nigeria just to reiterate the importance of some of the indigenous plants in the country. Bhat et al (1990) undertook an ethno –botanical study in a state north central parts of Nigeria (Kwara state), where he documented the uses of different plants used as a resource by the people. A similar inventory was also carried out in Kano also in the northern part of Nigeria by

Sofowora (1993).Medical plant and traditional medicine inventory in Africa was also carried out in Nigeria, medical plants in common use and listed biologically active ingredients derived from some of the plants were enumerated in Africa(2007),(Olofin,1998).

## 2.0 The study area

The case study area is Lokoja, being an urban area that had experienced colonial rule, is located between latitude 7o 45' N, 7o 51' N of the equator and longitude 6o 41' E 6o 45'E of the Greenwich Meridian. It is bounded in the west by the River Niger at an altitude of 45-125metre above sea level. It is also surrounded by pockets of hills of which the highest in the Patti ridge (figure -1).

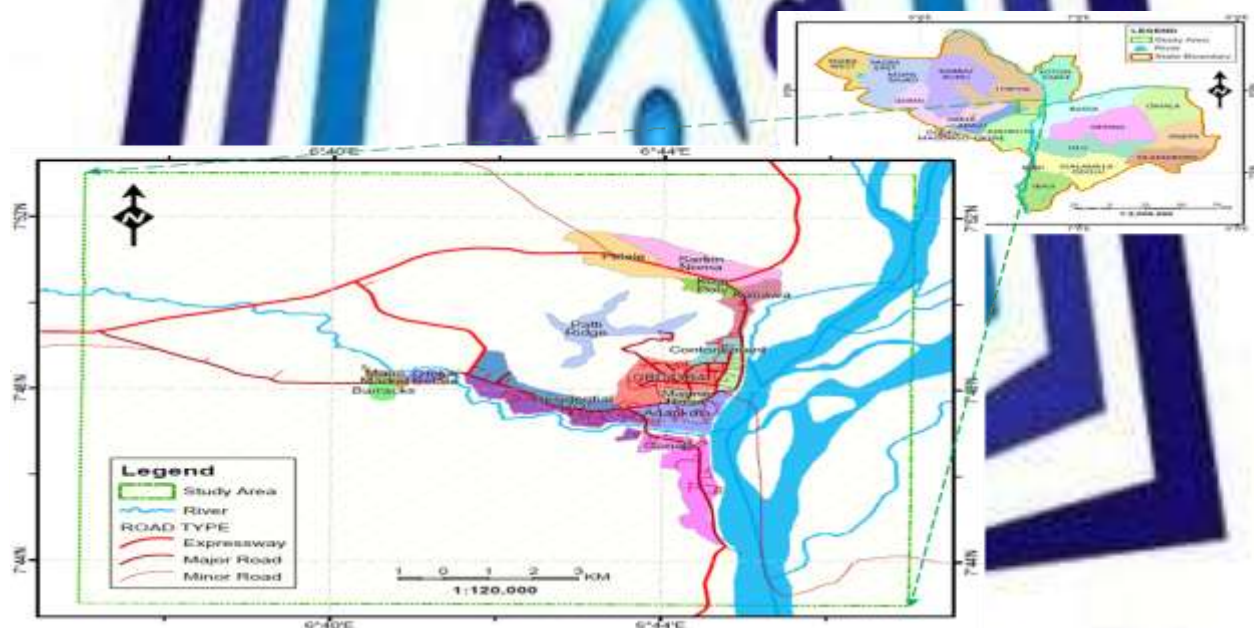


Figure -1 showing the neighborhoods in the study area (Lokoja)

## 2.1 Vegetation and Rainfall

The area is categorized to be within the guinea savannah belt, even though what we really have now is the derived savannah, only resistant vegetation still remains dominant due to anthropogenic activities of bush clearing and burning, lumbering, most of area consists of secondary regrowth. Short grasses like *Andropogon tectorum*, *Bambusa vulgarise*, *Panicum laxum*, *Cynodon dactylon*. The tall trees found in the area include, *Carapa procera*, *Elaeis guineensis*, *Enanma chloranta*, while the shrub species are the *Sida acuta*, *Chromolaena odorantum*, *Mimosa pudica*, *Cassi tora*.



The climate falls in the category the tropical wet and dry climate of the Koppen's classification, which is characterized by wet and dry season, the rain begins in May and ends in October. With a maximum temperature of 37.9 °C, maximum temperature between December to April, average annual rainfall of about 1000mm and a relative humidity at 60%.

### 3.0 Methodology

Reconnaissance survey was conducted in October 2012 during which the study area was visited in order to get a view of plants surrounding buildings (landscape). This was followed by a field work which lasted from October 2012 to January 2013. A geometric centre of each grid on selected quadrant of 100m sq was measured at selected points in 10 selected neighborhoods in Lokoja, houses within these points with deliberate plants around it were randomly selected.

During this period plant inventory was conducted and a sample collection made, since it was the period immediately after the rainy season when most plants were still fresh and at maturity stage. Plant pressers were used in the collection of grasses and herbs. In the case of shrubs identifiable features such as branched with leaves and flowers were collected as samples, trees were later conveyed to herbarium for botanical identification.

The second phase of the field work was conducted between the months of February and later where groups and individuals were interviewed on identification of plant species and their medicinal importance. The oral interview technique was adapted in acquiring information and knowledge of the multipurpose uses of plants.

### 3.1 Conceptual framework

According to world health organization (WHO, 2001) plants are now being recognized by both rural populace and urban elite as an important health care resource. Plants are seen as important in the healthcare system and of high nutritional value by the people, where they are believed to have medical and magical values (Ayodele,2005). Oladunmoye and Kehinde, (2011), found that about 35000, plant species have been discovered and widely used for medicinal herbs.

### 3.2 Plants that were once common to the study area

The table -1 shows the plants that were once common in the study area, their botanical names and common names, it also shows their usage and the parts used.

**Table-1 shows plants that were once common in the study area and their uses**

	Botanical Name	Common Name	Used in curing:	Parts used in curing :
1	Acacia	Acacia	chicken pox	Stem bark, sap
	Aframomum melegueta	Alligator pepper	Stimulant, Sleeping Sickness, measles, chicken pox, anemia	Nuts, roots, the whole plant
2	Abelmoschus	Okro	Sperm count, fever, gonorrhia, catarrhal emollient	Fruit, leaves, seeds
3	Aloe bateri	Aleovera	Boils and dandruff	leaves
4	Amacanthus	prickly	Malaria, sore, eye	leaves
5	Anacardium occidentale	Cashew	Cough, Jaundice, gonorrhia, syphilis, diabetes, scurvy	Stem bark,leaves/bark
6	Azadirachta indica	Neem tree	Boils, malaria, jaundice, syphilis, sore-throat, emothic, laxative.	Fruit juice, leaves and tree bark
7	Calabium nigrum	Jesus blood	boils	Leaves, rhizomes
8	Parkia biglobosa	Locust bean	hypertention	seeds
9	Raphia farinifera	Raffia palm	measles	leaves
10	Solanum melongena	Garden egg	Kidney problem, vitamin C	Seed, leaves
11	Terminalia atapa	Umbrella/almond tree	Insomnia/Sleeplessness	leaves



12	Cymbopogon citrates	Lemon grass	Malaria, typhoid fever, diuretic astringent , antiseptic	leaves
13	Mangifera indica	Mango	Malaria, diarrhea, astringent, hypertention, hemorrhage	Leaves, stem,bark, root
14	Dacrodes	African pear	Swollen foot from jiggerinfestation ,	Bark, stem, fruit
15	Ocimum gratissimum	Fever plant	Convulsion in children,fever/cold	
16	Thymus	Curry leaf	Carminative	leaves
17	corchorous	jute	Abscesses,Swellings	Seeds
18	Carica papaya	Paw paw	Boil, purgative,jaundice	Latex fruit ,seed, leaves
19	Milicia exceise	Mulberry	Rheumatism	root
20	Vernonia amygdalina	Bitter leaf	Cancer, detoxicant	Leaves, stem

**Source: Colonial archives and interview**

The table -1 shows the common plants that once flourished in the study area, it also shows their uses with the parts used in curing ailments.

## 4.0 Results

### 4.1 Existing common plants

The table -2 shows the present situation on ground, showing the distribution of plants in selected locations within the study area.

**Table-2 showing shrub distribution in selected location**

Point station	Location	ELT	BH	BHM	AGV	IXR	YLB	ACS	CRTN	GRAK	TJA
1	Sarkin noma	8	4	8	7	3	10	5	2	2	3
2	Felele	10	3	6	5	6	15	3	6	4	5
3	Ganaja	7	5	7	6	3	17	7	4	2	10
4	Otokiti	9	7	6	8	8	16	9	7	5	7
5	Kabba road	7	3	3	7	4	10	3	3	2	8
6	Lokongoma	9	8	5	5	5	14	5	8	4	9
7	Patti ridge	6	3	3	9	2	8	2	5	6	2
8	Lokoja central	12	14	8	5	9	23	10	10	8	16
9	Barrack area	14	10	7	7	8	15	6	8	6	11
10	Kogi poly	9	11	8	8	10	17	7	9	5	10

**Source: field work, 2012-2013**

**ELT-elephant tongue, BH-boring hedge, BHM-bahama, AGV-agave ,IXR- Ixora**

**YLB-yellow bush, ACS-acacia, CRTN-croton,GRAK- green akaver, TJA-thuja plicata( xmas tree)**

**Table-3 showing flower distribution in selected location**

Point station	Location	HBS	RS	MVL	TPY	RAC
1	Sarkin noma	3	2	1	2	2
2	Felele	2	2	1	2	1
3	Ganaja	6		3	2	2
4	Otokiti	5	5	3	3	3
5	Kabba road	3	4	5	3	3
6	Iokongoma	8	8	4	4	4
7	Patti ridge	2	1	1	1	1
8	Lokoja central	10	9	9	6	6
9	Barrack area	8	6	7	5	4
10	Kogi poly	7	5	6	3	3

Source: field work, 2012-2013

HBS- hibiscus, RS- red rose, MVL-movila, TPY-tounpiya, and RAC-red Acaliber

**Table-4 showing tree distribution in selected location**

Point station	Location	RYP	MLN	MNG	ORG	CSW	LB	MST	NM
1	Sarkin noma	1	4	10	11	13	6	2	2
2	Felele	1	3	9	9	11	5	4	4
3	Ganaja	5	1	10	9	12	4	8	4
4	Otokiti	3	1	7	13	10	3	10	3
5	Kabba road	4	-	9	6	8	2	5	3
6	Iokongoma	3	3	11	9	9	3	11	4
7	Patti ridge	-	3	4	3	2	5	4	6
8	Lokoja central	8	2	15	10	9	15	4	6
9	Barrack area	6	3	11	11	8	11	6	8
10	Kogi poly	4	6	9	10	7	9	6	8

RYP-Royal palm, MLN- malaina, MNG-mango, ORG- orange, CSW- chashew

LB-Locust bean, MST- Masquerade tree, NM-Neem

## 5.0 Discussion

From the ongoing, the table -1 shows the plants that were once commonly found in the study area. This compared to the tables showing the present existing situation (tables, 2, 3, 4), reveals a contrasting scenario, where most of the medicinal plants were not found. They were found to have disappeared partly due to clearance to give space for urbanization and to replacement by exotic plants by city dwellers to “keep up with the jonses”. That everybody wants to imitate a beautiful



landscape as seen in the neighborhoods of the government reserved areas that were once the abode of the colonialists, without cognizance to the kind or the usefulness of the plants introduced. Most of the plants found in the area today have no known medicinal benefits to the people.

## 6.0 Conclusion

The foregoing discussions have elicited the great importance of plants used in landscaping. It is suggested that plants to be used in landscaping the environment should be made functional not only for aesthetics but also for food and medicinal advantages as this will help in sustaining indigenous plants which could be preserved for posterity.

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