

THE HISTORICAL AND GEOGRAPHICAL SETTING OF OGBIA AND ITS ENVIRONS: AN OVERVIEW.

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The study assesses the geographical and physical setting of the area (Ogbia) and its environs. It shows the various characteristics of the physical setting (drainage, soil, climate, vegetation and human settlement) system as it relates to human activities, their productivity before and after the discovery of crude oil (Oloibiri) in commercial quantity in Nigeria. The human activities were originally fishing and farming settlers, producing various food crops such as yam, cassava cocoyam, plantain, sweet potatoes, sugar cane, rice, palm oil, etc. with various natural resources. The food products and crops were transported through the rivers which is the original means of communication before the advent of the exploration and exploitation of oil and gas in the region. The various administrative systems are characterized by the river transport (Ekole, Kolo creek, Otuoke River and the Brass River) where great movement of goods and services impact positively to the human development in the area. The expansion of the state capital (Yenagoa) has brought both physical and economic development through the volume of trade. It concluded that due to its abundant land and natural resources there is need for proper physical planning to boost sustainable economic development in the area.

Key words: Drainage System, geographical, Ogbia, physical setting and Socio-economic**Introduction**

The water ways have played a significant role in Human history. De Blij et al. (2005) stated that humanity's earliest civilizations arose in the valleys of great rivers. People, particularly our ancestors learned to control the seasonal floods of these streams, and irrigation made planned farming possible (Hydraulic civilization), that is, the ability to control and exploit water. Our current dependence on water is no less fundamental, as society's technological progress notwithstanding, water remains the Earth's most critical resource world over. Human beings can do without oil, coal, iron, etc, but cannot do or survive without water and its resources. This is the reason de Blij et al (2005) stated that the historical geography of human settlement on this planet is no small part of the history of the search for, and use of water. This explains generally that most of the world largest cities world over are cited along or near the coast (rivers, streams, lakes, canals, etc.).

In north America, for instance, rivers have been used for transport long before European began to move in, the larger still form very valuable highways and may also be sources of hydro-electric power and irrigation and industrial water (Hudson, 1978). Several rivers such as the Columbia, Sacramento, and Colorado have recently been harnessed for power generation and irrigation water supplies. In the East of the United States, the Tennessee, a number of north bank tributaries of the St. Lawrence, and many short rivers falling abruptly from the Appalachians to the Atlantic coast plain have been dammed back to support power generation. The waterways of the Great Lakes-St. Lawrence River, between Canada and the United States, have been improved as to provide the greatest inland water route in the world.

In Nigeria, the Upper River Niger is housing the biggest dam in the country, the Kainji Dam, the Sirono Dam in the north western Nigeria. The

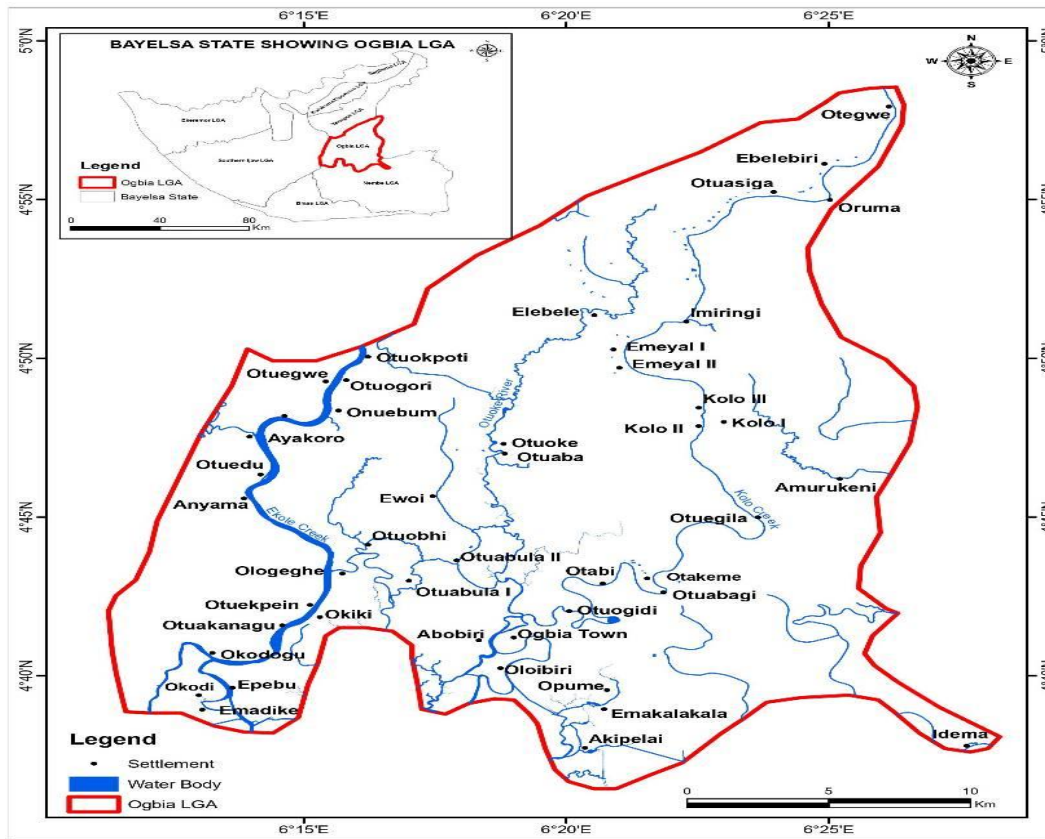
aim of the study is to analyze the geographical setting of Ogbia District and its environs; its implications on the socio-economic development of the area

The study area. The Ogbia LGA is located within Latitude $4^{\circ} 35'$ and $5^{\circ} 00'$ North of the equator and Longitude $6^{\circ} 10'$ and $6^{\circ} 28'$ East of the Greenwich meridian (Ogbia Master Plan, 1973; Obiene et al., 2011). It is bounded to the North by Yenagoa LGA, of Bayelsa State, North East by Ahouba West LGA of Rivers State, South by Nembe LGA of Bayelsa State, East by Abua-Odual of Rivers State and West by Southern Ijaw LGA, also of Bayelsa state. The area lies within the Central Niger Delta of the Niger Delta Region South –South Nigeria (Digha et al., 2009; Obiene et al., 2011). It has a population figure of 157,393 and 179,926 in the 1991 and 2006 National Population Census and the 2005 projection figure of 232,626 persons (NPC, 1991; 2006). It also has a geographical or areal extent of approximately 693.22 Km² and population density of 227/Km² (Bayelsa State Statistical Year Book, 2005; Obiene, et al., 2011), and about 25Km distance to the Atlantic Ocean (Digha, 2013).

Geologically, the area is part of the landscape of the Niger Delta environment with its limit of the Nigerian Coast between 30 to 40Km from the Coastline inland (Chima & Digha, 2011). This delimitation appears to be realistic since the tidal influences are felt up to 48 Km inland. The area also falls within the coastline and inland alluvial plains of the coastal lowland of the Niger Delta region. It has a mean sea-level of about 8m sloping seawards, that is, from north to the south of the Local Government Area (Ogbia Master Plan, NDBB 1966; NDRMP, 2006). It is important to note that, places like Oloibiri Island, Abobiri and Ogbia Town has a mean sea-level of 5m, while settlement such as Imiringi, Otuasega and Oruma and its environs has a mean sea-level of 6m above sea-level (Digha, 2008, 2013; Digha, et al., 2009).

In another study, the area is dominated by a low-lying plain belonging to the sedimentary environment of the modern Niger Delta. The Land slopes gently from North-South direction to the boundary of Ogbia and Nembe areas of the Central Niger Delta (Obiene et al., 2011). The Sedimentary sequence underlying the area constitutes the body of deltaic deposits laid down over 50-70 million years ago. However, since the past two million years, the delta has changed response to constantly rising and falling of the sea-level as a result of climatic oscillations. The present topographic configuration has evolved from the sedimentary pattern of the last 75,000 years (Chima & Digha, 2011). The geology of the Ogbia is dated back to the Eocene era. This was accompanied by the built-up of fine sediments, which were eroded by the Ekole Creek a tributary of River Niger and the Kolo Creek an arm of lower Orashi River (Chima & Digha, 2007; Obiene et al., 2012). The materials from the rivers were transported and re-deposited from the geomorphologic unit of the study area. The surface geology of the region is made up of three tertiary lithostratigraphic units, such as the Benin, Agbada and the Akata formations (Digha et al., 2009; Ogbia Master Plan, 1973). The Benin formation consists of over 90% of sand and shale intercalations. It covers the whole coastline of Bayelsa State. The materials of the Benin formation dates back to the Oligocene epoch, while the upper part of the formation generally ranges from Miocene to the recent age. The Agbada formation on the other hand consists of sequence of shale, while sand units predominated the upper part and the minor shale intercalations. The shale units become thicker towards the boundary between it and the Akata formation. The Akata formation is made up of uniform shale deposits consisting of dark-gray sandy, silt shale with plant remains at the top of the formation. Thin lenses are also known to occur near the top of this formation, particularly at the zone between Agbada and Akata formations.

Figure 1.0 showing the study area.



Various types of quaternary to recent deposits including Chicoco mud overlie the three units of formation. The sub-aerial Niger delta is made up of recent deposits. The quaternary deposits consist of either relatively uniform litology or alternating sequence of sand, silt and clay-peat or sand-silt-clay (loam) mixture, with clay and silt increasing seawards (Chima & Digha, 2007; chima & Digha 2011; Digha, 2008).

Vegetation. Notably, soil and vegetation are closely related and they are associated with one another in human reasoning or indigenous knowledge. The area called the Ogbia land is crisscrossed by two major vegetation zones notably the fresh water swamp forest, the Brackish or mangrove swamp forest, which is particularly situated at the southern part of the area. The freshwater swamp forest is characterized by raffia-palms up to the northern part of the district. The mangroves and the associated plants are replaced by freshwater vegetation as one move inland from the south to the north. The areas that have freshwater vegetation including floating species such as

vossia, cuspidola, nymhpae a lotus, grasses and sedges such as Mariscus SP. Paspun vaginatum and other plant species such as pandanus Candelabranum, Raffia vinifera etc. in the creeks with freshwater (Nyananyo, 1999, Digha, 2013).

Accordingly, further inland and with the rise in land there are extensive Freshwater swamp forests characterized by trees such as Carapa procera, Aletonia booni, Alchornea Cordi folia, Baptida, among several others. There are also the climbing plants, shrubs, lianas and ferns together with grasses and sedges occur on the outer fringes. These freshwater swamp forests are probably edaphic variants of the Guinea lowland rainforests. This forest view is supported by the occurrence of similar plant species in both forests. The vegetation is dominated by raffia palms (*Raffia vinifera*, R. Hooker). The sap of these plant species produces palm wine, which on processing produces gin (alcohol) commonly called 'ogogoro'. There are other tree forest such as the Bamboo and other economic trees within

the forest. They include the wild or African mango that produces ogbono (*Irvingia gabonensis*) (Nyananyo, 1999, Digha et al., 2009).

The forest in addition to these is rich in the supply of streams and pool of waters which are home to reptiles, fishes and water plants (hydrophytes) such as water lettuce, water hyacinth and water lily. The screw pine is economically important to the inhabitants of the area; it is succulent and when cut and retted produces a rope used in weaving fish gear, mats and local hats (Robert, 2019). However, the vegetation has been intensively altered through anthropogenic activities, especially in the freshwater swamp forest zone of the area. The implication of this is that, some patches of secondary forest are been observed in some parts of the area, especially around Oloibiri and the Emeyal axe (Ogbia Master Plan, 1973; Myananyo, 1999; Digha et al., 2009).

Soils. Two major soils are identified in the area; the freshwater/saltwater transition soils and the coastal plain terrace soils (Digha et al., 2009; Chima & Digha, 2011, Obiene et al., 1012). There are also other smaller soil units which occur in patches and are likened to the soils of the high-lying and the low-lying levees, meander belt soils, soils of the basins, silted river bed soils and soils of the transitional zones. The soils of the high-lying levees are generally coarse in texture, that is, sandy, loamy and sand. Others are moderately coarse and medium textured. The soils of the low-lying levees are mainly clay-loam and or sometimes silt, while the soils of the basins consist predominantly of the silt-loam at the surface underlain by coarse textured sub-soil. The soils of the silted river beds consist of clay. While that of the transitional zone consist of silt to sandy-silt (NDDDB, 1966; Digha, 2013).

Drainage System. Administratively, the entire geographical space of the study area is characterized by a maze of rivers, creeks stream and canals crisscrossing the low-lying plain of the area namely (Fig.1): Anyama-Ogbia, Kolo Creek (Emeyal group), the Oloibiri and the

Aburani axes. They formed the units or administrative areas and evidently identified by three major rivers and some creeks, streams and canals which characterizes the drainage systems. The entire area is drained by large and medium to small channels, rills, rivulets and streams of high tides (Digha, et al., 2009; Obiene, et al., 2012).

The Anyama-Ogbia, for instance, is flanked by the Ekoke Creek, a tributary from the River Nun that meanders from Yenagoa in Yenagoa LGA entering the northern part of study through Otuokpoti down to Ewoama-Emadike communities and to the South where it links with between Nembe and Southern Ijaw areas (Obiene, 2007, Obiene et al., 2012). The river plains provides for all the settlements particularly the Anyama district were the River is characterized by river bank erosion and deposition.

The Kolo Creek (Emeyal group) is flanked by the kolo creek, a tributary of the Orashi River in Ahouda West of Rivers State that traverse from Mbiama through Okaki to the Emeyal communities down to Ogbia town and Oloibiri which later empty into the Atlantic Ocean. It is the major drainage connecting all the communities in Emeyal-Kolo group and some settlement in the Oloibiri group (Digha et al., 2009).

On the other hand the Oloibiri group or axes is more of the tidal (brackish) water majorly of mangrove zone. It is evident by a tributary from Orashi River which bifurcates through Okaki via an ancient town called 'Onuoto' along Imiringi-Edepie road to Elebele via Otuoke down to Ogbia-Abobiri Town and Oloibiri which finally empty itself into the Atlantic Ocean. This river is called the Otuoke River leading to Ogbia town, Abobiri to Nembe via Oloibiri. The Oloibiri River, Emakalakala canal and the Otuoke rivers are influenced by the tidal movement of the sea water and for most of the dry season, these rivers experiences brackish water.

Between Ekole creek and the Otuoke River is a meandering creek (Owubio creek) is a creek

that connects three communities namely, Ologheghe, Otuobhi and Otuabula¹¹ which leads to Ogbia town and still empty into the Atlantic Ocean and through the Opume-Emakalakala- Akipelai to the Brass River. These rivers and Creeks serve not only as navigation routes but other economic activities such as sand mining, fishing, logging and a means to their farmland (Obiene, et al 2012).. A major characteristic of the rivers and creeks is that they all flow in North-South direction emptying their water into the Atlantic Ocean. The exception to this rule is the Otuoke River, Oloibiri River, and Emakalakala Canal where the water changes its flow direction in every six hours. The water is normally clean (almost free from dirty) in dry season but becomes muddy and cloudy during the rainy or flood seasons. All these rivers have a mean depth often in excess of six (6m) meters; sinuosity ratio exceeds 1.9, while velocity increases in downstream direction. Due to the dense vegetal cover of the area, chemical weathering predominates other forms of weathering. This is clearly shown by the concentration of minerals and the color of the water (Digha, et al., 2009). The Local Government area has two major modes of transportation systems: land or road transportation and the water or marine transportation system. The two form of transportation is still in existence though it is limited to an extent, while the Kolo Creek (Emeyal), road transport is the major means of moving goods and services, the Anyama-Ogbia still retains the marine transportation system. The reduction in the mode of water transportation is largely due to the availability of network of roads linking about 25 communities (Obiene, 2007; Obiene, 2012). Historically, the marine mode of transportation has been the major means; hence the major rivers are busy daily. But with the development of roads and bridges, its activities reduced largely and the rivers and creek are silted, hence navigation becomes difficult. The result of the silting is the flood hazard being experienced over time.

Climate. The area lies in the rainy belt of the Niger Delta. It is hot and wet throughout the year. Two types of air mass are identified; the tropical maritime and the tropical continental air masses. The former is associated with the South-West Trade Wind blowing from the Atlantic Ocean onshore. While the tropical continental air-mass is usually associated with the cool dry and dusty Harmattan wind (NDDDB, 1966; Digha, 2013).

There are two main seasons; the dry and rainy season, with a double maximum rainfall regime. This is accompanied with a break in August also known as the 'August Break'. It is observed that the area experiences July/August break and the actual month of occurrence varies both in time and space. It usually occurs either in July or August. However, four seasons are recognized (Digha, 2013). They are the long rainy season, the little dry season (August break), the short rainy season from late August to October and finally, the long dry season; from mid-November to February. It is important to note however, that the area receives high rainfall ranging between 300 to 400cm annually, with high temperature all year round. The relative humidity is as high as 89% during the wet season and sometimes decreases to about 85% during the dry season (Digha, 2013).

The annual average maximum daily temperature indicates a fall within a range of 28⁰C to 34⁰C, the highest temperatures occurring during the dry season particularly in the months of November to January and lowest in July. This pattern also appears in the soil temperature, the lowest temperatures occurring during the rainy season, owing to the high water content in the soil and low degree of solar radiation. The daily variations in the temperature exhibit regularity, throughout the year. Evaporation depends on the amount of sunshine, wind and relative humidity. The annual evaporation of the area totals 100cm, lowest is 60mm occurring in the month of September and highest monthly evaporation is

12mm in march Digha et al., 2009; Obiene, 2011).

Human Activities. Untill the year 1956 when crude oil was discovered at Oloibiri (Otabagi) in Ogbia LGA of Bayelsa State, agriculture and fishing was the most dominant economic activity in the area. The majority of the inhabitants are farmers and fishermen. Other scholars suggest that lumbering, hunting, gathering of wild fruits and raphia palm tapping constitute specific primary forest economic activities. Alliso-Oguru, 1999) However, the inhabitants of the upland part of the LGA are mainly farmers, while those in the riverine dwellers are mostly fishermen. Canoe carving and boat building are other occupation in the rural space (ecology). The boat building industry are commonly practiced in Ayakoro and Oloibiri, while the canoe carving are mostly practiced by Otuoke, Ologi, Okodi, Otuabula 11, Akoloman, Idema, Opume, Kolo and Anyama. Palm wine cutting and gin distillation industries, carpentry, weaving, palm oil and palm kernel processing are dominated by Emeyal 1 & 2, Elebele, Otuoke, Otuaba, Ewoi, Otuabula 1 & 2, Otuogori, Otuegwe, Okodi, Otuopkoti, Otuasega, Imiringi, Elebele, Amurukani and Oruma. There are few indigenouse people that were engaged in the distillation of Gin, majority of which are the Ogonis, the Ibibios and the Efiks. (fig. 1) (Digha, 2013)

Summary and Conclusion

The socio-economic development of the area is greatly influenced to an extent by the drainage system of the area. Before the advent of the crude oil discovery river craft was the primary mode of communication. Then canoe carving and boat construction was among the economic activities in the area besides fishing and farming. Traders applied the main rivers for their commerce, which was influenced by the neighboring markets. Major markets such as the Mbiama and Okarki which are mainly transacted by the Kolo (Emeyal) clan en-route to Ogbia-Oloibiri axes, from where goods and

services are taken to the Nembe-Brass areas. From the western axes the Ekole River is the major source of communication. Business activities are very high because of the volume of trade through the River Niger were it bifurcates to the Ekole creek (River) from traders of different part of the region or country. The Northern Ijaws, Ibos and the Hausa dominated the trade in that axes. The Ovom (Yenagoa) market was prominent in the area. This brings about commercial activities in the area. Locally produced goods like cassava, garri, plantain, cocoa yam, sugarcane, rice and palm oil are available at a relatively subsistent. Other crops such as rubber, cocoa, Ogbono, are in high demand, as such trader moved into the area for high commercial activities. The discovery of crude oil at a commercial quantity increases the volume of business in the area. All these have greatly influenced the socio-economic activities in the area. The study concluded that the absence of physical planning and implementation of the ogbia and the Niger Delta Master Plan is lacking in the area.

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