

STILT ARCHITECTURE AMONG IZON FISHERMEN OF EKEREMOR IN
BAYELSA STATE, NIGERIA

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Abstract

Man's basic needs are food, clothing and shelter and this study deals with the challenges of the architecture and house style of Izon fishing communities dwelling along the creeks and waterfronts. Because of seasonal changes in water levels, there is need for the use of stilts in the design of structures to ensure that the house is above water level. Descriptive survey design was employed in this study. Traditional and indigenous architecture has been treated elaborately in various literatures but very few exist in the core riverine terrains of Niger Delta. This study is expected to expose the existing natural architectural designs, identify its weakness and strength. The researchers identified possible ways to improve the Izon fishermen's architecture in Ekeremor in Bayelsa State.

Introduction:

The Izon ethnic group is found in the Niger Delta region of Nigeria and is believed to be the earliest ethnic group that occupied the South-South geographical part of Nigeria. The Izon have other groups as their neighbours, these include the Igbo in the North, Yoruba in the West and the Ibibio and Efiks on the Eastern fringe. Between these neighbours are other minor tribes like Itsekiri, Urhobo, Annang among others.

Allagoa (2005), observes that the Izon have existed in their present habitation for a very long period of time but also believes that like other ethnic groups in the area they must have migrated from the Northern fringes of the Sahara. What is generally accepted is the Izon oral tradition which states that the Izon migrated from the central Delta to other parts of West Africa. As a result of the rich availability of fresh water and arable lands, the people took to farming and fishing as a means of livelihood. Also, the presence of sea water in the coastal areas and the eastern flange led to the growth of not just the fishing industry but also salt production. According to Gborienemi Lambert an Izon elder Statesman of 70 years from Nembe, the Izon value fishing so much that they believe that whenever there is water in the East, West, Northern or South, the place belong to the them. With time, many of them migrated to other parts of the country and indeed West Africa on fishing expeditions and ended up settling there. That is why today, we have Lagos Izons, Ondo Izons, Ogun Izons and Izon indigenes in faraway places. Fishing expeditionary life has strongly influenced the Izon way of life. Izon culture manifest traces of environmental influence.

As a result, the dance, sports, architecture and several aspects of Izon life show evidence of environmental challenges. As knowledgeable and enterprising people, they sought and found solutions to some of the problems. Man's basic needs are encapsulated in food, shelter and clothing and the Izon people have utilized what is available in their fauna and flora to provide their needs. Many villages like Nembe, Akassa, Brass and Ekeremor are located among others along the shores and waterfronts. Because of the dynamics of water currents and the rise and fall of water levels, fishing families have to develop structures for the building of homes that can stand the environmental changes. As a result houses were designed to remain above water levels when the current is high. In the recent past, the life pattern of fishermen have been complicated as a result of the invasion of the Niger Delta region by oil prospecting companies who, in the process of exploration for oil have adversely altered the ecology of the region forcing communities to relocate from time to time often looking for a more friendly environment to continue their life. Today life in Izon fishing communities is surrounded by overwhelming uncertainties as the peace and serenity of the environment have been badly disturbed coupled with the global climate change which has engulfed the world.

Ekeremor town, an Izon fishing community located on the bank of River Nun in Western part of Bayelsa state has not been spared by the environmental degradation which has villages dotted along the beach display an array of stilt structures built by the fishermen as their abode from here they embark on fishing expeditions.

Ekeremor is one of the eight local government areas (LGA) in Bayelsa State, Nigeria. According to the documentation in the local government demographic office, it has a coastline of about 60 kilometers in Ekeremor town.

In a situation where whole families live on the waterfronts, the need for appropriate architecture became imperative. As a result stilts have been developed to prop up houses so that the houses are above water levels most of the time. These stilt houses are designed and built by the men for their families. They are arranged in rows facing the waterfront and in some cases the floors are in stairs because of changing water levels.

Methodology:

The approach employed in this research is historical and descriptive methods. These procedures enable the researchers to use historical documentation and oral tradition to dig up the past cultures of the Izon. Also photographic documentation laced with oral tradition were also useful source for the reconstruction of Izon stilt architecture which is key to the lifestyle of Izon fishing communities.

Area of Study:

The study covers the area known as Ekeremor also referred to as Ekeremor Local Government Authority with headquarters in Ekeremor town. There are ten fishing settlements that can easily be identified around Ekeremor town. These fishing settlements have grown into communities of their own but they span the 60 kilometers of coastline bordering the town. They are;

1. Isompou
2. Foutorugbene
3. Beautiful gate (foutorugbene3)
4. Isrealo zion
5. Amabolu
6. Tommmugbene
7. Norgbene
8. Obrighbene
9. Amanaiegbene
10. Tamakiri

Members of each fishing community can freely fish in any part of the rivers on the water front without territorial declination. They can therefore be said to be culturally homogeneous. The study covers the design, materials, and structure of their stilt houses.

Statement of the Problem:

As was stated earlier, the need for food, clothing and shelter are basic for humans. These activities require and involve some technical know-how and these knowledge have to be handed down from generation to generation to be sustained with the coming of Western education that has made many young people abandon their fishing parents to go to school, the opportunity for them to understudy their parents is lost.

Also this has led to a drastic drop in the fishing population. How do we preserve and sustain these trades that are going extinct since the art education chain from parents to children are constantly broken through the dislocation of tradition. A study of this nature which documents still architecture and brings it to the front burner becomes imperative. This is to ensure the preservation and promotion of Izon architectural heritage is sustained.

Purpose of the Study:

Neo-colonialism has made Izon people and indeed Nigerians to have a large appetite for foreign goods, foreign culture, and tradition. Thus, the study is expected to expose the existing natural designs and identify possible ways to improve Izon fishermen's architecture in Ekeremor in Bayelsa State. This study aims at restoring our dignity as a people and promoting the positive aspects of our way of life for the good of humanity and ensuring that through studies as this, our heritage is preserved. The art and architecture of the Izon as presented in this study will not only be a resource for researchers but also a national heritage bank.

Literature Review of Nigeria's Climatic Zones.

Literature on this subject is indeed scanty. However, Imaan (2008) notes that Nigeria consists of four distinct geographical regions influenced by varying regimes of temperature, relative humidity, wind velocity and rainfall. He notes that along the coast is a belt of mangrove forest and swamps stretching some 16km inland in most places. Numerous lagoons and creeks cut across this region. In the Niger Delta region, the coastal belt extends some 100km inland. Beyond the coast, lowlands follow a low path cut by rivers, especially the Niger and Benue. The

River Niger and its tributaries-principally the Benue, Kaduna and Sokoto rivers drain most of Nigeria. These peculiar geomorphologic factors, in my considered opinion determines the appropriate approach to the architectural, structural and aesthetic design in the Nigerian environment.

Toffinu Lake Dwelling.

Comparatively traditional Architecture in Africa has a lot of similarities depending on the climate and topography of the environment. In Paul Oliver(1971), Shelter in Africa, Ganvie is identified as a lake village on the North West bank of Lake Nokue in southern Benin republic. The popular Toffinu (or fon) houses offer an interesting example of a type of rectangular construction with a hipped straw roof whose permeable walls and floors allow ventilation and resistance needed in constant humid environment. More than 15,000 people are said to live in this village that can only be reached by canoe or boat, no bridge connects it to shore and even within Ganvie, the spaces between the houses are under water. So the dwellers rely on canoe as the only means of transportation as well as for their livelihood. These Toffinus, a water people live primarily on fishing and exchange their smoke fish for manioc, sweet potatoes, millet grown by their neighbors on the shores of the lagoon.

Jean and Trinh (2011) Vernacular Architecture of West Africa also described the Toffinu lake dwellings as built on platforms set on stilts that reach between one or two meters above waterline during dry season however, during the rainy season, canoes can be steered right up to the door of each dwelling. Toffinu lake dwellings are similar to Ekeremor water front houses, the stilt structures and forest materials used are the same in this architecture where functionality overrules comfort.



**Plate 1: Stilt Houses in Ekeremor © O.K.Oyeoku & A.O.Angba
Traditional Architecture of Brassia Bayelsa State**

With regard to traditional architecture of Brassia Bayelsa State Spiff (1992) describes the brass architecture as using the post and beam construction technique. It's a style peculiar to square based and rectangular house structures. The main principle of this technique is that the house unit derives its form and shape from the structural relationship between the wad bearing wooden housepost or column and the house roof which the former supports in which case, the clay walls are merely space- enclosing. This clearly shows that the walls do not carry the roof but the weight of the roof structure comes to rest directly on the vertical house posts reinforced with horizontal beams for strength. She states that the post and beam is used for square and rectangular based houses types because if the walls are allowed to carry the weight of the roof structure, they might collapse for lack of structural strength. This usually begins from the four corners of the house. However, there are houses that are walled with palm fronts and straw instead of clay.

Labelle Prussin (1974) in her book *An Introduction To Indigenous African Architecture*, observes that the climate of the humid coastal rain forest belt, where there is little temperature change between day and night or even between wet and dry season, calls for a shelter with a maximum of cross ventilation to ensure bodily comfort. She notes that to achieve such a design, the indigenous coastal builders will strive to incorporate some variant of louvered or natural openings into walls stimulating open work screens designed to encourage air circulation. Floors are raised high off the ground on platforms to catch the ocean breezes. The traditional

rectangular building form found in the rain forest is by virtue of its easy adaptation of cross ventilation. Furthermore, she said early British and French colonial settlers and administrators, recognizing the merit of the indigenous solutions to climatic comfort, emulated them by raising their expatriate mansions high above the ground and by developing a wall system composed of louvered doors and screened verandahs. Many examples can be seen in Abidjan, Accra, Lagos and Dakar.

Typology of Stilt Architecture:

Stilt architecture designs are housing designs in which the structure stands on stilts making it possible for the house to stand above water even when water currents are on the rise.

Fishing families can then live in such houses as they carry on their fishing expeditions. This technology is not restricted to the Ekeremor as other fishing people along riverine and Atlantic coastline use the same pattern. This is evident as observed by the Economist (1st October 2012) in which it says that Maroko, a district built on stilts sitting a few feet above the lagoon...fishing families have lived here for more than 20years.([www.economist.com/blogs/baobab/2012/07/nigeria's slums](http://www.economist.com/blogs/baobab/2012/07/nigeria's_slums))

It is possible that many of these Maroko fishermen are Izon who immigrated from their homeland in search of fertile fishing waters since oil exploration has badly polluted their homeland.

Building Materials:

Iron wood, mangrove, raffia, palm, bamboo, wood (plank cane or twine).

Iron wood is used as the vertical pillar of the house. Mangrove is used as horizontal support poles because of their strength, size and durability. It also serves as the frame of the wood and is also used to support the plate of the stilt. They are sometimes used as vertical support or pillars in the water.

Bamboo and Palm ribs are used as walls and platforms while cane is used to bind the bamboo, mangrove stem and wood together.

Design

The function of these houses determines the design and materials used for construction. Rikko L.S. and co.(2011) opined that a building is a dwelling house not because of its size, shape, appearance, location or material components but because of the purpose which include among other things, day-to-day activities of the inhabitants resting, sleeping and family gathering.

Type A. Family House:

This design most commonly built include an exterior platform that leads to two interior rooms one used as living room and kitchen and the other smaller room for resting. The pierced walls and floors, made of bamboo or palm ribs, allow air to circulate the living room which also serves as kitchen at the back entrance has two doors, back and entrance door and two windows.

Although these doors used to be raffia mats, they are mostly wooden doors for maximal ventilation tools and personal effects are normally arranged on platform shelves.

Type B. Harbour & Recreation Hall:

This as the name implies is most common among the structures available as every compound will want to have a harbor from which family members could easily board canoes or boat for fishing and travelling. It is made of the front and back entrance and an open space. Wooden frames are built round the room with raffia mat roof. This open space only contains bamboo seats where men sit and discuss or entertain themselves.

The design is mostly occupied during the day, especially when the temperature is hottest as the open room allows the free flow of breeze in every direction (See plate 2).



Plate 2: Harbour & Recreational Hall Stilt Structures using planks and zinc © O.K.Oyeoku & A.O.Angba

Type C: Toilet Buildings:

The structures are on stilts with mangrove poles. These structures are mostly made with corrugated Iron sheets (Zinc). The long structure is mostly partitioned into small compartments. Toilet structures are built more into the river to enable easy disposition of waste and this implies that there is usually along bridge leading to the building from shore.



Plate 3: Showing a Toilet Building © O.K.Oyeoku & A.O.Angba

Type D. Stilt Compounds:

These are stilt structures on land. All houses and compounds built from the water front about 65 metres away are stilt structures. This is to prevent submerge during flooding. Although these stilts are not above 5meters or as high as those in the river, the patterns still apply. Stilt structures on land are mostly bigger, creating room for communal habitation. The house could have up to five rooms with a general sitting room and kitchen. In most cases stilt structures on land have a separate hut as kitchen joined to the main house by a wooden or bamboo bridge. The design starts with a lobby to a massive sitting room which leads through a passage to the smaller rooms of the house. These rooms all have windows placed in the rooms, starting at the lower edge of the rafters, forming eaves and proceeding upwards to the ridge.



Plate 4: Stilt Structure on Land © O.K.Oyeoku & A.O.Angba

The walls are constructed with bamboo or palm ribs, placed vertically side by side and tied to horizontal poles with twins or cane ropes. These bamboos are mostly equal to produce an even appearance.

Building Process:

The traditional stilt structure involves these major stages which include building the stilt, frame and roofing/walling. Iron wood (ikoruba) found in the mangrove forest of coastal areas is mostly used as rods on which the structure sits. These vertical poles 4.57-5.44 meters in length are fixed to the river bed, the water about 0.61 meters apart to create a space between the river and platform. Iron woods are then fixed horizontally to the vertical poles using 5-6 inches nails. Planks or bamboo sticks are then closely nailed together on the horizontal bars to form the stilt on which the house sits.

After the stilt is formed securely, the framework is then formed with mangrove stems. These vertical poles are placed 7.62cm-10.16cm apart. This framework is placed wherever a wall is needed for space division and room demarcation within the house. Horizontal poles are tied to the vertical poles to brace the structure. Other poles are then placed on the vertical poles to brace the roof structure.

Finally the roof frame is built by crossing sticks length and breadth ways, palm fronds sewn into mats and then toilet structures, are built more into the river to enable easy disposition of waste and this implies that there is usually a long platform leading to the building from the land.

These houses serve as resting places, harbor for entering the communities from boat, toilet structures and residential houses. This stilt design also applies inside the town where the floor of the houses are lifted above the ground. According to His Royal Highness of Ekerermor, Clement Ifoyou, construction of Ekerermor stilt house takes place between November to July in the year when tides are normal or lower. Those constructed on land are built allthrough the year.

The construction does not require any special skill as every member of the family is involved in one area or the other. While the men are involved in the gathering of materials in the forest and construction, the women and children prepare these materials and act as the labour force or helpers during construction. These houses which last at least 12years are gradually repaired by replacing any palm mats or bamboo in the roof or by replacing a particular wall.

Cooking inside the house also helps strengthen the durability of the roof mats as the smoke prevents it from decaying. Technology has also being injected into these stilt structures as modern constructions use zinc for roofing and plywood for the walls of these houses. Although these improved materials have been introduced because of their durability, the style and design of these houses have been the same.

Raffia Palms are dried and woven into straw or mats as roofing materials. Stilt architecture in Ekerermor Area as earlier stated is prompted by the flora of the area, the high tide between June-November flooding the most part of the communities.



Plate 5: The Making of the Walls using Bamboo © O. K. Oyeoku & A. O. Angba.

Conclusion

Rikko L.S. and Gwalau D.(2011) opined that a building is a dwelling house not because of its size, shape, appearance, location or material components but because of the purpose which include among other things, day-to-day activities of the inhabitants resting, sleeping and family gathering.

The vegetation and climatic conditions of a place also provides solution to problems of shelter in the environment. The flood resulting from the torrential rains of the terrain leads to the conceptualization of the canopy like pitched roofs over the rectangular buildings, the stilt foundation mimicking the mangrove stilt-like root system but the Nigerian building industry has not taken adequate steps to study her abundant natural examples. The existing stilt structures have not improved irrespective of technology. There are no concrete stilt structures in Ekeremor areas not because some rural dwellers cannot afford them but because there are no trained manpower to build concrete stilt under water. The technology and materials involved will be too farfetched for the fishermen.

Although planks and zinc are now in use to build stilt structures in Ekeremor, these materials do not provide the comfort of coolness and cross ventilation derived from the use of bamboo and thatch roofs. It will therefore be very beneficial if ways of improving the available natural

resources of the coastal terrain be studied further for improvisation and preservation of its indigenous architectural design.

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