# **Ijo Fishing Settlements in Nigeria. Facilities, Spaces and Activities**

# Warebi Gabriel Brisibe

Department of Architecture, Faculty of Environmental Sciences, Rivers State University of Science and Technology Port-Harcourt, Nigeria

### **Abstract**

This paper focuses on the architecture of the Ijo migrant fishing group in the Niger Delta regions of Nigeria. It examines the activity systems and use of space according to the age and gender of the users. The flow of activities at different times of the day and for each user gives insight into the various settings in which daily activities take place. Activities in this context are organized in designated spaces and at set times and it is the effect of culture as seen through these activities that influence space use in migrant fisher base camps.

The study draws on data obtained from a survey of 74 fishing camps in Bayelsa State, Nigeria. A combination of techniques such as focus group interviews, on-site drawings and photographic surveys were used to obtain data. The results showed that based on activity flow, a hierarchy of spaces exist as determined by frequency of use and the gender and age of the user. In summary, this paper reveals the importance of the gender and age factors in activity flow patterns, use of space, spatial arrangement and finally the design of the migrant fisher base camp dwellings.

**Keywords:** Activity, Space, Base Camp, Fishermen, Vernacular Architecture.

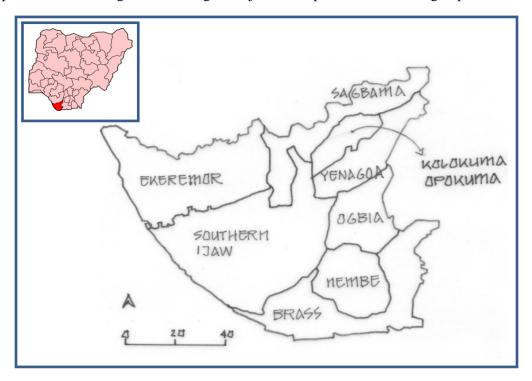
### Introduction

The Niger Delta area of Nigeria is made up of over 40 ethnic groups spread across nine states. Four of these ethnic groups namely; the *Andonis, Ijos, Ilajes, Ibibios* and *Urhobos* have long standing traditions as fisherfolk, although the *Ijos* and *Ilajes* are more renowned for their fishing tradition than the others. This paper focuses on the Ijo ethnic group and examines their vernacular architectural built forms, spaces livelihood and social activities. The Niger Delta is made up of three broad ecological zones; the freshwater zone, the marine or salt water zone in the coastal area, and the brackish water or estuarine zone, where fresh and salt water meet. The brackish and salt water zones have large amounts of fish stock and sustains Nigeria's fishing industry. About 37% of the entire Niger Delta area is made up of fresh water. Estuaries, beach ridges, more rivers and mangrove swamps make up the brackish water zone which takes up about 449 square kilometres in area. These estuaries and rivers along with the continental shelf constitute the locations for the bulk of the variety of fish reserves in the area and are earmarked as prime grounds for situating fishing camps. Fishing camps are scattered around most of the coastline and inshore waters of the region. A 1994 survey puts the total number of professional or full-time fishermen<sup>1</sup> in the central Niger Delta at 33,598 (Sikoki and Otobotekere, 1999).

<sup>&</sup>lt;sup>1</sup>In this study, two terms; fishermen and fishers have been used interchangeably.

# Study Location: Bayelsa State, the Central Niger Delta, Nigeria

Bayelsa is one of the nine states that make up the Niger Delta region in Nigeria. It occupies a total area of 9,059 sq. km and has an annual rainfall of 2000 - 4000mm. The main economic activities are fishing, production of local gin and farming. The Ijos are the predominant ethnic group in this state.



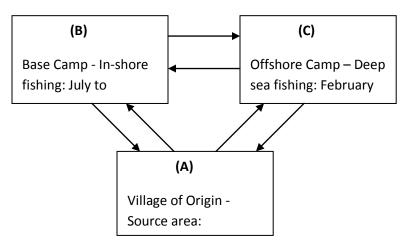
**Fig. 1:**Map of Bayelsa State showing the eight Local Government Areas (LGAs) Inset Map source: www.speakersoffice.gov.ng/images/map.bayelsa2.gif

There are eight major rivers that cut through Bayelsa State. They include; the Nun River, Brass River, St. Nicholas River, Santa Barbara River, Taylor Creek, Sangana River, Seibiri River and Apoi Creek. Three of these rivers were selected as routes for locating base camps that will be used as case studies. The water types in the Bayelsa network of rivers have been categorized into three, namely; Black, Clear and White. These different water types are known to influence the distribution, diversity and density of fish which ultimately influence the fishing cycle of this ethnic group.

### **Fishing Cycle**

Ezewu et al (1997) mapped the cyclical pattern of fishermen in the Niger Delta region in response to the various mechanisms such as seasons in the year, fish density and distribution. This was done with data obtained from time-geographical survey analysis from which the model below was produced. Although the model is not rigid, it however serves as a general pattern of the cycle of movement being practiced by Ijofishermen in the riverine and coastal communities of the Niger Delta area in Nigeria.

Hassan et al (1997) explain the fishing cycle concept using the link between the boxes. (A) is regarded as the sending society or the village of origin of the fishermen. (B) or (C) depending on the migration pattern of the fishermen could be the base camp or the off-shore satellite camp. Ben-Yami (2000) offered a more lucid description of the three categories of fishing communities, referring to them as; permanent villages (Ama), semi-permanent base camps (Endidoughene) and satellite camps or annexes (Endidoubou).



**Fig. 2:** The Annual fishing cycle of Ijo fishermen (Adapted from: Ezewu& Tahir 1997)

# Methodology

For this research, multiple methods have been employed in data collection. Firstly, since the issue of nomadism and culture is central to the research, methods that can provide 'rich' or 'thick' descriptions have been considered. Secondly, since the research warrants a detailed study of all aspects of the vernacular environment and not just the built forms, predominantly qualitative methods in data collection, using a small scope but in-depth study strategy has been adopted. In addition, basic statistical data is also required for the development of charts. This allows not just for the collection of architectural data but also for the collection of relevant narratives and information which depict the societal worldviews, activities, traditions and other forms of intangible heritage of the Ijo migrant fishers. As such, the methods employed in this study in addition to interviews are primarily focus group interviews and visual data which include; architectural drawings and photographic surveys.

## **Focus Group Interviews**

Focus group discussions proved very useful during data collection at the base camps. Gathering of all the household heads in a multi-homestead base camp for discussions is a pre-existing social practice which was capitalised upon. Another advantage of group discussions in Ijo multi-homestead base camp settings is that women are also included in the group. The information derived from these group discussions were often self-validating as any information offered by a member was likely to be confirmed, corrected or refuted by others. Factual credibility rested on collective memory which is essential for the narrative and descriptive approaches were used in studies of the vernacular environment.

### Visual Data: Architectural Drawings and Photographic Survey

Capturing different aspects of the vernacular environment from different views and showing different details that can be further analyzed required the use of drawings and photographs. One of the standard forms in which architectural ideas are represented is through drawings. These representations comprise of measured drawings, schematic sketches, details and other related diagrams. Drawings of different aspects of the base camp dwellings produced covered three main areas of interest:

- Camp layout and planning pattern
- Designs of dwellings
- Material selection and usage

Photography provided support for ethnographic reports and served as illustrative resources to enhance how the fishermen make sense of their mobile lifestyle, activities and their dwellings. The photographic

survey was aimed at capturing activities that show the use of space, especially where sketches could not be made due to interview time constraints and showing certain details of the dwelling.

# **Categories of Fishing Settlements**

As stated earlier, Ben Yami (2000) described the three categories of fishing communities within the study area, referring to them as; permanent villages (*Ama*), semi-permanent base camps (*Endidougbene*) and satellite camp or annexes (*Endidoubou*). Understanding the various categories is important, as it directly affects the time invested in the design, form and construction of the dwellings, in the fishing settlements. It determines to a large extent, the facilities located in the settlement, the size of the built forms in the settlement, the number of units considered necessary to construct in the area and the amount of design detail put into the project.

# Permanent Villages (Ama)

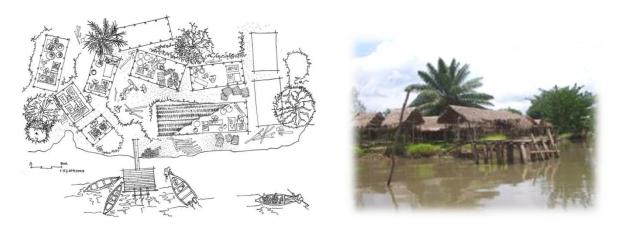
The permanent villages of origin are large communities usually situated along major waterways that accommodate both a fishing and non-fishing population. These settlements are located within the fresh water zones in the study area and are attractive locations as permanent settlements for fishing communities due to access to fresh water and closeness to the hinterland for trade relations. Besides residential dwellings these villages also have other facilities such as periodic markets, and religious and social buildings.

## Religious Worship Facilities: Oyinkareware

Fishermen who share similar religious beliefs usually live together in autonomous settlements. The advent of Christianity to the creeks in the early 20<sup>th</sup> century led to the decline of the traditional religion, which was spiritism. However, the traditional religion has not been completely obliterated, as the current form of religion being practiced may be considered syncretism of Christianity and traditional religious beliefs .i.e. rituals are still performed alongside orthodox Christian practices. This has resulted in the formation of the *Zion* movement, a religious organisation widespread among Ijo fishing communities and villages. Some villages are established on these principles, which extend to spatial planning, cluster arrangement and to some extent the architecture of the dwellings. They can be clearly recognised by distinct white flags hoisted above each dwelling in the village, and the presence of a large worship hall, centrally located within the village. The strategic location of the worship hall is indicative of the centrality of their belief system to their way of life. The design of the hall is accentuated with the intent of making a statement, about its significance to their socio-cultural lives, as the size of the hall is not always commensurate to the number of worshippers it accommodates. Proximity of the various dwellings to the hall (holy ground) reflects spiritual hierarchy or affiliation to persons of spiritual hierarchy.

# Periodic Market Stalls: Fou/Eyeyereyou

Periodic or seasonal markets are the main locations of commerce in the creeks. They serve the dual purposes of being both commercial and social hubs, giving the fishermen a chance to renew acquaintances as well as selling their catch. *Fou* or markets are strategically located and often develop in specific areas over time. They can be found in villages and have seasonal market days. *Fou ware bo* or market stalls are a distinct and highly recognisable form of architecture in terms of design and cluster arrangement. They consist of open-sided buildings enclosing a central space, which could be either open or having other stalls within.



**Fig. 3** Layout of periodic market at Lagosgbene, Bayelsa Source: Author

# Satellite camps or annexes (Endidoubou)

The fishing camps are seasonal sites with temporary homesteads or hamlets within or close to the fishing grounds and is not intended for extended periods of stay or designed as such. All fishing activities from catch to processing are carried out here and only migrant fishermen inhabit such camps. These satellite camps are situated mainly along the marine or salt water zones which are along the continental shelf. The length of time spent in these camps range from two days to two weeks. The two day to two weeks fishing period, may or may not require the construction of a dwelling around the fishing grounds. In some cases, migrant fishermen who fish in offshore waters and require the use of large boats carry supplies for the trip and live in their boats for the entire fishing period, which is often a very short stay of less than 14 days. In other cases, existing camps built during the previous season may be renovated for the brief use, or those belonging to relatives or friends are borrowed for that fishing period. This time-share for camp dwellings is only possible with offshore camps and not with base camps because of the length of time spent there.

# **Semi-Permanent Base Camps** (*Endidoughene*)

The semi-permanent settlements or base camps although transit settlements, also serve as places of extended stay often for considerable lengths of time. They are often established to bring the fishermen closer to the fishing grounds and are inhabited mainly by fishermen of the migrant class but can also accommodate non-migrant fishermen as well. The base camps are situated within what is known as the brackish water zone in the study area. This is where fresh water and salt water from the ocean meet. The focus of this study is the base camp dwellings (*Endidougbene*). This is because the base camp is the primary settlement from which architectural data is obtained and from which the spatial organization of the base camp dwelling as it relates to the day to day activities, livelihood practices and the aquatic environment can be obtained.

# **Types of Migrant Fishing Base Camps**

From the survey, two distinct types have been identified. These are the 'single' and 'multiple'homestead camps. This distinction is based on the number of households in the camp. Some families prefer to live alone, as having close neighbours could mean increased competition for existing fish stock. But for others, the social relations and communal support they enjoy from having close neighbours, is worth the opportunity cost in potential stock rations. Households are referred to in the Ijo language as 'Ware', a term which is also used to describe the architectural built form (house), as well as

the extended family (quarter) or group of families (clan). The distance one 'ware' or a group of 'ware' are from another is the main factor in differentiating fishing camps.

## **Single Homestead Base Camp**

This is a fishing camp inhabited by only one household. The household consists of a household head, his wife or wives and dependents. The size of the household often varies depending on the extent to which the household head practices polygamy. So where some single homestead camps could consist of just two persons, others are inhabited by as many as 25 persons but still with one household head. Single homestead camping is often practiced by non-community oriented fishermen or those who want less competition from others for fish stock around their location. All tasks, ranging from fishing, processing of fish, to building of dwellings are carried out by members of the founding household.

# **Multiple Homesteads Base Camp**

In situations where more than one household dwell together in the same fishing camp, a multiple homestead camp is created. Usually the camp is originally established by a household head or a group of them, as in situations where a group of brothers or relatives co-establish a camp. These founders then allow other fishermen to join them. The right of abode automatically ensures fishing rights to the river strips within the community's territory where the fishing camp is located. Although several families may co-habit in a camp, fishing is purely an individual family enterprise and no communal or co-operative fishing is practiced except where a fisherman may have other fishermen in his employment. However, though demand for existing fish stock within the location increases with the number of persons in the camp, there are advantages to communal living. One advantage is the communal support obtained in the area of construction of dwellings. Here the newcomer supplies the materials for building and labour is supplied by communal effort from members of the other households.



Fig. 4: Single homestead



Fig. 5: Multiple homestead

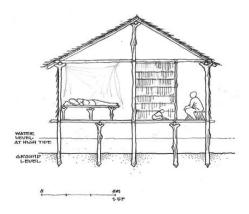
# **Typologies of the** *Endidougbene-Ware* (Base Camp Dwellings)

Two main built forms are predominant across all regions in which Ijo migrant fishermen are present. The two main types are: the *agbada ware*(house on stilts): and the *atou* or *atouko ware*(house on mud foundation). There is however a third type, which is simply a combination of features obtained from the first two types. It can be referred to as the *agbada – atou mo ware*(stilt house with mud foundation). These building types are distinguished by the materials used and construction methods employed in their sub-structure. This ultimately determines the function of the building or building area.

### Agbada Ware (House on Stilts)

The stilt house is the most prominent feature on the Ijo riverine landscape. It is built on the edge of the river for easy access to the waterways and to fishing grounds. The dwellings are erected on timber posts or stilts, which act as structural elements that carry the building above the water and by so doing,

creates a raised platform which provides protection from high tides and floods. Flooding is a regular occurrence in these regions as migrant fishing settlements fall within the risk flooding zones of the Niger Delta (Ologunorisa, 2004). The sea level reaches its average peak in terms of the inundation depth at about 1.2m in this zone, although Denyer(1978) mentions tidal wave range of up to 1.76m around the eastern delta coasts. Sea rise levels in high risk flood zones are known to exceed the 2m depth mark. The height of the wooden stilts supporting the dwellings are gauged for adequacy in height against flooding using local knowledge acquired over time. The *agbada ware* is designed to house most facilities except for the hearth.

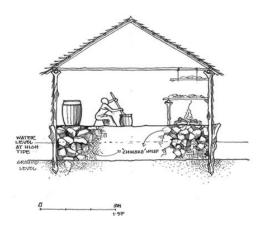




**Fig. 6:** *Agbada ware* (dwelling on stilt foundation) **Fig. 7:** Agbada ware at Tugbogbene fishing camp Source: Author

# Atouko ware (House on Mud-foundation)

The main distinguishing feature of the *atouko ware* is its elevated mud foundation, kept in place by timber pieces. The term *atouko* is derived from the Ijo word *atou*which means mud. The type of mud referred to here is the *chikoko* mud. It is a mixture of clay soil and dead vegetable matter, which makes it resilient to the eroding effects of constantly flowing water. *Atou* foundations still survive long after the *Endidoughene ware* has lasted its 3-4 year course. The *atou* foundation is created as a base for the *fein* (fire) used for drying the fish, as this material has far less fire risk tendencies than the timber flooring of the *agbada ware*. This makes the *atouko ware* design popular in its use as a multi-purpose hearth space, serving as kitchen, eating area, and fish drying area.

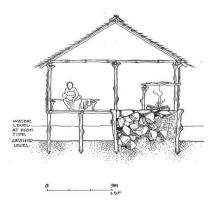




**Fig. 8:** Atouko ware (dwelling with compact mud foundation) **Fig. 9:** Atouko ware at Oyegbene fishing camp. Source: Author

# Agbada-atou mo ware (Mud and Stilt hybrid house)

Buildings incorporating both types of foundations are also common. This occurs when dwellings combine both living/sleeping spaces and hearth spaces. In this type of built form, a part of the foundation is erected on stilts and the other part is made up of compact and elevated *chikoko* mud. Another common practice is where a part of the building is sited on marshy land and the other part over water. Usually the area on land is earmarked as the hearth space, which serves as both the kitchen and drying area, while the area over water functions mainly as the living/sleeping area.





**Fig. 10:** Agbada – *Atouko mo ware* (dwelling using both mud and stilt foundations)

Fig. 11: Agbada-atou mo ware at Inegerman II fishing camp at low tide

### **Facilities in the Base Camp**

The basic functional units of the base camp (ware) are a combination of living areas (warekiri); sleeping areas (okpo); cooking/fish processing areas or hearth space (tebesoun); the river (pou) which serves as a bathing area, toileting area, trading area and fishing ground amongst other things; and daytime rest house (atele). Some of the other features include reclaimed land areas, which are primarily earth fills of chikoko mud, held in by wooden embankments; and the mini Jetty (Aro-egbeyou).

# **Settlement Patterns**

Base camps are located along river strips, creeks or coastal shorelines and the settlement patterns of these base camps are dispersed. There are often considerable distances between them. It is rare to find a cluster of several base camps in a particular location as migrant fishermen prefer less competition for fish stock in an area. In establishing a new base camp in a location where there is an existing one, the fisherman moves a few kilometres downstream beyond the 'shouting distance' from the existing base camp.

# **Camp Layout and Cluster Pattern**

Two predominant layout patterns are observed among base camps and these are linear and courtyard arrangements. In the former, dwellings are laid out following a horizontal line formation. Most of the multiple homestead camps visited used this pattern of layout. With each new household joining the camp, modular dwelling units are attached end to end, thereby extending linearly. In the latter case, households construct dwellings around a central courtyard or open space. This space is usually reclaimed land, made up of 'chikoko' mud. The open space often times contains 'life trees' and other ancillary features. In the courtyard layout, the dwellings and other features are positioned on ground without any apparent discernible order. However, these layout and cluster patterns are best understood based on the

factors that govern the proximity of buildings, the order in which the buildings are laid out and the organisation of other ancillary features in the base camp.

### **Activity and Space**

In his theoretical approach of cultural use of space through activity, (Rapoport, 1990) breaks down activities into;

- The nature of the activity itself.
- How the activity is carried out.
- Their meaning.
- Their relationship with other activities.

He further suggests that activity systems are organized spatio-temporally. In essence, activities are organised in designated spaces and at set times. It is the effect of culture as seen through the activities that influence space use, which in turn influences architecture.

Based on a study of 74 migrant fisher base camps, space utilisation is examined based on the flow of activities and the various settings in which these activities take place. Each setting or scenario dictates its own activity or sets of activities taking place within it. A setting may be a defined (bounded) or undefined (unbounded) space, as well as a combination of spaces. Hence, an activity or a series of activities, make up the use of space or spaces within that setting.

Activities that occur within the migrant fishing household must be analysed in relation to space, as they do not occur independent of each other. Activities also determine to a large extent the size and morphology of space in which they occur. For the performance of certain activities, timing is essential, while for others it can be flexible. Three broad groups of activities have been identified; these are *Economic, Social and Cultural Activities*. Economic activities require a strict adherence to timing, within which a particular space or setting is used. Social and household activities can be fitted into any available space, while cultural activities such as festivals have fixed days during which no other activity occurs e.g. burials once announced take precedence over any other activity set during that day. Some spaces accommodate several activities while other spaces are for singular and more specific purposes. Some spaces are prominently used by a specific gender or member of the household than by others.

Table 1 below shows how space has to be adapted or bounded to accommodate the activity; the materials employed in defining the space; and the special features included, which add to the uniqueness of the space. The purpose of examining the use of space is to show how functional activities ultimately affect the dwelling design by how the individual spaces in the base camp (endidougheneware) can be designed using different materials and incorporating different features, depending on the use it is put to. The table shows the relationship between activity, spatial morphology, building materials, finishes and fixtures used.

**Table. 1:** Spaces, Activities and Features of Base camp Facilities in Bayelsa State Source: Author

Functional spaces	Living area/ <i>Warekiri</i>	Hearth space/ Tebesoun	Sleeping area/ <i>Okpo</i>	Bathing area/ River Benbiriyou	Storage space Stoware	Mini-Jetty Aroegbeyou	Connecting bridges Teneye	Rest area Atele	Elevated landfill reclamation
Activities/ Uses of Space	- Relaxation -Family eating area -Guest reception	-Fish drying, -Cooking, -Female social space, -Eating area, -Sleeping	Sleeping	-Bathing, -Fishing, -Toileting, -Washing, -Playing, -trading	Storage of fishing tools and building materials	Parking area for boats	Walkways for pedestrians	Relaxation area -Social & meeting area (for men)	-Storage area -Household chores -Cloth drying -Mending of nets
Specific Materials/ Finishes used	Raffia or timber wall cladding and timber floors	Raffia or timber wall cladding and mud floors	Raffia or timber wall cladding and timber floors	None	Timber supports and floors. No walls	Raised timber platform	Raised timber platform	Timber frames and floors. No walls	Earth or mud floors with timber embankments
Special features/ fixtures included	Timber benches	Smoke outlet and drying stacks for fish	Timber beds	None	A roof with open sides. No wall cladding	Attached ladder		A roof with open sides. No wall cladding	Retaining timber stakes

# **Spatial Analysis Based on Activities and Users**

From the study, certain core spaces based on the users and nature of activities taking place within it was examined. The study revealed that each distinct space when profiled is symbolic, with multiple layers of definitions yet forms an integral part of the vernacular fishing homestead and settlement. The core spaces that have been identified include; the River (Pou), the Hearth space (Tebesoun), the Living area (Warekiri), the Sleeping area (Okpo), the Daytime rest area (Atele), the Reclaimed area/ connecting walkways, and the Mini-Jetty (Aroegbeyou).

# River (Pou)

The river forms their core space serving as a bathing area, play and recreation area for the children, space for toileting, and performance of household chores such as, washing of clothes and crockery. In base camps since there are no seasonal markets, the river strip on which the base camp is located also serves as a floating market. Fishmongers come to the base camp areas and trade is carried out from their boats. A semi-permanent base camp is established and built with access to the fishing ground as the primary objective. (Scott, 1989:16) defined fishing grounds as consisting of "the banks and floor of the stream, and the still or flowing water they contain". In essence, the fishing ground consists of several fishing spots within an aquatic range. Borrero and Barberena (2006) observed that every migrant fishing household operates within a given aquatic range or 'home range'. A typical home range could translate directly into the area a household occupies and the aquatic range or river area they forage in. But this aquatic home range consists of different stops that are perceived as fertile fishing sites, where fish traps are set and nets are cast for a while, until the stock depletes. This idea of a home range is also reflected in the Ijo word for fishing camp -Endidoughene which is a combination of three words; endi – fish; dou – find; and ghene – area or grounds. The word gbene translated as area or grounds gives no specific location or boundary definition of the area. It thus, embodies the concept of an unbounded space or an open aquatic range which is the river body around the base camp the fishermen forage in.

# **Hearth Space** (*Tebesoun*)

The hearth space or *tebesoun* is used primarily for the smoking or drying of fish and for cooking of meals. In terms of construction, the use of mud floors, smoke exits and in-built drying racks are identifiable features in this space. These are features not included in other spaces in the base camp. Most designs of the hearth space in base camps in Bayelsa also include a sleeping area for the woman directly opposite the hearth. This has been attributed to the need for constant monitoring of the fish smoking process which can sometimes be carried out all night hence the need for combining the two spaces.

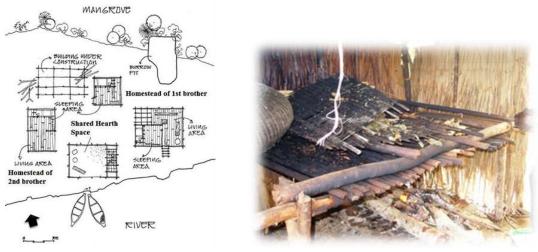
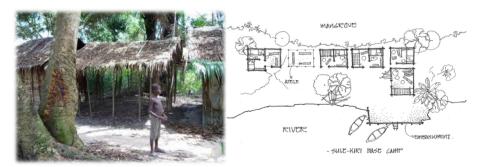


Fig. 12: Hearth space (Source: Author)

# Daytime rest area (Atele)

In communities within the Bayelsa region every compound, which is a combination of several homesteads belonging to members of the same extended family, have an 'atele'. This is the family rest house and a place for socialising. The 'atele' is often located strategically to capture views of the scenery, air flow, and to see and greet passers-by. Traditionally, it is used by men and normally during the day. This cultural practice has evidently being carried on from the village into life in the fishing camp, in the regions around Bayelsa State. The Atele is a social space traditionally occupied by men and is mostly found in multiple homestead base camps. In each multiple homestead base camp, only one Atele is built and shared by all male household heads. It is a space where the men of the camp gather to discuss issues, settle disputes or simply socialize. Women are not expected to sit in the Atele even in base camp meetings involving everyone. It is often designed as a simple structure with a roof covering but no side cladding or walls. The atele is not a space for eating, except in situations where meals are served after undertaking communal labour in the construction of a new building in the camp. In such cases the member whose dwelling is being constructed provides the meal for all the other camp members involved in the building project.



**Fig. 13:** *Atele* space and sketch showing position of the *atele* in *Sulekiri* base camp (Bayelsa) Source: Author

# Mini Jetty (Aroegbeyou)

The jetties are wooden platforms built to extend into the river that serve as harness points for boats and landing area for people and goods. The connecting bridges extend from the platform to a main building or several buildings. In multiple homestead camps, dwelling units belonging to founders of the base camp are often identified by their direct accessibility to important ancillary facilities such as the jetty (*aro-egbeyou*). Boats are harnessed to stakes at the mini jetties to keep them from drifting away with the tide. The jetties are often located right in front of the dwelling where the boats can be easily observed.

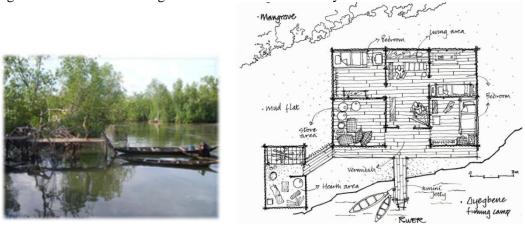
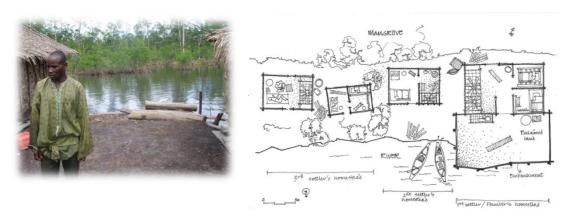


Fig. 14: The boat jetty and platform (Source: Author)

## **Reclaimed areas**

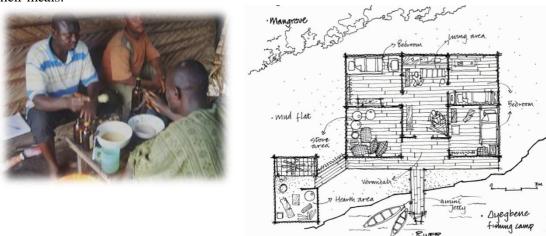
Reclaimed land areas, which are primarily earth fills of *chikoko* mud, held in by wooden embankments is one of the core features of the base camps. It keeps rising flood water away from the dwelling and provides utility spaces for activities that include socialisation, informal storage spaces, drying spaces and walking surfaces connecting different units in a base camp. The reclaimed area serves as a utility space and where equipment and supplies are kept.



**Fig. 15:** Reclaimed land space Source: Author

# Living area (Warekiri)

The *Warekiri* is similar in purpose to a living area. It is a space that exists in each homestead and although predominantly used by the men, it can still be used by other members of the family as a relaxation space and where all members of the family can have their meals.



**Fig. 16:** The living area or Warekiri Source: Author

# **Discussion and Conclusions**

The artisanal fishing industry in the Niger Delta region provides over 50% of the fish requirements of the Nigerian populace. Fishermen from the Ijo ethnic group are the predominant group engaged in artisanal and migrant fishing in the Niger Delta region. The fishermen are known to move residence up to three times each year following seasons. Their migratory cycle involves long or short term stays at their village of origin (ama), semi-permanent base camps (endidoughene) and satellite offshore camps or annexes (endidoubo). The fish obtained from this sector is landed and processed mainly by migrant fishermen in

their base camps. The study focused on the base camps and examined the socio-economic activities of the group and how these activities influence the creation and arrangement of spaces and facilities within the camp.

The study also reveals a number of issues. Firstly, in addition to their primary uses, certain spaces have been observed to have other uses which have their importance in maintaining the overall balance of the migrant fisher lifestyle. For example, the river is not seen as just an access route but serves equally as a foraging ground and area of production, bathing facility, lavatory, and play area for children. Similarly, the connecting walkway, also serves as a platform for carrying out laundry tasks as well as enhancing inter-household movement. In essence, spaces in this context are not confined to bounded interiors but are connections between the built form and the natural landscape as De Silva (2008) suggests. In a similar analysis of the architecture of coastal fishers in Sri Lanka, De Silva observes that in a fishing community, spaces accommodating daily activities are everything between the house and the sea and this flow between spaces is of significant importance to the community. This makes open spaces ranging from immediate verandas to the entire territorial fishing grounds integral parts of the fisher's dwelling.

Also, the river serves as a space not just for fishing but from which functions such as trading is carried out. The use of the river as a trading space is not uncommon amongst fishing communities in the West African sub-region and South-east Asia. Some of the most popular communities where this practice occurs are the *Ganvie* lake village in the Republic of Benin and the *Cai Be* floating market along the Mekong River in Vietnam (Garafola, Gilman et al 2013). These communities epitomise the concept of space and commercial activity flow in these aquatic cultural landscapes. The boat also serves as a platform for defecating into the flowing river, a practice that the migrant fishers find more convenient than building a toilet space in the base camp. Also most boats used in offshore fishing within Bayelsa State are partitioned to accommodate storage spaces for fishing gear, the daily catch, as well as for sleeping.

Furthermore, a profile of each space in the base camp was carried out showing their layer of uses where available and special features. However, responses obtained from focus group sessions indicated that the main generative concept behind the design of base camp dwellings is the need for reduction of labour in constructing added dwelling spaces. Fishermen would rather invest their time in foraging for better fishing sites and landing catch, which would yield income, than engaging in the construction of new buildings, or the extension of existing ones. The alternative is the multiple use and maintenance of the available spaces. Being economical with space reduces costs in terms of time and money bearing in mind that the fishermen tend to migrate and as such require only temporary functional dwellings. This supports Mcguire and Schiffer's(1983) theory which suggests that sites where less investments in terms of time and monetary capital are made are essentially temporary. This is because they tend to attract high maintenance costs and where maintenance exceeds production costs the sites are abandoned.

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Warebi Gabriel Brisibe has a PhD in Architecture from the University of Newcastle, UK. He is currently a Senior Lecturer at the Department of Architecture, Faculty of Environmental Sciences, Rivers State University of Science and Technology, Port-Harcourt, Nigeria. He can be contacted at briswares@yahoo.com