

## **A THEME APPROACH TOWARDS A SUSTAINABLE WATERFRONT DEVELOPMENT - A CASE STUDY OF IKURU TOWN IN RIVERS STATE, NIGERIA.**

---

**Peterside, Gift David**  
Department of Architecture,  
Faculty of Environmental Science,  
River State University, Port Harcourt, Nigeria  
Email: [peterside\\_gift@yahoo.com](mailto:peterside_gift@yahoo.com),

### **ABSTRACT**

Water bodies and Rivers are important natural resources for human life, the environment and national development. Recognition of water resources as national heritage will contribute towards more long term sustainable property development. Waterfronts are characterised as a place integrating land with water and having a natural attraction to people. This paper reviews the benefits of water front development in Ikuru Town, Rivers state. It is aimed at applying the concepts of sustainability to enhance the coastlines of the area. It also focus on revitalizing the waterfront with a view of reintroducing Aquaculture to a ranking industry which plays a vital role in the culture of Rivers people and also establish recreational and relaxing spot that will help promote tourism and generate income for the state.

**Keywords:** Waterfront development, Aquaculture, Sustainability, Tourism

### **INTRODUCTION**

Rivers State is made up of communities rich in history, and a lot of that history involves the Sea, Fish, Fishing and Sailing profession. Fishing is highly important in the culture of Rivers people; due to the littoral characteristics of the region, it had been serving the socio- economic needs of the people adequately since pre-colonial era. In the wake of oil exploration in the 70's, the profession was neglected despite its huge contributions to the economy. Considering the current depression in the economy and the recent drive to encourage entrepreneurship, developing a project that will boost the economy through Aquaculture is a must have in Rivers state. This project can be considered as an

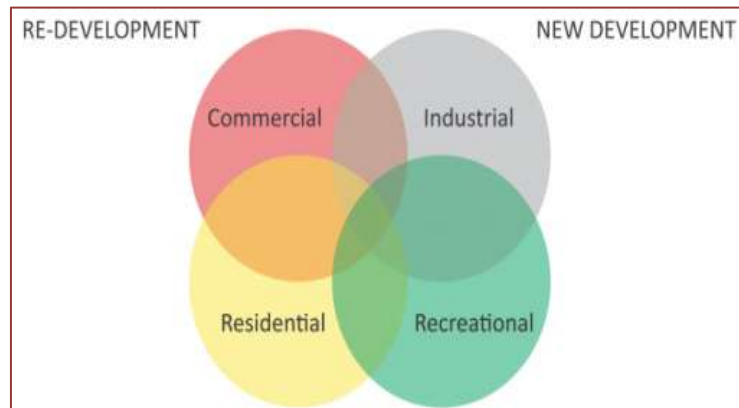
architectural design device, to drive the Rivers Community and beyond towards a new approach in fishing, fish and seafood marketing in a state where these are staples and mainstay of the economy. Enhancing the program by adding entertainment and educational activities, will improve the image of the profession that has been downgraded in the past.

### **Waterfront Development**

According to Dong (2004), Waterfront is defined as *"the land fronting on to water"*. This terminology has been used widely by many researches, but some researchers include different definitions, such as city port, harbour front, riverside and river edge (Hoyle, 2002; Mann, 1973; Tunbridge & Ashworth, 1992; Watson, 1986). Zhang (2002) characterized waterfront as a place integrating land with water and having a natural attraction to people. In addition, waterfronts were the most attractive water features for human settlement. Therefore, by considering many factors, Ryckbost (2005) concludes that waterfronts are *"any property that has a strong visual or physical connection to water"*. Waterfront developments have several expressive and varying interpretations due to characteristics of sites and cities (Dong, 2004). Waterfront development is any development in a town or city by a water body, maybe river, lake, creek, bay, ocean or canal.

### **Waterfront Uses**

Waterfront development can include any combination of different land uses, and waterfront projects can be new projects or re-developments of existing waterfronts into new places. Some waterfront projects focus on industrial uses, such as industrial ports, and others focus on more recreational and tourism-oriented uses. It's important that a diversity of uses can occur along a waterfront, bringing in as many interests as possible to the waterfront, but it's not necessary that a diversity of uses occurs within each project. For example, due to environmental, public safety and security reasons, it may not be appropriate to locate a public park and residential neighborhood within the same zone as an industrial port.



**Figure 2.1: Waterfront Uses**  
Source: WaterfrontsNL, 2018

### **Advantages & Benefits of Waterfront Development**

The benefits and advantages of developing water front are manifold ranging from economic benefits, environmental benefits to social/ community benefits. These benefits are detailed below;

1. With the development of waterfront there would be creation of jobs as it gives way to starting up a host of commercial activities in that region.
2. Source of revenue for government – government would be able to earn revenue in terms of taxes from the commercial activities in the region. The commercial activities may include shops, restaurants, sport activities, transportation, boating etc which can be leased out or giving to private players to operate.
3. Development of tourism in the region – with the development of waterfront the tourism in the region can be increased by offering a variety of attractions like water sports, entertainment arenas, parks, shopping areas, etc.
4. Economic spin-off's – rise in the value of properties in and around the region, acting as a catalyst for redevelopment and renewal of nearby places.
5. Habitat protection and restoration
6. Maintenance of River bank.
7. Water conservation practices - Development of Riverfront projects would ensure a proper design of projects in conserving river and maintenance of rivers flowing through large cities.

8. Beautification of the waterfront with a natural outlook will provide the general public with an open space for leisure and recreation like walking, jogging, biking, sports activities, etc.
9. Improving quality of life of nearby community by revitalizing the neighbourhood.
10. Human/Environmental connections.
11. Conservation and development of land.
12. Conservation of flora and fauna.

### **Examples of Waterfront Development**

#### **Cape Town Waterfront**

Cape Town Waterfront is one of the most visited destinations in South Africa; it is a home to waterfront walkways. It exhibits historical buildings and museums that displays the local culture of the people to the world. Boat trips, craft markets, shops, hotels, bars, cinemas, upmarket craft markets and the Two Oceans Aquarium are the major attractions in the Cape Town Waterfront.



Source:<https://ak7.picdn.net/shutterstock/videos/11923817/thumb/1>

#### **Canary Wharf, London**

Canary Wharf London is a large business and shopping development in East London, it is located in the London Borough of Tower Hamlets, centered on the old West India Docks in the London Docklands. Canary Wharf is a thriving space and vibrant business district with a wide range of shops, restaurants, pubs and wine bars, as well as healthcare and leisure facilities and an extensive arts and events programme. It also has a conference and banqueting centre, two Dockland Light Railway stations, a Jubilee Line station, car parks and approximately 20 acres of

Peterside, Gift David

landscaped open spaces. Increasingly Canary Wharf is becoming a shopping destination, particularly with the opening of the Jubilee Place shopping centre in 2004, taking the total number of shops to more than 200 and increasing employment in retail to around 4,500.



Source: [https://assets.londonist.com/uploads/2016/09/i875/12854157043\\_0a19995ef3\\_k.jpg](https://assets.londonist.com/uploads/2016/09/i875/12854157043_0a19995ef3_k.jpg)

## Hong Kong

Hong Kong's harbor is core to Hong Kong's heritage, a global icon and the source of Hong Kong's competitive advantage in the Pearl River Delta. The harbor is at the heart of the city; is considered as an environmental lung, and is one of the busiest ports in the world. With an estimated 8.3 million residents and 70 million tourists by 2030, Hong Kong's harbour is considered to be a showcase for Hong Kong with a high degree of social, economic and environmental vibrancy.



Source: <https://i.pinimg.com/originals/39/e2/1f/39e21fc6c6a0523f7f07fe6623d0b2a9.jpg>

### **Stockholm, Sweden**

As a city of islands, the waterfront here really is the heart of town and has quietly adapted over time as Stockholm evolves, providing many new and different ways for people to use it. With few traffic-heavy roads along the water, walking and bicycling become great pleasures, enabling people to discover an array of attractions all along the city's shoreline. What really sets Stockholm apart are the promenades and esplanades that naturally draw people to public destinations on the water.



Source:[https://cache.radissonhotels.com/galleries/radblu/photos/webextra/stozw/meetings\\_isotope/](https://cache.radissonhotels.com/galleries/radblu/photos/webextra/stozw/meetings_isotope/)

### **Copenhagen, Denmark**

These two spaces have a symbiotic relationship, with the large, oval-shaped KongensNytov Square serving as the gateway to Nyhavn, Copenhagen's top waterfront district. Nyhavn makes a compelling promenade, packed with restaurants overlooking a small canal that harbors classic old ships, that naturally leads you right into the heart of the city. The square has recently been improved with more active management; and now hosts public events and programs that draw people to the area. Both places also exemplify the octopus effect, with many streets emanating out toward other destinations in the city.





Source: <https://s19623.pcdn.co/wpcontent/uploads/2015/08/copenhagen2.jpg>

### Sustainable Waterfront Development

Sustainable Waterfront Development focuses on measures that preserve the Ecosystem, it meets the needs of the present without compromising the future, and it is concerned with ways that reduces negative human impact on the environment like the use of Environmentally-friendly Chemical Engineering, Environmental Resource Management and Environmental protection. The term “Sustainability” is seen as humanity’s target goal of human Ecosystem Equilibrium (Homeostasis), while “Sustainable Development” is the overall approach and temporal processes in which Sustainability can be achieved. The Principles of Sustainability involves the following factors:

1. Economic
2. Social
3. Environmental and
4. Preservation



### Principles of sustainability

*Economic:* The use of Sustainable Materials in

designs and construction reduces energy consumption and improves water efficiency in buildings. Sustainable buildings helps aid in the expansion of the green market, it reduces the operating cost of buildings and optimizes the life cycle of the buildings.

**Social:** Globally, Mobility has caused an expansion of Tourism; more open spaces for recreation and physical needs are now required. This has encouraged the development of new mixed uses along the water bodies that combine areas of open space and leisure, with Shops and Restaurants to provide cultural and recreational attraction.

**Environmental:** The whole idea behind sustainable building is to preserve our environment and avoid the depletion of the earth's natural resources. Since the 1970s, there has been an emphasis on the environmental issues that include cleaning up water bodies, water supply, natural marine life and pollution. This demand is to protect the environment, and encourage new Waterfront Development Scheme.

**Preservation:** The trend toward cultural tourism pushes to make value to the historical building. Preservation and restoration are important to give a character to the city. The similar element in waterfront development around the world is the public's desire to be near to the water. Most existing waterfront areas which have not yet been discovered are either remains of industrial areas and Slum areas. These areas may become fashionable places to live in, and can promote more investments.

## STATEMENT OF PROBLEM

The Coastal frontline is the meeting point of land and sea; and has been the focus of human settlement and activity for thousands of years. Tourism within most countries looks strongly to the coast all over the world. Most tourist destinations have an attraction or feature that expresses the image of that particular area; these attractions can be the history, culture, nature of the environment etc. African countries like Kenya and Egypt have in their own way, utilized their tourist resources to generate income for their country. Kenya's inherent attraction is its wildlife, which is



Peterside, Gift David

regarded as the greatest single attraction in Africa to tourists from all over the world. For Egypt, the attractions are of historic and cultural significance.

Ikuru town in Rivers State by virtue; being a coastal Town has not been able to efficiently make use of the frontal coastlines for the purpose of tourism. With the rising cost of holidaying abroad on vacation, the establishment of a development of this kind will be a welcome development; as this facility would harness the tourism potentials of the state which in turn will create an alternate source of income other than the oil industry and it will also help reduce the level of unemployment in the state. The development of a Waterfront facility on the frontal coastlines at Ikuru town, Rivers State, would create a tourist destination in a scenic environment where tourists would not only lodge but experience the rich aqua and fishing culture of Rivers people it is considered as a strategy to develop our waterfront and enhance tourism. It is also envisaged that this development will constitute a hub from which development will radiate to surrounding communities. The goal is to elevate the diminishing culture of fishing in the State, developing the economy status for the individual fisher-person and strengthen the people's cultural bond with the sea.

## **BACKGROUND OF STUDY AREA**

Andoni is a Local Government Area in Rivers State, Nigeria. Its headquarters is at Ngo Town. It has an area of over 233 km<sup>2</sup> and a population of over 311,500 at the last census in 2006. Andoni was created in 1991 during the regime of General Ibrahim Badamosi Babangida. Andoni shares boundary with Gokana and Khana to the South, to the East is Opobo, to the west is Bonny and to the South is the Atlantic Ocean. It forms part of the rain forest in Nigeria. The Andoni people are related to the Ijaw people of Niger Delta in Nigeria they speak Obolo language, their villages and towns are situated on islands and some of them are Ikuru, Unyeangala, Asukama, Agana, Egwede, Ayamboko, Agwut Obolo, Ilotombi, Ekede town and **Oyorokoto** (the largest fishing settlement in Rivers State). The people are predominantly fishermen. Some parts of the Andoni tribe can be accessed by road and all parts by sea. It is rich in wildlife (elephants, monkeys,

species of pythons, tortoise etc. and Mineral resources and It is a growing tourist location in Rivers State.



Map of Rivers State showing Andoni Local Government Area Circled.

Source: Ministry of Urban Development Rivers State, 2010

### **Ikuru town, Andoni local Government Area**

Ikuru Town is located in Andoni Local Government Area in Rivers State, Southern Nigeria. It was founded by King Ikuru Efuya. The Island is small and located close to the bight of Bonny, It features a lengthy white sand beach along the Atlantic Ocean. Ikuru town can be accessed by road and by sea. The beautiful coastlines in Ikuru are an attraction which if properly organised will bring more tourists to the area. The people of Ikuru town are very receptive and their main occupation is fishing.



Map showing Ikuru town and its beach

Peterside, Gift David



Map showing Ikuru town main town

### **Analysis of Ikuru Waterfront**

The analysis of Ikuru waterfront is based on the principles of waterfront development, which are;

#### **Access and Linkage:**

The waterfront is 3.2km drive on Atlantic road from Ikuru main town and it runs from Oyorokoto Fishing settlement down to Queen's Town in Opobo with a length of 28.2km with variable width from 26m to 30m. The waterfront can be accessed both by land and water. There is an access road that has recently been constructed from Sakpenwa-Bori Road (Ogoni/Andoni/Opobo unity Road) for this purpose. By River routes it is accessible to Bonny, Opobo, Akwa- Ibom state, Port Harcourt and many other coastal towns and settlements.



Left; Atlantic Road (Access Road to the Waterfront/Beach), Right: Ikuru Waterfront/Beach

### **Uses and Activities:**

The Local and State Government have Earmarked Ikuru Waterfront for the purpose of Tourism due to the Vista views and coastal breeze that appeal to Tourist. Ideally, the intention behind the development of the Waterfront is to develop a tourist facility that will feature spaces that would showcase the rich Cultural Heritage of the people and value the sea within its elements which is the essence of Rivers State and all this will be conveyed through properly sequenced indoor and outdoor spaces and programs to give the end user a memorable experience.

As part of the program, the facility will have spaces for Lodging, Restaurants that serves different cuisines of Fish, A seafood Market, Museums that exhibits old and new fishing tools/activities of the people and that will also educate people on Aquaculture and its benefits, Games, Shopping experience, Esplanade along the Beachfront and the luxurious views it affords.

### **Comfort and Image:**

The Image of Ikuru Waterfront is a scenic view that depicts the cultural and historical background of the place. The People enjoys the Waterfront where Fishing activities takes place, which is the primary occupation of the place, hunting is another activity of the people because of the Rainforest, Animals like Grass cutter, Monkeys, etc can be caught in this Forest. The Elephant reserve in Andoni extends to some part of the Forest at Ikuru Town; Most times Elephants are seen along the Atlantic road that leads to beachfront.

By analyzing the condition of the buildings there is no architectural style and the buildings are built haphazardly, most of them are built with local materials like thatch and mud, only few buildings like the chief's house, churches, the naval barracks etc are of block wall and aluminum roof.

Peterside, Gift David



Pictures of popular sites at Ikuru Town respectively; Elephant Reserve, A Street scene, Fishermen by the beach, Ikuru Jetty and St. Thomas church.



The primary occupation in Ikuru town and Oyorokoto Fishing Settlement

### **Sociability:**

The Primary occupation, which is Fishing and Hunting gives a local identity and character to Ikuru town and provides income for the people. The State and Local Government has set- out Ikuru town as a tourist site, due to the natural white sand beach, Tourist comes in during festive periods to enjoy the sea breeze

and vista views at the waterfront. The Elephant reserve is also an attraction in the area.

## **CONCLUSION**

Recognition of water resources as national heritage will contribute towards more long term sustainable property development. Waterfront development is already a well-established phenomenon internationally. The emergence of new tourism-related land uses within historic waterfront cities has brought a range of physical, economic and social benefits. However, there are often associated tensions between the need for economic development and the need to maintain the unique heritage resource that may be a large part of the attraction for visitors.

All over the world, buildings has become the biggest energy-consumer in the world. In this regard, there is need for a more sustainable practice in buildings. The target is to employ strategies to cushion the effect of environmental degradation taking into consideration stringent guidelines set out by the standard in waste management, energy efficiency, water conservation, waste water management and green procurement.

This paper has focused on using resorts as a means to develop the waterfront with a view of reintroducing the nostalgia that the sea, fish and fishing, represents in the lives and culture of the Rivers people. Beyond the primary objective, the establishment will drive Rivers state as a tourist destination.

Conclusively, the need for the development of the Waterfront at Ikuru town cannot be over emphasized. The project is to restore the socio-cultural values of Rivers state by its peculiar nature with water and fishing.

## **RECOMMENDATION**

It has been argued that the successful implementation of the principles of sustainability should promote long-term social, economic and environmental benefits, while ensuring and enhancing the prospects of continued viability for the tourism enterprise (Brown and Essex, 1997).Sustainability has become a globally recognized concept, as the extents of sustainability are



concerned with achieving environmentally conscious design. It is thereby recommended that the following should be put in place to successfully achieve the design of a functional and aesthetically pleasing Waterfront development.

1. The building should adopt a more sustainable way to effectively use and conserve energy; the use of hybrid solar power and grid power.
2. For landscaping it is recommended to include the use of lemon grass and citronella to repel mosquitoes.
3. Grey water system of water treatment should be adopted (it is a system that collects and filters waste water to be reused).
4. The facility should be constructed of heat resisting materials and should be rain proof.
5. The rooms should be provided with doors and windows for securing and maintaining adequate light and ventilation by free flow of air.
6. The building should be periodically inspected in order to see that it is safe and is being maintained under sanitary conditions.
7. The government also has a major role of ensuring security around the resort. This can be done by equipping the sea police efficiently to curb sea piracy around the facility.
8. Measures should be employed in monitoring waste disposal by oil companies into the sea, to avoid pollution of the water.

## REFERENCES

- Adewumi, A. A. (2015); *Aquaculture in Nigeria; Sustainability issues and challenges*, Retrieved from <http://directresearchpublisher.org/journal/drafts> ISSN 2354-4147 December 2015 Director Research Journals Publisher
- Band-Bovey, M. and Lawson, F. R. (1977), *Tourism and Recreational Development*; London and Boston; Architectural Press and CBI Publishing Co
- Coggan, A., and Kelly, G. 2007. *Quality of Life and Sustainability on the Central Coast*, Report of CSIRO Sustainable Ecosystems

- Gordon J. Mengel, Jim Tidwell and Kenoye Eke (2017); Agricultural Potential in the Rivers State of Nigeria. Retrieved from <https://www.was.org/magazine/ArticuleContent>
- Goodwin, R. F. 2009. "Redeveloping Deteriorated Urban Waterfronts: The Effectiveness of U.S. Coastal Management Programs." *Coastal Management* 27:239-69.
- Gospodini, A. 2001. "Urban Waterfront Redevelopment in Greek Cities" *Cities* 18: 285-95
- Government of Karnataka (2009): Pre-feasibility Study for Waterfront Development in Karnataka. Retrieved from [www.idkarnataka.gov.in/doc/17prefea\\_Riverfront](http://www.idkarnataka.gov.in/doc/17prefea_Riverfront)
- Ragheb, A. R. 2014. "Alexandria's Eastern Entrance: Analysis of Qaitbay Waterfront Development" *International Journal of Civil, Environmental, Structural, Construction Architectural Engineering* 8 (8):865-74.
- Riham A. Ragheb (2017): Sustainable Waterfront Development—A Case Study of Bahary in Alexandria, Egypt retrieved from *Journal of Civil Engineering and Architecture* 11 (2017) 380-394doi: 10.17265/1934-7359/2017.04.007 May 2018
- Waterfronts NL (2018): What is Waterfront Development? Retrieved from [www.waterfrontsnl.com](http://www.waterfrontsnl.com)

A Theme Approach towards a Sustainable Waterfront  
Development – a Case Study Of Ikuru Town in Rivers State, Nigeria

Peterside, Gift David

---

**Reference** to this paper should be made as follows: Peterside, Gift David (2019). A Theme Approach towards a Sustainable Waterfront Development - A Case Study of Ikuru Town in Rivers State, Nigeria *J. of Environmental Science and Resources Management* Vol. 11, No. 1, Pp. 51-67

---