

Ocean-aquariums and Their Visitor Experiences: An Instrument for Promoting Tourism and Aquatic Wildlife Conservation

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Abstract:- There are a variety of ways to promote both tourism and aquatic wildlife conservation. When we think of tourism, we typically picture exotic travel, beautiful locations, and spending money, whereas when we think of aquatic wildlife conservation, we picture preserving and safeguarding the aquatic environment and its inhabitants from harm frequently brought on by us humans. Over the past few decades, many public aquariums have been planned and built around the globe, the majority with a similar goal of wildlife conservation in the aquariums or on environmental protection of the surrounding areas and reintroduction of endangered species. Additionally, these establishments provide formal and informal educational opportunities for tourists, students, and schools, fostering tourism and ocean awareness. This article demonstrates how an effective tool for promoting both aquatic species conservation and tourism is the visitor experience, which is essentially "education, interpretation, and training" of ocean aquarium visitors. Aquarium tank displays, preserved biological material, film projections, seminars, lectures, and book magazine publications raise environmental awareness and encourage people to engage in Environmentally Responsible Behavior. The majority of public aquariums are operating at a profit, mostly because of their widespread appeal, making all these objectives possible. Aquaria have revitalized run-down waterfront regions and raised the revenue of tourist resorts in the vicinity, mostly by "stretching out" the tourist season. In ocean aquariums, missions related to research, conservation, and teaching are explored.

Keywords:- Aquarium; Conservation; Marine Animals; Ocean; Oceanarium; Tourism; Visitor Experience.

I. INTRODUCTION

In our present world, it really is no surprise that tourism has become a chief industry. Note that tourism in general both directly and indirectly has contributed a lot to the economics of various countries and the world's GDP. In fact, it is very obvious that tourism has grown to become a major contributor to countless economies around the world and our country Nigeria needs not be an exception. Traveling outside one's typical area for personal, business, or professional reasons is known as tourism, and it is a social, cultural, and economic phenomenon. A lot of tourism endeavors include

visiting landmarks both artificial or natural, wildlife and natural environments therefore visiting the zoo, wildlife tours like the safari and visits to the aquarium or oceanarium are a great example of some tourist attractions.

Now some may say that an oceanarium is the aquatic counterpart of a zoo, which houses living aquatic or marine animals and plants specimens for public viewing. Naturally these public buildings house larger tanks than the type's home aquarists tend to and also smaller tanks as well. In the mid-19th century, the first public aquariums were built and ever since then they have become popular and their numbers have increased. However, our modern-day aquariums and oceanariums stress wildlife conservation issues and educating the public.

An oceanarium can be defined in many ways, it can be said to be a marine mammal park as well as a large-scale aquarium presenting an oceanic habitat with marine life or it can be said to be a facility built to simulate water habitat for example a river, lake or sea, to house collections of living aquatic animals and plants for entertainment, exhibition or studies. And none of these definitions are wrong. There are a lot of oceanariums around the world today, a few names are the Shanghai Ocean aquarium, the Miami seaquarium, Oceanographic of Spain, Chi me long ocean kingdom, Cube oceanarium of China, Blue planet aquarium and Lisbon oceanarium of Portugal etc.

II. WHY OCEAN-AQUARIUMS?

Wildlife refuge and public aquariums are usually clustered together as visitors' attractions that show off flora and fauna in their primal state or at least in a state close as possible to what we could call natural. While aquariums pay attention to marine animals and their ecosystems, they also have a little unique challenges and concurrently distinctive rewards when using their facilities to promote tourism goals. Even though there is a swelling body of research looking at the role of zoos in tourism, very little attention or studies have been paid to aquariums through the years (Mason, 2000).

Meanwhile the oceans are over 70% of the surface of the earth, yet it remains the most unknown part of our beautiful planet not just because of its vastness but also the limitations it posed to terrestrial species like us humans.

There is a lot the ocean does for us in the planet from helping to control the Earth's climate, provide most of the world's oxygen, soak up carbon dioxide to supplying 2.9 billion people with at least 15 percent of their average per capita animal protein intake (FAO, 2009), not forgetting transportation of belongings and people, and provide employment and recreation.

With all the great importance of the ocean, its current state is quiet alarming. As said by the condition of the ocean reports (Rogers & Laffoley, 2011) our oceans ability to support and sustain life is dwindling at a faster rate than we have hitherto assumed. For over five decades pasted problems like overfishing, practices that are unsustainable and pollutions have costed us the loss of more than 40% of the coral reefs in the world even with the artificial reef systems being built (Hoegh- Guldberg, 2011) not to even mention that locales such as seagrass beds and mangroves are vanishing at an unmatched rate (Rogers & Laffoley, 2011). A blend of all of this factors in addition to climate change impacts have in no doubt the capacity to cause mass extinctions of our ocean's wildlife (Ferrer et al 2011).

As humans, terrestrial beings that we are, have mostly had fairly little interaction with the oceans. In current years we have gotten a blast of documentaries and films on the oceans and freshwater ecologies, nevertheless, even though attention has been amplified (Rodger, Smith, Newsome, & Moore, 2011), a lot of persons remain disengaged from sea life. With the exemption of aquatic mammals, individuals do not often have a natural empathy for fish or other marine animals and usually view them as food. Aquariums and oceanariums are in a unique position to change this observation and to connect people to the marine realm to stimulate guests to care about aquatic ecosystems and wildlife. This vivarium can also generate a responsiveness to the challenges fronting aquatic systems and empower visitors to take tangible action to address these issues.

An Oceanarium is a venture wholly devoted to the display of marine plants and wildlife and creatures from the various strata of our ocean as well as from other sources of water in an interesting and informative manner with the motives of entertaining and educating the visitors. An ocean aquarium would help us better our knowledge regarding the seas and about the sea life.

III. WHO VISITS OCEAN-AQUARIUMS AND WHY?

Guests to facilities such as zoos and aquariums are usually seeking for recreational activities or leisure experience especially in the social context wanting to experience nature with friends or family. When it comes to research purposes it is noticed that we mostly group people who visit zoos, aquariums and sometimes even museums together but according to (Falk, Heimlich and Bronnenkant, 2008) visitors to aquariums have a few distinct characteristics.

A lot of research has been focused on fathoming the reason people visit informative-leisure settings such as aquariums, science center's, observatories, museums and zoos these researches have sometimes been for marketing purposes but most have been carried out to progress the impact of the visitor experience linked to the institutions purpose or task (Packer & Ballantyne, 2002). Usually, Visitors' demographics are not particularly useful in telling us what motivates them to attend, what knowledge and attitudes they bring with them during a visit, or how their experiences may influence their behavior afterward. Previous research on science center visitors by Falk and Storksdieck (2005) discovered that the reasons people visit seem to bunch around a few identity-related details. Falk and Adelman (2003) discovered sustenance for their theory that grouping visitors based on their entering understanding and attitudes was helpful in more precisely assessing changes in visitors' conservation learning in a study at the National Aquarium in Baltimore.

Why should one visit an Oceanarium? According to the world association of zoos and aquariums, these facilities worldwide receive 700-million plus visitors yearly which is about 11% of the earth's human population which means about one in every random ten persons have human-animal interactions at either zoo, aquariums and oceanarium. There are a large number of reasons why aquariums are so popular, humans are naturally very curious and are always LATIN ENGLISH Aquarius of water Vivarium Aquarium mid-19th century Mid-19th century: from Latin, neuter of Aquarius 'of water', on the pattern of vivarium. Origin¹⁴ after discovering the unknown is our environment which appear foreign to us sometimes. As a result of our fast pace urbanization, we have lost that closeness to nature that is necessary to help us unwind and relax. Those of us fortunate enough to live in the outer parts of rivers state away from the cities hustle and bustle have access to beautiful surrounding, beaches. But a great majority of people live in environments that are hardly conducive to their physical, emotional health let alone their well-being.

As humans we most definitely need to have contact with nature in its most pristine state. We long for calm, and solitude that nature provides we crave restorative places which that permit us to transcend the stresses and strains of our daily life's and find a sense of inner peace. And perhaps aquariums and oceanariums are one of these such restorative places; an oasis in the chaos of our city life.

These are some of the reasons why people visit oceanariums:

- Oceanariums offer fun for all ages.
- Sea aquariums offer a relaxed and tranquil environment and are educational too.
- These facilities offer family bonding time through experience.
- They are also research facilities most times attached to a university or research institution.

IV. TOURISM

Tourism can be said to be the act and process of spending time away from home or their regular lifestyles in quest of pleasure, recreation and relaxation while making use of the commercial provision of services. Tourism is a product of modern social arrangement which began in the western areas of Europe during the 17th century (Walton, 2022).

Tourism could either be local (within the travelers' own country) or international, and international tourism has both incoming and outgoing implications on a country's balance of payments. In 1994, the United Nations identified three forms of tourism in its (Recommendations on Tourism Statistics, 1994).

- Domestic tourism, involving residents of the given country traveling only within this country
- Inbound tourism, involving non-residents traveling in the given country
- Outbound tourism, involving residents traveling in another country

According to Dimitri (2008), the tourist sector, which is a subdivision of the service industry, has grown to be a noteworthy source of revenue for many areas and even total nations. As "an activity fundamental to the lives of nations because of its direct repercussions on the social, cultural, educational, and economic sectors of national societies, as well as on their international connections," the Manila Declaration on Global Tourism of 1980 highlighted the significance of tourism.

As of 2011, leisure industry accounted for 30% of global commerce in services and, as an invisible export, for 6% of total exports of goods and services, generating significant sums of revenue for local economies in the form of payment for the goods and services that tourists require. Also, it creates job openings in the tourism-related services sector of the economy. Travel is also said to widen the mind. (James, 2019).

Tourism provides numerous prospects for growing and developing economies. It boosts the local economy, supports the construction of local infrastructure, generates jobs, protects the environment, preserves cultural heritage, and fights poverty and inequality.

Transportation services, housing, and entertainment venues are among the hospitality sectors that profit from tourism. Examples of these sectors include airplanes, cruise ships, transit, railroads, and taxicabs (such as amusement parks, restaurants, casinos, festivals, shopping malls, venues, zoos, aquariums and theatres). This is in addition to the things that tourists purchase, such as mementos. Contrarily, tourism has the potential to degrade people and damage interactions between hosts and visitors (Melanie K, 2003). The local environment frequently faces increased pressure due to tourism.

Cultural resources, cultural property, and the characteristics of the trip destination are the economic pillars of tourism. Nowadays, the World Heritage Sites deserve special attention because they are potent tourist draws. Nonetheless, even a nation's present or prior political structure can have a significant impact on tourism. For instance, the obsession with the British royal family drives millions of tourists to the country each year, contributing to an estimated £550 million in economic activity. In Central Europe, the Habsburg family has been referenced. The Habsburg brand is expected to bring in 60 million euros in annual tourism revenue for Vienna alone. It is true that "Habsburg sells" to tourists (Smith, 2006), (Bitzan, 2011).

V. WHAT ARE THE TOURISM AND WILDLIFE CONSERVATION GOALS OF OCEAN AQUARIUMS?

Tourism and wildlife conservation have the following objectives, per Cater & Cater (2007): preservation, research, economic advantages, environmental sustainability, education, and interpretation. However, the World Zoo and Aquarium Association (WAZA) outlines areas where action is needed for facilities like aquariums to achieve their objectives, particularly when it comes to conservation. These include aquarium operations being integrated with conservation, education, interpretation, and training, "which creates the visitor experience," wild life population conservation, effective communication and marketing, science and research, and sustainability and ethics. It takes a lot of energy and water to run the life support systems in a facility like an ocean aquarium, and the majority of buildings have been built so that they need artificial lighting and air conditioning, all of which increase the industry's environmental impact. Ocean aquariums, though, are increasingly focusing on sustainability-related issues like:

- Biological sustainability: refers to the origins of the animal collection and the methods used to feed the animals.
- Sustainability in the environment: How does the facility's use of resources like water, electricity, and garbage generally affect the environment?
- Economic sustainability: does the marine museum have the resources to continue operating independently in the future?
- Social sustainability: refers to whether the institution supports local economies, employs locals, and has the backing of the neighborhood.

It is becoming increasingly clear that in order to be viewed as actually achieving the objectives of tourism, ocean aquariums must demonstrate sustainability in each of these four categories.

Research is essential for the success of sustainable aquariums and must play an equally significant role in the growth of sustainable ecotourism (Cater & Cater, 2007). Research on the social and economic aspects of aquarium operations, as well as environmental and biological research, is made possible by the aquarium industry.

Education is not left out, for the goals of education in aquariums are not only a comprehensive guided tour or informal education, (Price et al., 2009) but the staffs of aquarium facilities being generally involved in actual formal education activities of students and tourist while collaborating with school and universities to hold workshops seminars, summer lessons, undergraduate teaching and volunteer services for both students and the general public (Karydis, 2011).

VI. ENGAGING AN OCEAN-AQUARIUM TO PROMOTE BEHAVIORS THAT RELATE TO TOURISM AND WILDLIFE CONSERVATION GOALS

Many variables are considered, such as training, research, tourist experience, and so on, in order to encourage behaviors that match tourism and animal conservation goals. The demand for aquariums to demonstrate how well their role improves visitors' environmental capacities has presented many challenges. During the ocean project survey in 2009, many respondents powerfully agreed with the statements, "I trust non-profit organizations, such as aquariums, to protect the quality of the ocean" also "Aquariums should suggest or recommend specific behaviors or ways for the general public to protect the environment." This demonstrates the public's impression of institutions such as zoos, museums, and aquariums as reputable providers of information on environmental issues. Aquariums and zoos have traditionally adopted an environmental education approach to conservation (Ballantyne et al., 2007), emphasizing assisting visitors, particularly youngsters, in developing environmental literacy and an environmental ethic. Many aquariums have lately introduced a social marketing method to encourage conservation behavior, which supplements the longer-term ethic-building among visitors (Vernon & Mann, 2012).

A study conducted at the Monterey Bay Aquarium which began in 2006 and continued till 2012 sought to define and quantify the ways in which visiting the aquarium influenced people to become more attentive and concerned about ocean wildlife conservation, as well as to want to engage in conservation actions both during their visit and at home. During the Inspiring Ocean Conservation (IOC) project, the researchers (Vernon et al., 2012) used a variety of research methods to examine the relationship between a number of factors, including visitors' interests and backgrounds, individual characteristics, onsite visit experiences, and post-visit experiences. Positive conservation-related results were shown to be impacted by a visitor's initial beliefs and values, but these outcomes were enhanced by certain types of aquarium experiences.

Visitors who viewed more of the aquarium's conservation exhibits, attended specific programs, spoke with aquarium staff or volunteers, or took home a Seafood Watch pocket guide saw the most significant differences, but the impacts were greatest for visitors who were conservation-minded when they arrived at the aquarium. It was also

discovered that many tourists who came into contact with conservation knowledge or experiences during their stay retained and translated these encounters into personal activities that lasted for months after their visit (Vernon & Mann, 2012).

Progressively, aquariums are bringing attention to another conservation issue; Climate change, that will arguably have the greatest impact on the ocean, and probably marine wildlife and ecotourism, in the future.

Weather change being a conservational issues produced by carbon emissions is degrading ocean health by both warming the ocean and making it more acidic, and an increasing number of aquariums are interpreting this information for visitors, the likes of Ocean Park (Hong Kong, China), NAUSICAA (France), Monterey Bay Aquarium, uShaka Sea World (Durban, South Africa) and National Aquarium (Baltimore, USA) have exhibitions on climate change and the ocean mounted in their facilities to incorporate educating the public about the issues of climate change. Careful observation of the climate change exhibitions and programmes at aquarium facilities indicates that visitors are more likely to absorb climate change messages from interactive programs such as theatrical performances and conversations with interpreters than from exhibitions (Korn, 2011).

it is quite notable that, visitors to aquariums and also zoos in the USA are more likely to agree that climate change is real and happening compared to the general public (Luebke et al, 2011) and are more likely to be categorized as "bothered" and "concerned" according to the Yale University and George Mason University Global Warming's Six Americas public opinion research held by Leiserowitz, Maibach, Roser-Renouf, & Smith in 2010. This finding is true across all categories of visitors, including tourists. Aquariums appear to be a logical ally for other wildlife tourism and ecotourism efforts to encourage conservation action on this issue.

VII. CASE STUDIES

A. Case study 1: Lisbon Oceanarium

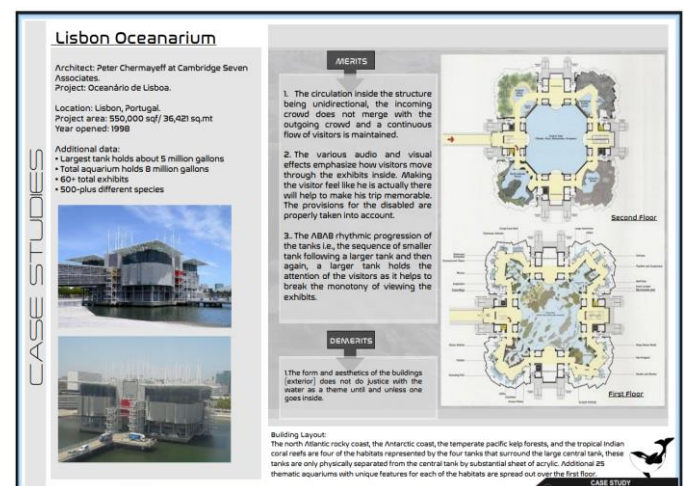


Fig. 1. Showing case study analysis of Lisbon Oceanarium

➤ *Appraisal*

Opened in the year 1998 and housing a total of 450+ species is the Oceanário de Lisboa or Lisbon Oceanarium, Peter Chermayeff oversaw the conceptual design, architecture, and exhibit design for the Lisbon oceanarium while working at Cambridge seven associates. The oceanarium its self is situated on a pier in an artificial lagoon and is said to resemble an aircraft carrier. The Osaka oceanarium Kaiyuan, one of the biggest aquariums in the world, as well as numerous other aquariums around the globe, were also created by Chermayeff. The north Atlantic rocky coast, the Antarctic coast, the temperate pacific kelp forests, and the tropical Indian coral reefs are four of the habitats represented by the four tanks that surround the large central tank, these tanks are only physically separated from the central tank by substantial sheet of acrylic. Additional 25 thematic aquariums with unique features for each of the habitats are spread out over the first floor.

B. *Case study 2: Shanghai Ocean-Aquarium*



Fig. 2. Showing case study analysis of Shanghai Ocean-Aquarium

➤ *Appraisal*

The Shanghai Ocean-Aquarium was completed in the year 2002, and is located immediately adjacent Shanghai’s most significant tourist attraction the Oriental Pearl Tower in Pudong Shanghai, sited on an 8500 sq.mt of land and housing over four hundred and fifty different species.

This piece of architecture was designed by cam Crossley architects. The buildings’ theme, “Across Continents through Worlds of Water” captures the essence of the broad scope of exhibits on display in the facility. With the China Zone being the first, visitors pass through representative countries of South America, Australia, Africa and the temperate zones that show cold-water fish and lastly the penguins.

The sea provides the theme for the second phase of the visitor’s experience where they view some of the more unusual and unique life from color changing giant cuttlefish and baby sharks to the miniature seahorses of the seaweed forest and the giant Japanese spider crabs.

The climax of the visitor’s experience is the showcase oceanarium consisting of 120 meter moving walkway passing

through five contrasting marine environments: first, the coastal reef, the open ocean, the kelp cave, shark cove, and the coral reef. This awesome experience is one of the longest aquarium underwater tunnel exhibits on planet earth.

C. *Case study 3: Monterey Bay Aquarium*

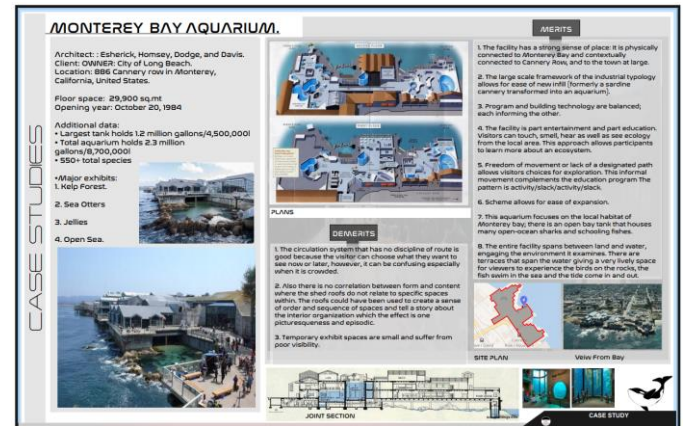


Fig. 3. Showing case study analysis of Monterey Bay Aquarium

➤ *Appraisal*

Housing about 600 species and located on the site of a former sardine cannery on cannery row in Monterey California USA is the “Monterey Bay aquarium” designed by Esherick, Homsey, Dodge, and Davis (EHDD Architecture). As one of the first of its kind, the Aquarium departed from the known traditional aquarium design by focusing on the unique marine ecology of one habitat: its host city’s habitat the Monterey Bay and her shoreline. Built over both land and water, it embraces dazzling views of the Bay, whose ecosystem it celebrates. The aquarium sits among the former existing sardine processing plants and cannery buildings, utilizing its foundations and rekindling the spirit of the old Hoyden Cannery. Its popularity has led to several changes all designed by its architects. In 1996, the 95,000 sq. ft., one-million-gallon Outer Bay Wing was opened, introducing jellyfish, tuna, sharks, and other dwellers of the offshore environment. In 2004, in order to accommodate increased visitors, a 61 m., blue clear-span “Sky bridge” joined the second floors of the Ocean’s Edge and Outer Bay Wings of the aquarium. The most recent of periodic renovations of the café and sea otter exhibit were completed in the year 2014.

The technical requirements used to support such environments are just as impressive as the habitats themselves. The water for the exhibits is drawn directly from the bay 120 herself, allowing the natural organisms that nourish the bay to be emitted into the exhibits during the evening hours while during viewing hours the water is filtered for more clarity for the visitors. However, the most extraordinary perhaps of all its practical accomplishments is that the aquarium’s condition has remained virtually unchanged in over the last twenty-six years. Recent testing of some of the concrete in the exhibits has indicated that it should conservatively withstand the corrosive saltwater environment for the next 490 years. The building is a light-filled assemblage of varied, well-proportioned spaces through which the visitor may chart their own course of movement,

rather than being locked into a linear path. The strategy was to create an immersive experience that both excites visitors' senses and invokes a feeling of wonder. The aquarium presents more than a 100 galleries and exhibits recreating the habitats of Monterey's Bay. Some of the most spectacular habitats are constructed in massive acrylic-enclosed tanks, including the jewel jellyfish tank, the towering giant-kelp forest in a 335,000-gallon that is 1,268,113 liters, three-story tank, and 3,785,412 liters which is a million-gallon shark tank.

The experience here is what amounts to a leisurely stroll through the ocean without getting wet. Monterey Bay Aquarium is older than modern-day sustainability goals and programs such as LEED®. However, its design included many sustainable design strategies and innovations that developed out of EHDD's the architectural firms, legacy of attention to environmental conditions and to project-specific imperatives and opportunities. These include: building reuse specifically in the case of the administration building, the seawall and the pump house; a sea water-based heat pump system that provides cooling and heating for both the building and her aquarium systems; and, the use of high-end durable materials for the buildings construction and finishing.

VIII. DESIGN PROPOSED BY THE RESEARCHER

The researcher proposes an ultramodern oceanarium facility to be built in Okrika, Rivers State. The Okrika, Rivers State waterfront is being developed in both the commercial and tourism sectors of the state under this design concept. This demarcation will take the form of a distinct and clear direction for each circulator, allowing vehicular circulation to be limited to a specific area of the design in the same way that pedestrian circulation is controlled by walkways and paved paths that direct movement. The idea is to erect a world class oceanarium facility which will not only be a ground for research, leisure and education but also to be a focal point of attraction having tourist tendencies to enhance some of the tourism potentials in the state. It will also act as a tool to promote tourism and environmental and wildlife conservation and forewarn individuals on the devastating consequences of environmental negligence, pollution, contamination and damage.

A. Design Brief

The design brief of the proposed project is conceived to create not only the necessary spaces but also effects that will be a complex but thrilling experience, the planning of an ocean aquarium entails the ability to both educate and entertain the visitors while telling a story of the importance of each of the exhibited species to us humanity and our ecosystem. The design brief takes into consideration the themes conservation, entertainment and marine habitat having each theme interwoven and reflected in the proposed design, such that as visitors explore the oceanarium these themes create a thrilling visitor experience that makes them more connected and empathic to their environments thereby promoting tourism and wildlife conservation.

B. Components of the proposed design (Ocean-Aquarium)

➤ Administration

The administration is the control area of the facility which includes the entrance lobbies, reception areas, Visitors lounges, administrative offices, cafe, convenience, conference rooms and staff lounge.

➤ Research laboratories

An oceanarium also covers research to an extent, though small it would contain a service floor or area, quarantine areas, water containers and pump system and lastly the research laboratories themselves.

➤ Theaters

The theater provides spaces for looking at or listening to performances. The theater design for this scheme is the Proscenium theater which basically has the stage positioned at one end of the auditorium and is substantially detached from the audience space by a proscenium wall. The design takes into consideration the acoustic balance and the visual and thermal comfort of the audience.

➤ Galleries

Galleries are spaces in which the oceanarium display their exhibits it contains all the entertainment facilities, the aquariums; different tanks of different shapes and sizes the underwater aquarium, acrylic tunnels, the aquariums exhibit displays like the coral reef tank, touch pool, fresh and salt water section, seashell display and a main exhibit etc. Gallery spaces are designed commensurate with the size of the exhibit. The relationship between the space, Colour, texture, lighting and ambience interact to impact the mood of the visitor.

➤ Technical Infrastructures/service

Technical and ancillary infrastructures are the maintenance and technical support facilities which are integral part of the oceanarium.

C. Zoning an Ocean-Aquarium

Zoning as an oceanarium planning tool, relates to organizing spaces into zones. The zones can be arranged as;

- **Public Areas:** Zone that are open to public access like Aqua-museum, library, lecture Hall or Auditorium, exhibit galleries, dolphinariums etc.
- **Nonpublic Areas:** Zone which is meant for the staff alone with environment controls and security.
- **Public Non- Collection Areas:** Zones created for human comfort, meeting and greeting like cafeterias, sit outs, food courts.
- **Non-Public- Collection Areas:** These zones are basically for maintenance of exhibits, provided exclusively for staffs who undertake this task.

IX. DESIGN CONCEPT

The researcher has developed a design concept which is “Interaction” brings to know each other, these will be expressed in the design via use of structural elements, plan forms and spatial configuration. The facility, an oceanarium is a commercial building that strengthens the local community and connects its people to each other and their environment. It is designed to support the local economy both in how it is built and how it functions, it brings different class of persons from all spheres of life students wishing to know more about wildlife and their ecosystem, families and tourists, business people and researchers.

The researcher has all these classes of people grouped together as mentioned above and provided spaces with suit each category or group, which in turn cluster together to create a single form as the result of interaction. The design is a narrative architectural piece, intended to create a mental picture of the closeness, togetherness and interaction for the visitors like a jigsaw puzzle, each segment melting into the other create a whole new entity.

From the aerial view, we see different functions being placed together at different heights, the lowest housing an auditorium, and 4d theater with several offices and restrooms followed by the main exhibit space housing the main exhibit tank of volume 13,312m³, a walk through salt water exhibit, a gift shop, the kids cove exhibit, freshwater exhibit and restrooms after this segment the longest and highest segment which houses an open court yard dolphinarium while containing laboratories, walk through exhibits, marine gallery, cold water exhibit, library etc.

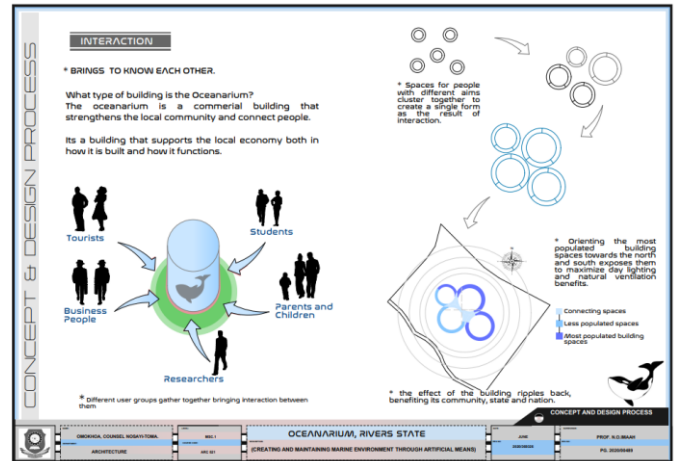


Fig. 5. Showing Concept Development, Form Description.

X. CONCLUSION

Ocean-aquariums encounter difficulties in achieving their objectives for tourism and wildlife conservation, much as aquatic wildlife tourism does. Marine tourism and oceanariums are rapidly expanding segments of the tourism industry (Penning et al., 2009), and both must figure out how to run their operations sustainably while also providing visitors with a distinctive experience. By offering an environment filled with educational marine exhibits, oceanariums are specifically created to fill the knowledge gap about all varieties of marine life.

An oceanarium's design accommodates a variety of patrons and promotes an increase in tourism. Nevertheless, just as not all tourism schemes are dedicated to the goals of sustainability, not all oceanariums are either. Many oceanariums are vibrant establishments that are vigorously thought-provoking the criticisms leveled at them and are constantly reinventing themselves to be more upbeat in reaching the goals of tourism. The disconnect between the theory of tourism and practical realities is just as pronounced in the management of ocean-aquarium operations as it is in the management of wildlife tourism (Veron, 2012).

The effort to accurately assess how effective such endeavors are in achieving their objectives is equally difficult. It is evident that ocean aquariums have the potential to support learning in the following ways: affective, behavioral, and cognitive, through the experiences they provide that are in line with ecological or wildlife tourism and conservation aims. Visitors to ocean aquariums are more likely to be interested in learning about the cultural history and natural of a place, and they are more open to proposals for individual conservation-related acts. Ocean aquariums can be viewed as crucial allies with other tourist initiatives that aim to protect the environment and support local populations by offering ethical and instructive animal encounters.

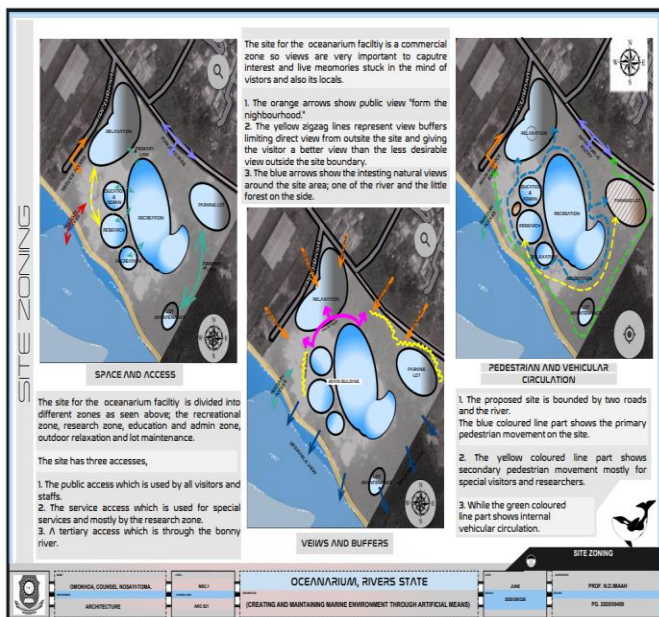


Fig. 4. Showing site zoning layout of the proposed Ocean-Aquarium

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