


## An Assessment of Tourism Infrastructure in the Niger Delta Region of Nigeria

### Abstract

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Tourism Infrastructure is a significant element that drives tourism development. Whilst that is the case, it is worrisome that many tourist sites in Nigeria lack the necessary infrastructure, with the implication that efforts at sustainable tourism development are hampered in these areas. This paper assesses the current state of ten tourism infrastructure components in the Niger Delta region of Nigeria from a sub-regional stakeholder's perspective and suggests improvements for the tourism industry. The views of tourism stakeholders were investigated through quantitative and qualitative approaches undertaken in six case study sites of the Tropical Rainforest Cluster within Niger Delta region of Nigeria. Data were collected through 347 questionnaires distributed to tourism stakeholders comprising public, and private sectors and host community members who were between 18-75 years of age. 22 structured interviews were conducted with the tourism stakeholders. The data were thematically and statistically analysed using Kruskal-Wallis independent samples test. From the findings, tourism stakeholders agreed that the current state of tourism infrastructure components in the study area is insufficient to sustain long-term regional tourism development. The findings also indicate the need to improve tourism's internal competitiveness in the area, which requires increased cooperation, support and collaboration among stakeholders, particularly through public-private partnerships.

**Keywords:** tourism, tourism infrastructure, tourism development, stakeholders, Niger Delta region

**How to cite this article:** Anunobi, H.N. & Okpoko, P.U. (2024). An Assessment of Tourism Infrastructure in the Niger Delta Region of Nigeria. *African Journal of Hospitality, Tourism and Leisure*, 13(3):682-692. DOI: <https://doi.org/10.46222/ajhtl.19770720.553>

### Introduction

Tourism infrastructure has become one of the prerequisites in strengthening international and domestic tourism competitiveness in regions (Petrova et al., 2018). Being one of the important elements necessary for successful tourism planning and development, its presence attracts tourists, induces creation of new attractions and supports existing ones, creates and enhances destination and product experience, determines destination competitiveness and improves living standard of residents and tourism destination development (Nguyen, 2021; Seetanah, et al., 2011). More so, it is critical to the economy and society's growth and development and as such, has drawn the attention of governments and development agencies all over the world. Tourism infrastructure refers to the component of a regional touristic product that consists of a variety of strategies and establishments that create quantifiable and structural foundations for tourism development, such as accommodation, food and beverage facilities, accompanying facilities, and information and communication facilities, among other things (Panasiuk, 2007). As a component of regional tourism product, the development of tourism infrastructure is very important for long-term tourism growth and general progress of tourist destination in providing services needed by tourists, regional authorities, businesses and residents. Therefore, tourism infrastructure development is undoubtedly crucial to the success of the tourism industry, whether in mature destinations or in destinations at the beginning of tourism development. Although the number of international visitors continues to increase at a rapid pace, so does the amount of money spent; this raises concerns that demand for tourism infrastructure components will rise as well. As a result, many regions are confronted with the task of developing suitable tourism infrastructure.

The attention of international development organizations has been drawn to tourism infrastructure as a critical component of achieving global competitiveness. The World Economic Forum and the United Nations World Tourism Organization released a global report in 2019 that highlights the need for new infrastructure to fulfill future tourism demands. The United Nations World Tourism Organization (UNWTO) forecast shows that by 2030, economic growth for emerging economies will reach 57%. As a result, the travel and tourism sector growth will benefit all regions of the world. In order to meet up with this trend, it is important that governments and organizations in emerging economies provide infrastructure to facilitate tourism development in tourist destination regions. Velichkina, (2014) pointed out that the regional tourism development is closely connected with tourist infrastructure, which either acts as an obstacle for the industry development or determines its positive dynamics. The relationship between infrastructure and tourism development has been theoretically established by many researchers (see Adebayo & Iweka, 2014; Eno & Aniedi 2019; Imikan & Ekpo, 2012; Mandic et al., 2018, Seetanah et al., 2011). According to Anunobi & Egere (2016), the availability of adequate infrastructure facilities is critically required for tourism attraction support and determines the reason tourists choose a particular tourist destination. Scholars have asserted that the development of tourism infrastructure which meets international standards is essential for dynamic growth of tourism businesses in a region (Balitskiy et al., 2014; Jovanovic & Illic, 2016; Pykhov & Kashina, 2015; Stepavova, 2015; Svetlana & Shulepov, 2019; Tappaskhanova et al., 2015).

Tourism is highly sensitive and influenced by infrastructure development. The implication is that failure to provide adequate infrastructure is quite worrisome because it makes achieving and maintaining service standards more difficult and as well hinders tourism development (Seetanah et al., 2011; Ionel, 2013). Indeed, the tourism industry is battling against global competition that is now focusing on key components of the supply chain rather than individual businesses (Song, 2012). The



reason is that the industry has been forced to look for ways to improve its competitiveness because of the extremely competitive environment. One of the lines of tourism industry development is creation of tourism cluster which is a territorially localized system of enterprises whose primary activity is to provide tourism and hospitality services (Miloradov & Eidlina, 2018). According to Tampakis et al. (2012), basic pre-requisite for dealing with fierce competition is the creation of infrastructure. Therefore, providing and maintaining tourism infrastructure is a critical requirement in determining a country's competitiveness. Based on this awareness, the stakeholders have invested and improved infrastructure as tourism contributes to the development of the region's infrastructural base (Telfer, 2015). Tourism boosts not only the tourism industry's operations but also stimulates investments in other tourism infrastructure elements that influence the host region's economic development (Okpoko et al., 2008). It is important to note that a region's socio-economic development, competitiveness and attractiveness are influenced by the level of tourism infrastructure development. As such, Asif, (2020) suggested that policy makers should focus on the development of tourism infrastructure and that scholars should use tourism activity specific data such as hotels, restaurants, and modes of transport which will be more helpful in guiding tourism policies in developing countries.

Nigerian government has shown interest in developing tourism and now adopted strategies to ensure that infrastructure facilities namely, good roads, water, electricity, communications and hotels, are provided at tourist destinations such as in the Niger Delta region. Tourism is currently an important segment of the Niger Delta regional economy, contributing significantly to socio-economic development, employment generation and foreign direct investment (Nwagba & Chukwu, 2020). The diversification from the mono-economy (oil) has resulted in developing the region's tourism potentials which has received significant boost in the past few years. Notwithstanding the vast tourism contributions to regional economy and potential, it is unfortunate to observe that the development of the region is faced with lots of setbacks in tourism infrastructure. The lack of infrastructure includes poor transportation, unstable and limited access to information and communication, shortage of water and sanitation supply, unstable electricity supply, security threats, etc. The problem of infrastructure needs to be addressed as it would undermine development potential in the viable tourism sector of the Niger Delta region. While several researchers have recently assessed tourism infrastructure in regional tourism development (Eno & Aniedi, 2019; Kondrateva & Shulepov, 2019; Miloradov & Eidlina, 2018; Oleh, 2020; Petrova et al., 2018; Sunitha, 2017), there is a dearth of studies on tourism infrastructure planning and investment in the Niger Delta region of Nigeria from the stakeholder's perspectives. Although Anunobi & Egere (2016), Eno & Aniedi, (2019), Imikan & Ekpo, (2012), studied infrastructure and tourism development in Nigeria, they barely touched on the Niger Delta region and sub-regional dimension, that is, tourism cluster dimension of tourism infrastructure assessment in an integrated approach. This represents a gap that the current study seeks to fill. Drawing from this background, this evaluative study assesses the current state of tourism infrastructure provision in the developing region context from the stakeholders' perspectives. The paper focuses on six selected tourist destination of the Tropical Rainforest Cluster in the Niger Delta region of Nigeria. For the purposes of this paper, tourism stakeholders are defined as people or entities that affect or are influenced by tourism activities. Broadening our awareness on the importance of investment in tourism infrastructure for regional development makes this study relevant. The findings will guide policy makers, investors and other tourism stakeholders on the composition of regional tourism infrastructure and how they might encourage fund and ensure that national and regional policies can support sustainable development of tourism infrastructure in emerging economies.

## Literature review

Tourism is a socio-economic vehicle that promotes development of infrastructure. That said, the lack of adequate infrastructure hinders tourism activities and discourages local and foreign investors, which stifles and retards development of emerging economies. Tourism infrastructure investment is one of the crucial factors influencing regional tourism development. Scholars and policy makers agree that infrastructure development plays important role in maintaining visitor arrivals and overall economic growth. According to Velichkina (2014), the study of regional tourism infrastructure requires clarifying its definition, structure and problems hindering its development. Tourism is not a single sector, rather a multi-dimensional and multi-faceted one. Therefore, there is no widely accepted definition of tourism infrastructure. The tourism infrastructure concept is not new; the scientific literature lacks its common interpretation Velichkina (2014). Tourism infrastructure, according to Bagheria et al. (2018), is a variety of facilities and services that are put in place in a particular location to meet the needs of the people who live there (Goeldner & Ritchie, 2009), as well as for tourism-related purposes. Mandic et al. (2018) in a related opinion stated that tourism infrastructure refers to all aspects of a place that permit and enhance tourism development. However, in a broader sense, it encompasses all amenities that visitors utilize when they leave their homes, travel to their destination and return home (Lohmann & Netto, 2017), even though majority of tourism infrastructures are used by residents (Fourie & Santana-Gallego, 2011; Hadzik & Gabana, 2014). Panasiuk (2008) goes on to define tourism infrastructure as a set of technologies and institutions that provide the material and organizational base for tourism development. The four basic features are accommodations, food and beverage facilities, accompanying amenities, and communication facilities.

According to the Tourism and Transport Forum (2012), accommodation, restaurant and entertainment centers, aviation, maritime, event venues, park facilities, cultural and arts amenities, transport networks and expressways, road infrastructure, and more are all included in tourism infrastructure. The transportation, social, and environmental supply chains that operate together at a regional level to generate a desirable tourism destination are referred to as tourist infrastructures. Some scholars have distinguished between tourism infrastructure and supra-structure, suggesting that the latter is dependent on the former. Every tourist attraction requires ancillary and complementary facilities, equipment, systems, processes, and resources to function well. This usually refers to the roads, railways, airports, and other infrastructure that make a tourist destination accessible to visitors. Supra-structure encompasses building facilities that exist solely as a result of the tourism-



related activity. Their primary function is to provide lodging and to accommodate the wishes of tourists in the form of hotels, campsites, restaurants, sports facilities, and other institutions of a comparable nature (Popesku, 2011).

Assessment of the development of tourism infrastructure in regions has been a subject of major interest because of its implications for decision makers' preference in identifying territorial imbalances in providing tourism infrastructure, defining pressure points and developing recommendations for national, urban and regional authorities and business communities (Stepanova & Shulepov, 2019). The Asian Development Bank (ADB, 2017) assessment recognized the tourism sector as having the potential to provide additional and alternative livelihood in poor areas and thus contribute towards developing more inclusive and equitable socio-economic development. This is to say that one of the key elements in tourism development is provision of destination infrastructure. The need then arises to take a more focused approach towards the development of tourism infrastructure, which is a major barrier towards harnessing the full potential of the tourism sector. One might argue that the development of infrastructure components is important for regional growth and development. In support, Asif (2020) suggests that policy makers should focus on the development of tourism infrastructure. He stressed that scholars should use tourism specific data, such as hotels, restaurant and modes of transport which will be more helpful in guiding tourism policies in developing countries. Considering the fact that the tourism industry is going to benefit from the forecast economic growth in the near future for the sector, it is important to develop tourism specific infrastructures in tourist destinations that will enhance the tourism product and increase tourist arrival and satisfaction. Studies that explored the development of tourism infrastructure show that they have scientific and practical significance. Stepanova & Shulepov (2019), while assessing the development of municipal tourism infrastructure, suggests a methodological approach to assessing tourism infrastructure development in order to identify territorial imbalances so that stakeholders can improve them. Miloradov & Eidlina (2018) proposes the use of multi-criteria analysis which reduces the likelihood of making incorrect development decisions and helps to improve the quality of tourism infrastructure development planning. Hossein and Hossein (2021) in a study, noted that developing countries mostly had low efficiency in the tourism industry and failed to achieve desired output level relative to their potential and their unfavorable tourism industry performance results from the lack of infrastructure, undeveloped infrastructure, and the absence of proper strategies to establish and improve infrastructure. The tourism stakeholders are very important in tourism development strategic decisions and implementation. Abdulla (2013) affirms that the level of stakeholder participation and the significance of the stakeholder perspective depend on their interests, influences and time.

The stakeholders influence successful tourism development by the way they perceive how it is being undertaken in tourist destination. Researchers have recommended that tourism developers and planners consider interests of all stakeholders in the long-term by "drawing on the knowledge and insights of stakeholders (Abdulla, 2013: 4). A stakeholder is any group or individual who can affect or is affected by the achievement of the organisation's objectives". According to Nagarjuna (2015), the private sector, government, civil societies and local communities involved in tourism development are diverse stakeholders. Particularly, each stakeholder group has varied perspectives and goals for tourism development. Abdulla, (2013) pointed out that a clear understanding of stakeholders' inclusion, support, attitudes and interests are essential precursors to planning of tourism development. While investigating the stakeholder's perspectives on tourism development in Waterloo region, Canada, Abdulla (2013) found that the stakeholders were confronted with numerous fundamental challenges, which provide constraints for tourism development. This calls for true leadership, strategy and effective collaboration between all stakeholders for tourism development. This was why Yuksel et al. (1999) cited in Abdulla (2013) emphasized the need for stakeholder feedback to facilitate tourism development, as there has been limited research on individual stakeholder perceptions (Hardy, 2005). The idea of stakeholders' perceptions has gained momentum in tourism literature. Studies have been conducted in different regions of the world such as Abdulla (2013) in Waterloo region, Ontario Canada, Bogason, et al. (2020) in Nordic region, Dabphet, (2013) in Rural towns of Thailand, Mandic et al. (2018) in Croatia, leading Southern Mediterranean destination by Petrova, (2018) and Wanner & Haider (2016) in South East Europe. The African region has also received considerable research from several development scholars who sought to investigate tourism and destination development. These studies include Onchwati et al. (2010) who explored the views of four key stakeholder groups. The findings indicate that the growth of tourism and the lack of resources to manage tourism are leading to persistent tensions between stakeholders and presenting long term threats to the tourism industry. Highlighting and investigating the lack of basic services on city tourism in the Bamenda region of Cameroun from a national and an international stakeholders' perspective, Jenling & Saeid (2019) explored potential solutions and suggested improvements that can make the region more competitive as a tourist destination. The findings showed that government negligence in providing needed infrastructure and services is one of the biggest setbacks to the smooth functioning of the tourism industry in Bamenda.

Swart et al. (2018) conducted a study on stakeholder perceptions on sport tourism development in Gabon. The findings showed that the issues of poor infrastructure, high cost of tourism, shortage of skills and corruption within government organizations need to be addressed. Odeku (2020) investigated poor road quality in Nigeria and finds that the state and condition of the road network, infrastructure, assets and facilities in Nigeria are extremely dire, which is having negative impact on virtually all socio-economic activities in the country. While assessing the availability of tourism infrastructure in South-South Nigeria, Eno & Aniedi, (2019) used infrastructure checklist and oral interview. The findings revealed a significant deficit in the number and type of infrastructure available as more than fifty percent of sampled tourist destinations lack the basic infrastructure such as accommodation, transport and health services. Therefore, the authors conclude that the sustainability of tourism in the area is in doubt except efforts are made to encourage the public-private partnership for the provision of critical infrastructure in these tourist destination sites. Irrespective of these studies, it has been revealed that achieving desirable economic growth through tourism development in developing nations and regions demands critical attention to advance policy



development and implementation on infrastructure provision. The issue of inadequate tourism infrastructure cuts across geographical boundaries and impacts economies. The tourism development of a region is dependent on how tourism infrastructure is adequately provided to meet the needs of international and domestic tourists and local communities. The Niger Delta region of Nigeria is one of the most naturally and culturally endowed places in Nigeria. The states that make up the region have made interesting giant strides in tourism development to diversify the region's economy. However, even though the region has diversified and abundant tourism resources with significance, if the challenges of investment in tourism infrastructure is limited, Niger Delta region will likely become an unattractive tourist destination. This is because no tourist would like to be confronted with inadequate tourism infrastructure, and sustainable tourism development depends on how tourism infrastructure is provided to support regional economy. There exists limited research on evaluation of tourism infrastructure provision in Niger Delta region of Nigeria and this call for more research into regional tourism cluster development. Therefore, using six tourist destination sites, this research assesses stakeholders' perceptions and suggests way forward.

### Research methodology

This study made use of a mixed-method research design, which involves the use of both quantitative and qualitative approaches. The tourism infrastructure variables evaluated in this study are the accommodation, food and beverage facilities, transport facilities, information and communication facilities, cultural facilities, sports and recreation facilities, trade facilities, water and sanitation, electricity and security facilities. During the fieldwork which lasted between October 2020 and September 2021 in tropical rain forest cluster (comprising Tinapa Business Tourist Resort, Calabar, Cross River National Park, Calabar, Marina Resort (comprising the Slave routes and River Cruising and Sea Sport Fishing Complex) Calabar, Obudu Mountain Resort, Obanliku, Akwa-Ibom Hotel and Golf Resort, Akwa-Ibom and Mary Slessor Cottage, Okonyo, Cross River State), data were collected using questionnaires and semi structured interviews. Two different Likert type (also referred to as summated rating developed by Renisis Likert) questions on a rating scale of 1-5 was used in the questionnaire. The ranges are: very low (1), low (2), moderate/average (3), high (4), very high (5) and strongly disagree (1), disagree (2), fairly agree (3), agree (4), strongly agree (5). The population of tourism stakeholders (public, private and host communities) from the six selected tourist destination sites in Akwa Ibom and Cross River state were statistically determined as 400 people between the ages of 18-75 years. The sample size was statistically determined and apportioned to the tourism stakeholders; public sectors (90), private sectors (64) and host communities (246), respectively. Purposive (Judgmental) sampling technique was used for selection of the public and private sectors because they are the providers, while convenience sampling was used for the selection of host communities based on accessibility, usage and because they influence or are influenced by the tourism infrastructure components. The questionnaires were pretested and confirmed by four (4) experts among the tourism stakeholders. In doing this, the research instrument was tested with a test-retest technique based on the responses from tourism stakeholders (public and private sector and host community) in Niger Delta region. Statistical analysis using Cronbach's alpha was used to check if the responses were significantly correlated. The acceptable scale for Cronbach's Alpha should be above 0.6 or equal to 0.8 which is said to be good. Therefore, the questions were thoroughly considered, and the measures were linked to achieve consistency (Hoang & Chu, 2011). The reliability test for the tourism stakeholders (public, private sectors and communities) was 0.72, 0.87 and 0.92, respectively, while the overall reliability was 0.87. The quantitative data were analyzed using 347 correctly filled and returned questionnaires distributed across the six (6) tourist attraction sites under study. In order to analyze the data, descriptive statistics such as frequencies and percentages were used, while inferential statistics such as Kruskal Wallis (K-W) H independent sample test was used to test the hypothesis. To support the quantitative data, qualitative data were obtained from 22 tourism stakeholders to identify the current situation of tourism infrastructure components in the study areas. The qualitative data were thematically analyzed.

### Findings

#### Stakeholders' responses

Total number of questionnaires from the tourism stakeholders were 347, although 400 (n=400) were distributed. The questionnaires from the public sector show 76 responses, that of the private sector were 51, and the host communities were 220 questionnaires. The interview responses were from 22 participants; four from each of the five study sites (20), while two responded from one tourist site; the Cross River National Park.

**Table 1: Questionnaire responses**

Respondents	Frequency of Stakeholders responses	Percentage of Stakeholder responses
Public Sector	76	21.90%
Private Sector	51	14.70%
Residents	220	63.40%
<b>TOTAL</b>	<b>347</b>	<b>100%</b>

The findings showed that out of the 347 stakeholders that responded to the survey, 230 (66.3%) were male while 117 (33.7%) were female. The highest and lowest responses came from persons within the ages of 31-40 years old with 118 (34%) and ages 71-80years with 14 (4%), respectively. Most respondents were single – 171 (49.3%) with secondary school certificate 138 (39.7%) obtained as highest educational background and occupation as students 244 (70.3%). The unemployed 29 (8.4%) and technicians/Artisans 21 (6.1%) were the least respondents. Meanwhile, 93 (26.8%) have resided in the Niger Delta Region since birth and 31 (8.9%) have resided between 0-5years and 16-20years, respectively. It was gathered that the highest earners with 116 (33.4%) earn between N30,000 and 60,000 monthly, while the least earners 18 (5.2%) earn above N150,000.



**Figure 2: Mean current state of tourism infrastructure availability**

Tourism Infrastructure	Public	Private	Host Community	Total
Hotels, guest houses	1.51	4.47	2.90	2.96
Restaurants	3.15	4.35	2.95	3.48
Transport facilities	3.00	3.10	3.00	3.03
Information & communication facilities	2.42	4.00	2.30	2.91
Cultural facilities	3.11	3.35	3.02	3.16
Sports & recreation Facilities	2.26	3.11	2.83	2.73
Trading facilities (markets/shopping malls)	2.85	4.12	2.45	3.14
Water & sanitation facilities	2.46		2.35	2.41
Electricity supply	3.01		2.83	2.92
Security infrastructure	2.48		2.71	2.56
<b>Overall</b>	<b>2.63</b>	<b>3.79</b>	<b>2.73</b>	<b>2.91</b>

### *Accommodation infrastructure*

The result of stakeholder’s perceptions on the availability of tourism infrastructure components is shown in figure two above. Based on observations, the public, private sector and host community has different perceptions with regards to tourism infrastructure availability in Niger Delta region. While the rate of availability for accommodation infrastructure were low for public sectors and host communities with mean score 1.51 and 2.90, respectively, the private sector rated the availability high with mean score of 4.47. The overall rating for availability of accommodation infrastructure is low with mean score of 2.96. The responses from the interview indicate that there are different types of accommodation facilities in Niger Delta ranging from five-star to one-star and other non-service accommodation facilities, both standard and non-standard. The findings indicate that accommodation infrastructure components are available, but the existing ones are not enough compared to what they are supposed to be in the Niger Delta region. The participants for the interviews confirmed that they have at least one accommodation facility but not currently adequate, especially the three-star hotel in Tinapa Business Resort. The Amber hotel was totally destroyed, and all the properties shattered during the End SARS protest. End SARS is a call for social justice from Nigerian youths to disband the Special Anti-Robbery Squad (SARS). The researcher observed this information to be true as the End SARS protest had negative impacts on the resort. Some of the accommodations are depreciating because of lack of maintenance.

### *Food and beverage infrastructure*

The findings show that the rate of availability for food and beverage facilities is average as the public sector and host communities rated with mean scores of 3.15 and 2.95, respectively, while the private sector rated the available facilities with a mean score of 4.35 which are very high. The overall average is 3.48 which indicated that food and beverage facilities are available in the study area on an average scale. The participants consented that they have functional and non-functional restaurants, upper and lower capacity restaurants, and modern standard and local restaurants (Food is Ready restaurants) which are said to be good and manageable restaurants.

### *Transport infrastructure*

The stakeholders have similar views in rating the availability of transport infrastructure average with mean score of 3.00, 3.10 and 3.00, respectively. The stakeholders agreed that transport facilities are available at an average scale. The participants in the interview session noted that there are transportation facilities which can be two-way access through road or water in the Niger Delta region. These participants explained that the main roads leading to the sites are federal (which are under construction) and state roads which are generally in fair condition. cars, tricycle, motorcycles, canoes and speed boats.

### *Information and communication facilities*

The findings showed that information and communication facilities availability are low within the sites. The public sector and host community rated it very low with mean scores of 2.42 and 2.30, respectively, while the private sector rated it 4.00. The participants noted that there are few business centers outside the sites, but only a few have computer services inside the resort such as Akwa-Ibom Hotel and Golf Resort. There is at least one available network which is very effective in communication in the study sites. The stakeholders agreed that MTN network is available and effective for communication by the tourists and residents in the study sites.

### *Cultural facilities*

The findings showed that the public, private sector and host communities rated average availability of cultural facilities with mean scores of 3.11, 3.35 and 3.02, respectively, with overall score of 3.16. The stakeholders added that there are not much cultural facilities in the study sites except the standard international Slave Route Museum, Studio Cinema and Theatre Hall, Cultural Souvenir shop, memorable monument referred to as independence stone built in 1960 to commemorate the Independence Day in Nigeria and Mary Slessor Cottage. Other available cultural facilities are the village square which are useful during village meetings and cultural festivals.

### *Sports and recreation facilities*

The findings reveal that the public and host communities rated the availability of sports and recreation facilities low with mean scores of 2.26 and 2.83, respectively, while the private sector rated it average with mean score of 3.11. The stakeholders noted that there are sports and recreation facilities in the form of semi or mini stadium used as school field for football in communities



within the sites, government field and standard stadium. Other available sports and recreation facilities include: volley ball court, standard golf courts, swimming pools, cable car station, badminton centre, gymnasia, game houses, water parks, canopy walk way, tennis courts, gym house, water-park, mini fall, cataract view, canopy walk way, standard and non-standard table tennis court, cable car station, mountain race track, distant natural fall, shocker board, etc.

### Trading facilities

The findings showed that the stakeholders rated the availability of trading facilities average with overall mean score of 3.14. The public and host community rated it low with mean scores of 2.85 and 2.45, while the private sector rated it high with mean score of 4.12. The stakeholders noted that trading facilities referred to as local or village markets, beach market, mini markets and big markets are mainly available at nearby or outside the sites. They trade between 7am – 6pm at some markets three times a week, while others trade daily from Monday to Sunday. The remaining markets sell only on Mondays, Fridays, Thursdays and Saturdays. The markets trade on necessary food stuffs, clothes and other things. The trading facilities found within the study sites are souvenir shop and market stalls. These facilities serve the tourists’ needs in the sites.

### Water and sanitation facilities

The public and host communities rated the availability of portable water low with mean scores of 2.46 and 2.35, respectively, and the overall rating was 2.41, which indicate that the provision of portable water in the Niger Delta region is low. The stakeholders agreed that borehole is the major source of water and is very clean for drinking in the study sites. The host communities complained that they do not have portable water but only stream water except in few sites where some community members provided borehole for them

### Electricity facilities

The findings showed that the public sector rated the availability of electricity average with a mean score of 3.0 and host communities 2.83, with an overall score of 2.95. This indicates that although there is evidence of electricity facilities, the electricity supply is low. Most participants explained that they have electricity supply from Power Holding Company of Nigeria (PHCN), but that the company do not supply steady power and as such, they support electricity with generator. Some of the host community participants explained that they receive electricity supply from Power Holding Company of Nigeria but it was through the community efforts.

### Security facilities

The availability of security infrastructure showed that the public sector rated it with a mean score of 2.48, and the host communities rated it with a mean score of 2.71. The overall rate showed low with mean score of 2.56. This indicates that the availability of security infrastructure is low in the study site. The stakeholders agreed that there are security personnel ranging from paramilitary personnel, police, private sector security men and women and local vigilante security personnel in the study sites. The most available security personnel are the locally employed vigilante but this is not enough to sustain tourism development in Niger Delta region.

**Figure 3: Mean of tourism dependence on tourism infrastructure components**

Tourism Infrastructure	Public	Private	Host Community	Total
Hotels, guest houses	2.71	4.52	2.86	3.36
Restaurants	3.39	3.94	2.75	3.36
Transport facilities	3.00	3.01	2.84	3.00
Information & communication facilities	2.48	3.91	3.10	3.16
Cultural facilities	2.80	4.23	3.41	3.48
Sports & recreation facilities	2.94	3.29	2.85	3.03
Trading facilities (markets/shopping malls)	3.19	4.00	3.29	3.49
Water & sanitation facilities	3.45		3.25	3.35
Electricity supply	3.27		3.31	3.29
Security facilities	3.01		3.00	3.00
<b>Overall</b>	<b>3.02</b>	<b>3.84</b>	<b>3.01</b>	<b>3.23</b>

The findings above showed that tourism development in the Niger Delta region depends on tourism infrastructure for development. All the stakeholders have similar view about the rate of dependency of tourism development on tourism infrastructure. The overall rating showed the mean score at 3.23. This indicates that all the tourism infrastructure components are important in tourism development in the region.

**Figure 4: Mean current state of tourism infrastructure components quality**

Tourism Infrastructure	Public	Private	Host Community	Total
Hotels, guest houses	2.31	4.05	3.37	3.24
Restaurants	2.92	4.17	3.08	3.39
Transport facilities	2.69	3.03	2.71	2.81
Information & communication facilities	2.72	3.91	3.08	3.24
Cultural facilities	2.88	2.88	3.35	3.04
Sports & recreation facilities	2.46	3.29	3.41	3.05
Trading facilities (markets/shopping malls)	2.73	3.64	2.85	3.07
Water & sanitation facilities	2.79		3.20	3.00
Electricity supply	3.03		3.25	3.14
Security facilities	2.48		2.92	2.70
<b>Overall</b>	<b>2.71</b>	<b>3.56</b>	<b>3.12</b>	<b>3.07</b>



The findings showed that the quality of tourism infrastructure is on the average except for transport facilities and security facilities which are rated low by the stakeholders with overall mean scores of 2.81 and 2.70. There are variations in the rating by the public, private sector and host communities, except for cultural facilities that have similar low rating with a mean score of 2.88 from both public and private sectors. The stakeholders pointed out that there are service and non-service, standard and non-standard accommodation facilities ranging from one star to five stars, and there are also non-classified accommodation facilities in the Niger Delta region. Only one five-star hotel was identified in Akwa-Ibom Hotel and Golf Resort. The informants noted that some of the accommodation facilities are functional, while others are not functional because of lack of maintenance and national crisis.

The restaurant facilities are moderate with standard and non-standard food and beverage facilities. Some of the informants noted that the restaurants are manageable, and some are dropping in standard. The quality of transport services and facilities is rated low by the public and host community, while the private sector rated it moderate. The overall rating showed a mean score of 2.81 which indicates low quality. The stakeholders stated that they have manageable access road with average commercial good cars and motorbikes. The federal roads are said to be abandoned while the state roads are good. With regards to the quality of information and communication facilities, the public sector rated it low with a mean score of 2.72, while the private sector and host communities rated it moderate with mean scores of 3.91 and 3.08, respectively. The findings showed that stakeholders agreed that MTN network is available and very effective for communication by the tourists and host communities in the Niger Delta region. Based on the findings, the public and host communities rated the quality of cultural facilities low while the private sector rated it moderate. The stakeholders noted that the available cultural facilities need improvement in order to attract tourists. Some of the sports and recreation facilities were standard while others were below standard. As such, the public sector rated them low while the private sector and host communities rated them moderate with mean scores of 3.29 and 3.41. The trading facilities were rated low by the public sector and host communities, while the private sector rated them moderate since they sell necessary goods to tourists and residents. The quality of water and sanitation – borehole - was rated moderate by the stakeholders who noted that the water is clean for drinking and other tourism purposes in the sites. The quality of electricity facilities was rated moderate by the public and host communities with a mean score of 3.03 and 3.25, respectively. The stakeholders explained that although there is electricity supply from PHCN, they do not enjoy constant supply but depend on the use of generator. Most of the host community participants expressed anger about the epileptic supply of electricity. The quality of security facilities and services was rated low by the public and host communities with mean scores of 2.48 and 2.92 respectively. The stakeholders noted that most tourist sites have effective local community vigilantes that guard lives and properties in the area.

**Figure 5: Mean current state of tourism infrastructure components accessibility**

Infrastructure	Public	Private	Host Community	Total
Hotels, guest houses	2.94	3.47	3.35	3.25
Restaurants	2.98	4.23	3.14	3.45
Transport facilities	2.54	3.03	2.59	2.72
Information & communication facilities	2.77	3.82	2.98	3.19
Cultural facilities	2.88	3.17	2.21	2.53
Sports & recreation facilities	2.18	3.23	3.25	3.23
Trading facilities (markets/shopping malls)	2.64	4.00	3.04	3.23
Water & sanitation facilities	2.77		3.10	2.94
Electricity supply	2.78		3.19	2.99
Security infrastructure	2.68		3.05	2.86
<b>Overall</b>	<b>2.72</b>	<b>3.56</b>	<b>3.00</b>	<b>3.04</b>

Figure 5 above, shows the accessibility of tourism infrastructure to the stakeholders were rated moderate with a mean score of 3.04. There are variations in the ratings by the stakeholders. The public sector rated the accessibility of the facilities low; the private sectors rated the accessibility moderate and high, while the host communities rated the tourism infrastructure components moderate and low. They were of the view that some of the tourism infrastructure is accessible to those that are interested in making use of them. Generally, they agreed that the tourism infrastructure components are always available for users.

**Figure 6: Mean current state for number of tourism infrastructure components**

Tourism Infrastructure	Public	Private	Host Community	Total
Hotels, guest houses	2.76	4.00	3.22	3.23
Restaurants	2.65	3.88	3.11	3.21
Transport facilities	2.39	3.15	2.56	2.70
Information & communication facilities	2.43	4.41	2.74	3.19
Cultural facilities	2.28	3.94	2.61	2.94
Sports & recreation facilities	2.25	3.47	3.26	2.99
Trading facilities (markets/shopping malls)	2.77	3.35	3.01	3.04
Water & sanitation facilities	2.55		2.93	2.74
Electricity supply	2.39		2.59	2.49
Security infrastructure	2.35		3.04	2.70
<b>Overall</b>	<b>2.48</b>	<b>3.74</b>	<b>2.91</b>	<b>2.92</b>

The result of the number of tourism infrastructure components in the Niger Delta region as shown in figure 6 was rated low by the stakeholders. Only the private sector gave a rating of moderate mean score of 3.74, while the public and host communities



rated it low with mean scores of 2.48 and 2.91, respectively. The findings revealed that the stakeholders have diverse views about the number of tourism components in the study sites. This indicates that the number of available tourism infrastructure components is not enough compared to the expectations of the stakeholders.

**Independent Sample test perceived current situation of tourism infrastructure and stage of tourism destination development in Niger Delta region**

The hypothesis was tested using the Kruskal-Wallis (K-W) H independent samples test for more than three independent samples which is considered a non-parametric approach for the parametric one-way analysis of variance (one-way ANOVA). The K-W test was considered adequate for this hypothesis since the responses are nominal and obtained from three independent stakeholder samples comprising the public sector, private sector and host communities. The test was done in order to ascertain if there are significant differences in the responses of the stakeholders on the five core measures of the stakeholders’ perceptions of the current state of tourism infrastructure components in the study area. The hypothesis was conducted at 0.05 level of significance and the results are summarized in Figure 7 below. Any p-value of the test statistic (K-W value) which is less than the 0.05 level of significance ( $p < 0.05$ ) leads to the rejection of the null hypothesis ( $H_0$ ). Multiple comparison analysis was performed for the significant results to ascertain the category of stakeholder that is significantly different from the other(s). The categories of stakeholders significantly different from the others are displayed in the last column of Figure 7.

**Figure 7: Results of independent samples Kruskal-Wallis H Test for hypothesis one in tropical rainforest cluster Niger Delta region of Nigeria**

Variable	K-W Value	P-Value	Decision	Multiple Comparison for Sig Factor(s)
Availability	46.092	0.000*	Reject $H_0$	Private Sector
Dependence	19.543	0.000*	Reject $H_0$	Private Sector
Quality	16.998	0.000*	Reject $H_0$	Private > Host > Public
Access	12.747	0.002*	Reject $H_0$	Private Sector
Number	28.809	0.000*	Reject $H_0$	Private Sector

\*Significant at 0.05, Degrees of freedom = 2. Source: Author’s computation from field survey

The findings in figure 7 show that the p-values for extent of availability, dependence of tourism on availability, quality of infrastructure, access to infrastructure and the number of infrastructures are less than the level of significance ( $p < 0.05$ ). These findings indicate that there are significant differences in the stakeholders’ perception of the current state of tourism infrastructures in the destination. Therefore, the null hypothesis was rejected for the extent of availability of tourism infrastructure, dependence of tourism on availability of infrastructure, quality of available infrastructure, usage and number of tourism infrastructure. The multiple comparison analysis revealed that the perceptions of the private sector are significantly different from the perceptions of the host communities and the public sector on the availability, dependence, usage and number of tourism infrastructure. The private sector is more positive about the availability, dependence, usage and number of tourism infrastructure while the public sector and host communities are not significantly different in their perceptions of these attributes of the current situation of the infrastructure. The perceptions of the three categories of stakeholders differ significantly from each other on the quality of the tourism infrastructure components with the private sector being more positive about the quality, followed by the public sector while the host communities are more skeptical about the quality of the tourism infrastructure in the area.

**Discussion**

This study evaluated the Niger Delta region’s stakeholders’ perceptions of tourism infrastructure provision and the way forward. Tourism infrastructure is an important regional development phenomenon and should be given adequate policy attention, especially in developing regions. This is not so in the study area as the tourism infrastructure components were found to be inadequate from the 347 stakeholders’ assessments and twenty-two interview responses collated. This finding collaborated with Eno and Aniedi’s (2019) study which concluded that tourism infrastructure was found to be inadequately distributed in Nigeria. The outcome is that many tourism destinations in Nigeria lack competitive advantage in resources and tourist attraction potential because of tourism infrastructure inadequacy. This means that the destinations cannot earn a substantial share in the global tourism market (Hosseini & Hosseini, 2021). The Niger Delta region is a developing and tourism resource rich region that requires public-private partnership in the provision of tourism infrastructure. The most available tourism infrastructure element is restaurants which indicate that the private sectors always provide food and beverage services at tourism destinations. The tourism stakeholders, especially tourist to any destination, needs sustenance services and facilities no matter how small or big. However, the stakeholders agreed that transport facilities are also available on a moderate scale. This finding is in line with Adeleke and Ayantoyinbo (2019) who found that there are strong relationships between transport and tourism and the presence of one causes the other’s development. They concluded that Nigeria should promote tourism as another source of economic booster with the development of transport infrastructures and vice-visa. The least rated available tourism infrastructure components are accommodation, information and communication, sports and recreation, water and sanitation, electricity and security infrastructure which are among the most important in tourism destination development. In as much as it is advocated that successful and future tourism development depends on intensive investment in these tourism infrastructure components, it is still found that appropriate facilities are not available in the right places and at the right time in the Niger Delta region. It is important to note that tourism infrastructure improvement can bring about better effectiveness of construction and supply of tourism services and improved source of tourism facilities in the Niger Delta region of Nigeria. The transport and security infrastructure were the least rated in quality because the major federal roads are in bad shape and most of the sites are being



guarded by local vigilante who are less equipped. This confirms the findings of Odeku (2020) who reported that although Nigeria has expansive road networks, they are in very poor condition because of the extent of damage and lack of maintenance and are mostly not motor vehicle conducive. It has now become very critically important for the tourism destinations in the Niger Delta region to provide tourism infrastructure components that are of high standard, especially transport, safety and security infrastructure. This is because Tinapa Business Resort have lost business and long-term reputation because adequate and standard security infrastructure was not put in place before and during the End SARS protest which impacted negatively on tourism activities in the destination.

The stakeholders' perceptions towards accessibility of the tourism infrastructure components was moderate which shows that the facilities are accessible on daily basis and are meant to meet the needs of tourists, the local community and other tourism stakeholders. Since tourism infrastructure is the basic need for the tourism sector development, economic growth and serves as supporting element for urban and rural activities, they are required to be accessible to tourists, local community and regional stakeholders in the Niger Delta region. This supports Nwagba & Chukwu's (2020) recent recommendations that the Nigerian government should ensure that the social insecurity experienced by the Niger Delta people is solved through infrastructural development in the region. The number of tourism infrastructure components was generally rated low although the private sector rated moderate to those ones provided by them, the public and host communities believed their number is significantly low, particularly electricity facilities. Tourism stakeholders expressed low to number of tourism infrastructure components available in the study sites. This confirms the findings of Eno & Aniedi (2019) that there is a significant deficit in the number of tourism infrastructure components in South-South Nigeria. The tourism industry in Niger Delta region needs the involvement of public private partnership in the provision of more tourism infrastructure components. A Kruskal-Wallis H (KW H) independent sample test indicates a significant difference in the stakeholders' perceptions of the current state of the tourism infrastructure components in the destination. The private sector is more positive about the availability, dependence, usage and number of tourism infrastructure while the public sector and host communities are not significantly different in their perceptions of these attributes of the current state of the infrastructure. The perceptions of the three categories of stakeholders differ significantly from each other on the quality of the tourism infrastructure elements with the private sector being more positive about the quality, followed by the public sector while the host communities were more skeptical about the quality of the tourism infrastructure in the area. The stakeholders' perceptions of tourism infrastructure components' current situation have great influence in successful tourism development by the way they perceive how it is being undertaken in destination region. This is in line with Abdulla's (2013) assertion which affirms that the level of stakeholder participation and the significance of the stakeholder perception depend on their interests, influences and the time available. In the issue of tourism destination development, it is important that tourism developers and planners consider interests of all stakeholder views and interests in the long-term by "drawing on the knowledge and insights of stakeholders. As rightly pointed out by Mandic et al. (2018), stronger or weaker public attention on tourist infrastructure development and facilities may disclose how destinations compete with their primary competitors for the target industry. The stakeholder's responses showed that the government has neglected the provision of adequate road network, portable drinking water, reliable energy supply, and good security personnel as a result of poor governance, inadequate financial backup and non-public-private partnerships which have severely hindered tourism development.

For the Niger Delta region of Nigeria, the provision of adequate tourism infrastructure in tourism destinations is necessary for achieving tourism development and there is a need for urgent action. As a well-known developing region in West Africa, the Niger Delta region can become Africa's tourism destination paradise if proactive action is urgently taken by the policy makers, government, private sector and other tourism stakeholders to prioritize the development of adequate tourism infrastructure components. The basic needs of tourists, host communities and other stakeholders in tourist destination areas must be given due attention through collaboration and consultation, especially as it regards the provision of electricity, transportation, water, security, lodging facilities, information and communication facilities, etc. Good governance, appropriate and judicious use of scarce public resources and an effective public-private partnership arrangement should be adopted in providing adequate infrastructure and tackling the challenges confronting the development of tourism infrastructure. This study is anchored on the assumption that tourism stakeholders as decision-makers have a great influence on successful regional tourism development. This they do by officially approving program documents that clearly outline the main goals and objectives of state policy in the sphere of tourism, highlighting the resources potential, infrastructure endowment, and tourist and host community needs. By so doing, regional tourism infrastructure provision and maintenance will be given priority attention in the regional program of tourism development. Tourism infrastructure has been said to be a component of regional tourism products, as such, the development of tourism infrastructure is very important for long-term tourism growth and the general progress of a destination in providing services needed by tourists, regional authorities, businesses and residents. The Niger Delta region of Nigeria is the world's third largest wetland that has great potential for tourism development, but the appalling state of infrastructure hinders tourism growth and development. Therefore, it is expected that the world's tourism stakeholders and regional authorities, policy makers and investors will be interested in research focused on the composition and enhancement of regional tourism infrastructure and how their actions are influencing tourism development in developing regions. This should serve as a guide for strategic tourism planning and development and a tool for measuring how well a regional strategy fulfills the criteria for long-term tourism development. The current situation of tourism infrastructure in the Tropical Rainforest cluster of the Niger Delta region of Nigeria is unacceptably inadequate. Some of the available tourism infrastructure components are in a very bad condition and depreciating daily. This makes some tourism destination development stage stagnant and if nothing is done, they will decline.



The regional tourism destination development and tourism infrastructure development should be evaluated more so that policy makers and tourism investors will analyze regional disparities, determine priorities for tourism sector development and understand the importance of making appropriate decisions on the type of infrastructure needed in order to expand tourism activities and ensure successful tourist destination development. This is in line with Imikan & Ekpo's (2012) observation when they pointed out that efforts towards increasing road density and quality transport service in spite of the difficult terrain in the Niger Delta are needed if enormous tourist attraction of the region must be utilized. The successful and appropriate provision and maintenance of accommodation, food and beverage facilities, transport, information and communication infrastructure, cultural facilities, sports and recreation facilities, trading facilities, water and sanitation, electricity and security infrastructure in the Niger Delta region of Nigeria will go a long way in achieving regional competitiveness and long-term tourism development which will in turn bring about success of the tourism industry, national and regional economy. The statement is further collaborated by Petrova et al. (2018) when they asserted that if a country plans to implement strategies of tourism development at the state or regional level, they should consider the development of domestic market and invest export revenue to maintain existing tourism infrastructure and support new development. An effective provision and maintenance strategy to tourism infrastructure will help to achieve regional tourism development.

## Conclusion

Tourism infrastructure is an important regional development issue that is crucial to growth and development of regional economy and society. Therefore, there is need for urgent action to provide, upgrade and maintain the tourism infrastructure components in tourist destination regions. The attention of international development organizations has been drawn to the importance of tourism infrastructure in long term tourism growth and successful tourism destination development and competitiveness. Even the respective global report and 2030 forecast of the World Economic Forum and the United Nations World Tourism Organisation in 2019 point to the need for tourism infrastructure to achieve global competitiveness, fulfill future tourism trends and demands. This study evaluates stakeholders' perceptions of the current situation of tourism infrastructure and suggests the way forward to tourism infrastructure provision. The implications of this study to achieving global competitiveness and meeting future demands for tourism infrastructure components, especially in the world's developing regions, is that many emerging regions will not meet up with the rest of the world if the challenges confronting tourism destinations are not addressed. The tourism stakeholders in the Niger Delta region needs to diligently implement policies on infrastructure provision and the private sector should be actively involved. It is recommended that a favorable environment be created by providing reliable electricity, adequate transportation system, as well as the upgrading and maintenance of other tourism infrastructure elements to attract private sector investors in tourism infrastructure investment. Nonetheless, in order to make such investments in regional development viable, adequate implementation of a well-designed infrastructure policy is required. If the government had taken concerted action to implement tourism development strategies on infrastructure provision, then the destinations would attract more tourists, increase the socio-economic well-being of the people and go a long way in increasing tourist destination development. This will help to enhance the competitiveness of the region and nation. There is also need for tourism industry stakeholders to look for ways and make tourism infrastructure development more interesting. This can be done by state government and private sector partnering in investing more funds in the tourism sector as this has the potentials to accelerate socio-economic development in the region in this time of dwindling economic situation in the country. Thus, urgent need is required to modernize, upgrade, and maintain existing infrastructure elements while providing new ones with priority attention given to reliable electricity supply in the region. On that note, this study proposes further evaluation of tourism infrastructure provision from the tourist perception in Niger Delta region of Nigeria, which will require performance evaluative study.

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