BEACH RESOURCES AND SUSTAINABLE DEVELOPMENT IN BAYELSA STATE, NIGERIA.

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ABSTRACT

This study sought to examine the relationship between beach resources and sustainable tourism development in Bayelsa state. This was against the backdrop of a number of concerns threatening the sustainable development of tourism industry in Bayelsa that solutions were sought through this study. To achieve the aim of the study, beach resources was studied for its impact on three measure of sustainable tourism development. The data for the study was gathered via the use of questionnaire distributed to the sampled beach/water tourist sites, using a sample random sampling technique, a total of 400 questionnaires was distributed, out of which 296 were used for analysis. With Pearson Moment Correlation andsimple regression, the study found that beach resources is significant predictor of sustainable tourism development in Bayelsa state. Consequently, the entire null hypothesis were rejected. On the basis of conclusion, recommendations were offered. Among other recommendation, the need for deliberate and collaborative efforts between private tourism practitioners, government and host communities towards the development of tourism sector was emphasized.

Key Words: Beach resources. Economic Development. Socio-cultural Development. Environmental Development.

Introduction

The tourism sector has witnessed consistent development and expansion for decades. We may anticipate further progress over the next 20 years. Tourism is the second-largest business in the world, after agriculture, and contributes 9.8% of the global GDP, according to estimates from the United Nations World Tourism Organization (UNWTO) (7.2billion USD). Tourism accounts for

7% (1.5 trillion USD) of the world's exports of goods and services, whereas in many developing nations it is the largest source of export amongst several industries. At the same time, it generates over 284 million employment opportunities; this connotes that tourism creates 1 in every 11 jobs across the globe. The increase in travellers from 25 million in 1950 to 1186 million in 2015 is evidence that travel is becoming more popular worldwide (UNWTO, 2016). Due to the world's increasing economic expansion, beach resources are crucial both in Bayelsa State and other parts of Nigeria. Despite these enormous potentials tourism wields, incessant governments pay little attention to the growth of tourism as a strategic source of economic independency and diversification, which is typically a source of worry to economic experts and tourism practitioners. The strategies to promote and market the touristic potentials of beach resources and tourism in Bayelsa State still suffer incoherence and inconsistency. How to incorporate tourism development within the scope of integrated beach resources and improve the one of the major obstacles facing the state's tourist sector is the probability of long-term sustainability.Due to negligence, many rivers, lakes, oceans, beaches, and other water resources have become havens for kidnappers, terrorists, and oftentimes serve as a haven or escape route for unscrupulous characters. Meanwhile, some individuals utilize the waterways and locations as public restrooms, places to dispose of their sewage, and abandon rickety ships and boats. People avoid visiting beaches, lakes, and rivers because of all these fears. The lack of sufficient restrooms and trash disposal facilities, as well as the lack of adequate safety and security measures, are additional difficulties that Bayelsa State's beaches still contend with. Some regions of the country lack the necessary modern infrastructure, and there are severe underdevelopment and poverty issues that many   potential   tourists   may   not   want   to   encounter. These issues can be resolved if beach resources are good and appealing with clear, white sand beaches, manageable waves, and hills surrounded by lush vegetation. If these conditions are met, the area has the potential to draw in a lot of local and foreign tourists through the use of water resources, beach destinations, and adventure beaches, among other things. Based on this context, the study set out to determine how beach resources and tourism growth interacted in Bayelsa State.

Aim and Objectives of the Study
The aim of this study is to empirically examine the relationship between beach resources and sustainable tourism development in Bayelsa State. The specific objectives are;

1. To examine if there is any relationship between sand resource and economic development in Bayelsa State.
2. To examine if there is any relationship that between sand resource and environmental development in Bayelsa State.
3. To examine if there is any relationship between sand resource and sociocultural development.

LiteratureReview
Theoretical Foundations

Systems Theory

Ludwig von Bertalanffy was the one who initially propounded the system theory. According to him, a system is "a collection of interrelated and inter-dependent components. A systems-theoretic point of view is offered in Leiper (1990). He suggested that it was a collection of parts, bodies, or pieces that were held together by at least one distinguishing quality. It is a unique concept that brings everyone together. Because there are systems inside systems, this denotes that everything is interconnected, has an effect on other things, and is impacted by other things. According to Easton (1953), the system does not have to respond to turbulence by simply oscillating or moving relative to its previous point of equilibrium in order for it to be seen as having done so. One strategy for lowering arousal levels is to work toward changing the environment in such a way that there is no longer a link between the individual and the environment that is both stressful and adaptive.

Systems theory provides a unique way of knowing, which makes it useful in a wide variety of research initiatives and disciplines of study. Because it has an effect on both cognition and practice in all of these areas, as well as disciplines in many more, it is also highly useful in the instruction of practical interdisciplinary subjects. As a result of this, its application to tourism research as well as the travel and tourism industry is expansive and multifaceted. General systems theory has as one of its primary goals the investigation and resolution of challenges and notions that appear challenging to an organization in the service of achieving a more extensive purpose. The goal is to simplify things as much as possible, which will have the positive side effect of making things and ideas less difficult to grasp, deal with, and control (Emery, 1981). The system method also has the advantage that academics can consider how such changes would affect the tourism system and predict how they will affect other sectors. This is a benefit that the system method offers. The experience is encapsulated inside the structure (Page & Connell, 2006). When it comes to tourism systems, one of the most essential points to bear in mind is that whatever takes happening in one location will almost certainly have repercussions in other locations. Leiper (1990) proceeded by determining the principles of the subsequent tourism system. Travellers; areas that benefit economically from tourism a path that passengers use to go from their starting location to the travel and tourism sector (including places to stay, modes of transportation, and companies and organizations that provide services and commodities to travellers); According to this research, transportation is an essential component of the tourism system, as it links regions of production to destinations that are represented in terms of the number of travellers that visit them. The beaches of Bayelsa cannot sustain or cultivate their own growth on their own. To get the full experience of the area, guests from all over the world need to go here. In order for this area to be classified as a "beach resort," it is necessary to include some extra man-made or cultural attractions. It is important to keep the transportation routes that go to this place and other locations of Bayelsa State in good condition in case tourists are interested in investigating such areas.

Conceptual Review

Beach Resources

Resources, according to Okpoko (2002), are money and materials that are available to people or nations and may be used to accomplish goals. Another definition of resource is something set aside or reserved that he can use when things go tough. There are essentially two types of materials with regard to this study in particular. Natural and cultural resources might be included. Natural resources might be those that nature has made accessible and usable. Forests, wildlife, lakes, streams, mountains, mineral ores, petroleum, and gas are a few of them. Cultural resources might be created from natural resources. Whatever originates from nature and is made up of different elements like land, mountains, valleys, rivers, waterfalls, rain, etc. is referred to as a resource since it may be used to satisfy demands and enhance the welfare of living creatures (Hendrymahendra, 2017).Beach resources relate to the kind of beach tourism that occurs (Page & Connell, 2006). All tourism-, leisure-, and recreation-related activities that take place in the coastal zone and offshore coastal waters are included in the definition of beach resources. The beach resource is built on a special resource combination at the boundary between the land and sea environments: sun, water, beaches, breathtakingly vistas, a diverse range of living things (birds, whales, corals, and so on), seafood, and a decent transit system. It is a type of land formation found beside an ocean, sea, lake, or river. It typically consists of loose particles, such as sand, gravel, shingle, pebbles, or cobblestones, which are frequently made of rock. Sometimes biological materials like mollusc shells or coralline algae make up the beach's particles. Sand and other loose sediments that make up the beach are moved by waves or currents while they are kept in suspension, creating beaches. The pressures of waves and currents cause the rock elements to move on shore, offshore, or along shore. The majority of beach materials are the results of erosive weathering.

Sand, sun, and sea are the three Ss that define the beach, and each beach has a profile and a berm. The beach's topography—both above and below the water—is described in the beach profile. It transitions from season to season as a result of the fluctuating wave energy that is felt during the summer and winter seasons, but is felt more frequently during the summer as a result of the gentle wave action. On the contrary, the beach berm is the portion of the beach that is generally above water (depending on the tide) and is more or less actively influenced by the waves at some point in the tide. This portion of the beach is known as the beach berm.

The vegetation in the intertidal zone, which may include trees, shrubs, or grasses; the type of sand and rock; and the height of the tidesfound there are among the areas above the water. Beaches are a component of coastal regions, which act as transitional zones between terrestrial and marine ecosystems and are impacted by changes in both the land and the sea. Commercial, cultural, and entertainment functions are brought about by development in beach areas. Coastal, marine, and small island resources also play a significant role in development(Suratiniet.at, 2019).

Beach resources include coastal elements like sand, forests, mangroves, water flora and fauna, cliffs, contours, and shade are all found in the surrounding area of the beach, and vistas that need to be developed and preserved, according to Suratini et al. (2019). The beach's inherent potential for scenery can be seen in the beach panorama. There are numerous types or forms of beaches. Beach resources are factors that affect the growth of coastal tourism where there are potential drivers or things that tend to have weaknesses so that they can impede the growth of coastal tourism (Oktaviani and Suryana, 2006 as cited in Suratini et al., 2019). Beaches are an interface or meeting zone between land and water. They are dynamic traits that are frequently influenced by a variety of processes and circumstances, all of which are dynamic in their own right. These consist of oceanic, geological, and climatic processes. Beaches are significant from an ecological and monetary standpoint. Sand beaches, for instance, are crucial for sea turtles' ability to lay their eggs. Additionally, beaches provide leisure opportunities for both locals and visitors. Muddy beaches are home to a variety of benthic species, which is consumed by a range of migratory and permanent birds. Beaches also provide coastal towns with places to work, beautiful, calming settings, and a way to make money through tourism. Many human activities have an impact on beaches, some of which result in issues with beach erosion, inaccessibility for locals if the beaches have been privatized, and disturbance of the nesting places. The greatest risks to beaches include sand removal and blockage, deterioration of protective ecosystems, and building on the beaches.

Sustainable Tourism Development

According to the World Tourism Organization (UNWTO), tourism is "a social, cultural, and economic phenomenon involving the travel, for pleasure or commercial purposes, of humans to sites beyond their customary surroundings." This definition is widely accepted today. These individuals, who might be visitors, excursionists, locals, or even people from out of town, take part in activities that entail spending money on tourism-related activities (United Nations World Tourism Organization, 2008). According to the World Travel & Tourism Council(2017), the tourism industry is continuing to experience phenomenal expansion, outpacing the growth of a number of other industries that make significant contributions to the economy of the entire world, such as the production of food, automobiles, and oil (UNWTO, 2016). As a result, it is essential to develop the tourist business in regions that have promise in order to capitalize on the benefits associated with doing so. The generation of profits in foreign currency, the attraction of foreign investment, the increase in tax revenues, and the creation of extra job opportunities are all ways in which tourism contributes to the expansion of the economy (Alam, &Paramati, 2016). The huge economic importance of the tourism sector is demonstrated by the repercussions of its activities. The expansion of tourism has piqued the interest of a number of governments, regional and municipal authorities, commercial investors, and other parties due to the industry's capacity to generate income and employment opportunities while also contributing significantly to a number of countries' overall contributions to their respective balances of payments. In a fundamental research that was published in 1961, Kraph claimed that tourism in underdeveloped nations serves a function that is distinct from any other industry. He referred to these responsibilities as "economic imperatives" in his statement (Kraph, 1961). Utilizing the country's

natural resources, being internationally competitive due to favourable trade circumstances, being able to produce the bulk of necessary goods and services domestically, and improving the country's overall payments balance are all goals that need to be accomplished. The benefits of tourism investment to society include job creation, the generation of multiplier effects, and the maintenance of balanced expansion. According to Kraph (1961), the tourism sector has seemed to possess the ability to generate substantial capital from reasonable investments in plant and infrastructure. This assertion comes from the author's examination of the industry. After that, the money could be redistributed to various other sectors of the economy and could result in further development since. In no time the country would begin to notice the multiplier effect of tourism investments in other areas like employment creation, educational growth, improved public transportation system, improved reputation of the country, foreign direct investment through foreign exchange opportunities amidst host of other benefits.

When promoting tourism in a way that is sustainable, the needs of both present visitors and the communities that host them are given priority, all while chances for the future are preserved and developed. This is expected to lead to the management of all resources in a way that meets economic, social, and artistic objectives while also preserving cultural integrity, basic ecological processes, biological diversity, and the system that sustains life.Therefore, it is a good idea to develop tourism in a way that is ethically and socially responsible, as well as financially and ecologically viable. The three measures of sustainable tourism development used in the study are economic, socio-cultural and environmental development.

Economic Development: this connotes the economic activities associated with tourism activities that engenders economic development in a tourism destination. It involves the creation of tourism infrastructure that leads to the maximisation of resource efficiency and minimize negative environmental impact. Other evidence of economic development includes job creation, and growth and development of the local economy, improved personal standards of living.

Socio-Cultural Development: this connotes activities that engenders quality of life of the local people in a tourism destination. Evidence of socio-cultural development includes healthy internal environment, provision of social amenities and recreational facilities, Safety (personal, household and environmental), and having access to jobs.

Environmental Sustainability – connotes preserving the environment throughEnergy efficiency, Water efficiency/Conservation, pollution prevention, reduction of greenhouse gas emissions , Waste management / recycling Material efficiency, protect and enhance biodiversity, etc.

Empirical Review

Discussion on tourism development has for long been of great concern to scholars and other stakeholders in the tourism industry. For example, a few studies have attempted to explain sustainable development from several perspectives. The social, economic, and tourist satisfaction levels of Alpha Beach were investigated and assessed by Ajani et al. (2016). Structured questionnaires were distributed to two tiers of stakeholders, including 100 locals who were willing to participate and 101 tourists, in order to collect information on socio-demographic characteristics, economic advantages, the condition of the infrastructure, the attraction of tourists to the resort centre, level of satisfaction, and likelihood of return. There was no correlation found between the ages of the respondents, their genders, or their levels of schooling. There is no statistically significant correlation between the Alpha Beach Resort's tourist attraction and the level of satisfaction felt by the hotel's guests.

In Ghana, Eshun et al. (2019) highlights how important it is to maintain the cleanliness of Ghana's beaches in order to maintain a successful and long-term coastal tourism industry. The participation of stakeholders, promotional efforts, policies to ensure clean beaches, and sanitation challenges impacting Ghanaian beaches were the primary focuses of the study's main objectives. The results revealed that there are some policies and procedures in place to keep beaches clean, particularly in Accra. Akendoretal. (2003)in South-South Nigeria, used a sample of twenty-six (26) different tourist attractions located in the South-South area of Nigeriacomprising the states of Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers. The study found a relationship that is significant and positive between marketing efforts and the growth of tourist destinations in South South, Nigeria; there is a relationship that is positive but not significant between destination attributes and this growth; and there is a relationship that is negative but not significant between demand variation management and this growth.

Suratini et al. (2019) investigated Beach Development Strategy as it relates to Tourism Destinations in Tabanan Bali. Because of its exceptional potential for growth as a tourist attraction, Pasut Beach in Tibubiu Village, Kerambitan District, Tabanan was selected as the venue for the study using purposeful sampling. Their decision was made because Pasut Beach is located in Tabanan. The sample for this research consisted of a total of 49 people, including representatives from various levels of government, prominent community figures, and actors in the tourist industry. In addition to using a SWOT analysis, this research also makes use of qualitative analysis, which provides evaluations and interpretations of the acquired data that are much more in-depth. In addition, the IFE matrix and the EFE matrix are applied in the SWOT method in order to determine the weight, rating, and score, in addition to the strategy and placement of Beach quadrant. In addition to that, models such as EFAS and IFAS are used. Pas Po has moved into Quadrant I of the S-O matrix, which indicates that both its strength and opportunity values are strong. This was accomplished by improving the quality of its human resources, particularly in the areas of technology, communication, and information mastery. Oron and Itu are both communities that can be found in Akwa, which is a state in Nigeria.

Okhiria et al. (2014) carried out a research with the purpose of investigating the effects that tourism has on native ways of life, natural environments, and human societies in these two communities. For the purpose of data collection, questionnaires that had been field-tested and validated were distributed at random to employees, merchants, and residents of the tourist areas. In all, there were 150 people who answered the survey. The analysis of the data used the concepts of simple frequency and mean scores. Despite the fact that tourism is demonstrated to be beneficial to the communities that host visitors, the research demonstrates that there are also negative ramifications that should be a matter for concern. Deterioration of the environment, eviction from agricultural land, theft of genetic material from native species, unfair labour and pay practices, and other issues are included in this category of dangers.

Rutty and Scott conducted a study in 2013 on the issue of the varied climatic preferences of beachgoers from across the world. An examination of the climatic preferences of important tourist market sectors in the Caribbean islands of Barbados, Saint Lucia, and Tobago is based on the findings of a research that involved the participation of 472 beachgoers. The primary results suggest that visitors coming from tropical regions have greater temperature preferences and tolerances than those coming from countries with a more moderate climate. In addition, a statistically significant difference was found between people living in regions with temperate and tropical climates for every single climatic variable that was examined (p 0.05); these include temperature, amount of precipitation, wind, and overall weather. Ijeomah et al. (2020) conducted a study utilizing field research and in-depth interviews to investigate the tourist destinations and activities in some coastal districts of Nigeria's Niger delta. These locations are popular tourist attractions. Finima Nature Park, Bomadi Beach, Lake Efi,Opukuma Beach, Seigbenogugu Lake, Port Harcourt Tourist Beach, River Ethiopia, and Rivotel River Resort are some of the most popular places to visit along this stretch of coast. The most common types of visitor activities in these locations are swimming, picnics, boating, sport fishing, breathing in the salty air of the ocean, sunbathing, and participating in local cultural celebrations. One of the most popular activities that visitors to the Rivotel river resort may participate in is the boat rental trip.

As a direct consequence of this, the following hypotheses were formulated:

H_{O1}: There is no significant relationship between sand resource and economic development in Bayelsa State.

H_{O2}: There is no significant relationship between sand resource and environmental development in Bayelsa State.

H_{O3}: There is no significant relationship between sand resource and sociocultural development in Bayelsa State.

Methodology

This study adopteda quasi-experimental research design. This method was considered most appropriate since the object of the study involves humans; unlike animals, plants or other object whose actions can be completely put under the control of the researcher.The study's population consists of adults in the Bayelsa East Senatorial District. The Nigerian Census figures from the National Population Commission were utilized in the study (NPC). Bayelsa State's population is expected to reach 2,537,400 by 2022, according to NPC figures. Consequently, the 2, 537, 400 individuals of Bayelsa State served as the study's population sample. The researcher used TaroTamane formula for sample size determination to obtain a sample size of 400. The beaches where the study was conducted are listed in Table 1.

Table 1: Beaches in Bayelsa State

S/N	Beach	Address(LGA)
1	Okpoama Beach	Brass LGA
2	Odioma Beach	Brass LGA
3	Bayelsa Ferry Terminal and Resorts	Nembe LGA
4	Polaku Beach	Yenegoa LGA
5	Famgbe Beach	Yenegoa LGA
6	Sagbama Beach	Sagbama LGA
7	Koluama Beach	Southern Ijaw LGA
8	Agei Palm Beach	Ekeremor LGA
9	Foropa Beach	Southern Ijaw LGA
10	Opokuma beach	Akarabiri town in Opokuma clan Kolokuma Opokuma LGA

Source: Nigerian Directory, 2021

Considering the objectivist position to this study, primary data shall be collected from all the ten (10) selected beaches in Bayelsa State aided by structured copies of questionnaire. The unit of analysis in this study are top management and other staff of beach sites in Bayelsa State. In this regard, forty (40) copies of structured questionnaire were hand delivered to these respondents representing four hundred (400) copies of questionnaire.

For the questionnaire's "beach sand resources and tourism development" variables, a 5-point Likert scale format (5 = Strongly Agree, 4 = Agree, 3 = Undecided, 2 = Disagree, 1 = Strongly Disagree) was derived from Kigenyi (2017) and modified in line with the goals of this study. The Likert-type scale of measuring variables was chosen.Beach sandresources was the predictor variable (adapted from Arcana &Wiweka, 2015;Dantata, 2011). On the other hand, the dependent variable Tourism development was measured with economic development, socio-cultural development and environment development (adapted from Dantata, 2011; Sharpley & Telfer, 2002).

The instrument used in this study was a structured questionnaire. The questionnaire was divided into four (4) sections (section A-D) containing twenty-one (33) item questions in all. Section A has five (5) questions on the demographics characteristics of the participating respondents. In section B, twelve (4) questions were generated regarding beach resources dimensions;section C was made-up of the same eight (8) questions on the measures of sustainable tourism development while section. A 5-point Likert measurement scale was used in weighting the responses.The face and content validity were confirmed by experts in the field of Tourism. In terms of reliability,the Cronbach Alpha test with a threshold of 0.7 was employed to measure dependability. The value of .823 showed that the research instrument achieved internal consistency.

Results

Table 2: Questionnaire Distribution and Retrieval

Questionnaire	Frequency	Percent
Distributed	400	100%
Not retrieved	23	5.75%
Retrieved	377	94.25%
Useful response	296	74.00%
Not used	-	NIL

The table above shows the distribution of questionnaire to respondents and retrieval. Four hundred questionnaires were administered, while three hundred and seventy seven (377) copies (91.2%) were retrieved. A total of twenty three 23 (5.75%) copies distributed questionnaire were not retrieved. The two hundred and ninety six (296) questionnaires were all useful. Data collected from respondents were statistically treated as indicated on the Table 3 below:

Table 3: Demographic profile of respondents

S/No	Demographic variables	No	Percent
1	**Gender**		
	Male	118	39.8
	Female	178	60.2
	Total	296	100.0
3	**Age**		
	20-30years	72	24.3
	31-40years	98	33.1
	41-50years	78	26.3
	51& above	48	16.3
	Total	296	100
3	**Marital status**		
	Married	132	44.6
	Single	148	49.3
	Divorced/Separated	16	6.1
	Total	296	100
4	**Educational Background**		
	SSCE	24	8.1
	OND/NCE	58	19.6
	Degree/HND	111	37.5
M.Sc/MBA		72	24.3
Ph.D/DBA		31	10.5
	Total	296	100

Section 1 of Table 3 shows the gender of respondents. 118 respondents (39.8%) were male, while 178 respondents (60.2%) were female. This information implies that majority of the respondents were female.Section 2 of Table 3 above shows the information on age brackets of the respondents. 72 respondents (24.3%), were within 20-30 years, 98 respondents (33.1%) were within 31–40 years, 78 respondents (26.3%) were within 41–50 years, while 48 respondents (16.3%) were greater than 51 years. This information shows that majority of the respondents were within the ages of 31 – 40 years. Section 3 of Table 3 shows the marital status of respondents. 132 respondents (44.6%) were married, 148 respondents (49.3%) were single, 16 respondents (6.1%) were divorced/separated. This information implies that majority of the respondents were single.

Section 5 of Table 3 shows the educational background of respondents. SSCE (24) (8.1%), OND/NCE (58) (19.6%), Degree/HND (111) (37.5%), M.Sc/MBA (72) (24.3%), Ph.D/DBA (31) (10.5%). From the information it shows that respondents with B.SC are of the majority.

Test of Hypotheses

Pearson Correlation Coefficient
For this study, Pearson Order Correlation Coefficient analysis was performed to predict the extent of sustainable tourism development in terms of qualitative and quantitative attributes: economic development and socio-economic development and environmental development.

Correlation Analysis
DECISION RULE
If   PV   < 0.05   =   Reject Ho
            PV   >0.05   =   Accept Ho

Beach sand resources and economic development
HO_1: There is no significant relationship betweenbeach sand resources and economic development

Table 4: Beach sand resources and economic development

Correlations			
		Beach Sand Resources	Economic Development
Beach Sand Resources	Pearson Correlation	1	.918**
	Sig. (2-tailed)		.000
	N	296	296
Economic Development	Pearson Correlation	.918**	1
	Sig. (2-tailed)	.000	
	N	296	296

**. Correlation is significant at the 0.01 level (2-tailed).

The information in Table 4 above shows the result of Pearson Correlation Coefficient   analysis. The correlation coefficient (r) =0.918.   This value indicates that strong relationship exists between beach sand resources and economic development. The positive sign of the correlation coefficient is an indication that a direct association exist between beach sand resources and economic development. The extent of this relationship is shown in the regression result below.

Table 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.918[a]	.843	.837	.084

a. Predictors: (Constant), Beach Sand Resources

Table 6: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.695	.158		17.089	.000
	Beach Sand Resources	.032	.060	.918	.538	.000

a. Dependent Variable: Economic Development

The table above shows the model summary and coefficients of the regression analysis. While correlation establishes that there is a significant relationship between the constructs, regression analysis shows the magnitude of the relationship.

Thus from the result, R^2 value of 0.843 shows that beach sand resources is a high predictor of economic development as it boast of 85.0% predictive capacity on economic development. This implies that beach sand resources can predict economic development to the tune of 84.3%. The result also reflects a beta value β of 0.918 (p-value 0.000). The regression models becomes =2.695+.0.918*BSR. Since the p-value 0.000 is less than the level of significance (0.005), the null hypothesis H_0 is not upheld. Therefore the alternative hypothesis is which states that there is a significant relationshipbetween beach sand resources and economic development.

Beach sand resources and environmental development
HO₃: There is no significant relationship betweenbeach sand resources and environmental development

Table 7: Beach sand resourcesand environmental development

Correlations			
		Beach Sand Resources	Environmental Development
Beach Sand Resources	Pearson Correlation	1	.946[**]
	Sig. (2-tailed)		.000
	N	296	296
Environmental Development	Pearson Correlation	.946[**]	1
	Sig. (2-tailed)	.000	
	N	296	296

**. Correlation is significant at the 0.01 level (2-tailed).

The information in Table 7 above shows the result of Pearson Correlation Coefficient   analysis. The correlation coefficient (r) =0.946. This value indicates that strong relationship exists between beach sand resources and environmental development. The positive sign of the correlation coefficient is an indication that a direct association exist between beach sand

resources and environmental   development. The extent of this relationship is shown in the regression result below.

Table 8 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.946[a]	.894	.889	.736

a. Predictors: (Constant), Beach Sand Resources

Table 9 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.244	.252		4.938	.000
	Beach Sand Resources	.608	.098	.946	6.199	.000

a. Dependent Variable: Environmental Development

The table above shows the model summary and coefficients of the regression analysis. While correlation establishes that there is a significant relationship between the constructs, regression analysis shows the magnitude of the relationship.

Thus from the result, R^2 value of 0.894 shows that beach sand resources is a high predictor of environmental development as it boast of 89.4% predictive capacity on environmental development. This implies that beach sand resources can predict environmental development to the tune of 89.4%. The result also reflects a beta value β of 0.946 (p-value 0.000). The regression models becomes =1.244+.0.946*BSR. Since the p-value 0.000 is less than the level of significance (0.005), the null hypothesis H_0 is not upheld. Therefore the alternative hypothesis is which states that there is a significant relationshipbetween beach sand resources and environmentaldevelopment.

Beach sand resources and socio-cultural development.
HO_3: There is no significant relationship between beach sand resources and socio-cultural development.

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Table 10: Beach sand resources and socio-cultural development.

Correlations		Beach Sand Resources	Socio-Cultural Development
Beach Sand Resources	Pearson Correlation	1	.890**
	Sig. (2-tailed)		.000
	N	296	296
Socio-Cultural Development	Pearson Correlation	.890**	1
	Sig. (2-tailed)	.000	
	N	296	296

**. Correlation is significant at the 0.01 level (2-tailed).

The information in Table 10 above shows the result of Pearson Correlation Coefficient analysis. The correlation coefficient (r) =0.890. This value indicates that strong relationship exists between beach sand resources and socio-cultural development. The positive sign of the correlation coefficient is an indication that a direct association exist between beach sand resources and socio-cultural development. The extent of this relationship is shown in the regression result below.

Table 11 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890[a]	.792	.779	.947

a. Predictors: (Constant), Beach Sand Resources

Table 12 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.248	.324		3.852	.000
	Beach Sand Resources	.573	.126	.890	4.543	.000

a. Dependent Variable: Socio-cultural Development

The table above shows the model summary and coefficients of the regression analysis. While correlation establishes that there is a significant relationship between the constructs, regression analysis shows the magnitude of the relationship.

Thus from the result, R^2 value of 0.792 shows that beach sand resources is a high predictor of socio-cultural development as it boast of 79.2% predictive capacity on socio-cultural development. This implies that beach sand resources can predict socio-cultural development to the tune of 79.2%. The result also reflects a beta value β of 0.890 (p-value 0.000). The regression models becomes =1.248+.0.890*BSR. Since the p-value 0.000 is less than the level of significance (0.005), the null hypothesis H_0 is not upheld. Therefore the alternative hypothesis is which states that there is a significant relationshipbetween beach sand resources and socio-culturaldevelopment.

Discussion of Findings

The findings of the study emanated from the result of hypotheses testing which had the objective to examine the relationship beach sand resources and the measures of sustainable tourism development; which are economic, environmental and socio-cultural developments.The study found that there is a significant relationship between beach sand resources and the sustainable tourism development. Specifically, the result showed a value of (r=.918, 946, 890 at$p$=000<.050) for economic development, environmental development and socio-cultural development respectively.The result is consistent with previous studies such as Simpeh and Amonsah-Tawiah (2011), and Milliman (2002) who found in their study that the business developed to offer relaxation and entertainment at the beaches enhances the organisational performance of the firms concerned as well as development of new businesses. These businesses does not only generate wealth to the owner, it also create employment opportunities to the host communities; giving them avenue for an improved economic welfare. The serene environment offered by the beach will continue to engender business growth which empowers the local people economically. Beach sand resources will continue to enhance the preservation of the environment through a good environmental programme by the tourism stakeholders. This involves managing coastal risks to maintain a pleasant and safe recreational environment, clean water and air quality, and healthy coastal ecosystems. A better environment will be provided for present generation and the future ones via good coastal management methods, especially with respect to the appropriate site of tourist infrastructure (Milliman, 2002).SimilarlySuratini et al (2019) explained in support of the finding that the economic empowerment arising from business opportunities makes it possible for the quality of life of the local people to improve. Also, the beach sand resources offer recreational ground for the local people to socialise with foreign tourists and language exchange/education.

On contrary, Eshun et al. (2019) targeted the supply of clean beaches in Ghana as the primary focus of their research in order to encourage the robust and sustainable growth of coastal tourism. The engagement of stakeholders, promotional activities, and policies to maintain clean beaches, and sanitation difficulties influencing Ghanaian beaches were the primary focuses of the study. During the course of the investigation, both quantitative and qualitative research approaches were used. A total of 150 residents in the area under investigation were chosen at random to fill out semjkvi-structured questionnaires, and the sample method used was convenience sampling. The results revealed that there are some policies and procedures in place to keep beaches clean, particularly in Accra. However, concerns such as low local participation in beach cleaning, poor image at certain sites due to inadequate sanitation, inferior facilities, and insufficient stakeholder collaboration need to be addressed in order for Ghana to achieve sustainable coastal tourism. Ajani et al. (2016) in their study also found that the community is not very satisfied with the socio-economic impact of private beach in their communities.

Conclusion

Overall, this study examined the relationship between beach sand resources and sustainable tourism development in Bayelsa state. In achieving this purpose, beach sand resources (water resources was adopted against the three pillars of sustainable tourism development (economic, environmental and socio-cultural development). The result showed that beach resources is significant predictor of sustainable tourism development in Bayelsa.Thus the study was concluded that there is need for collaborative efforts between private tourism business and other public stake holders like state and federal government and host communities in order to foster sustainable tourism development in Bayelsa state.

Recommendations

The following are recommendation of the study;

i.　Beach site managers should endeavour to ensure that sustainable planning strategies are put in place to protect and maintain the beach sand and other resources at the beach; poor state of beach facilities can dissuade tourist and this would not be healthy for the attainment of sustainable tourism development

ii.　The study also recommends that there is need for collaborative efforts between private tourism business and other public stake holders like state and federal government and host communities to come up with policies that will enhance the growth of tourism activities in order to foster sustainable tourism development in Bayelsa state.

Suggestion for Further Research

This study is focused on the relationship between beach resources and sustainable tourism development in Bayelsa state which is conducted on the broad tourism sector. Therefore, future researchers could consider adopting a longitudinal design with a lot more time allotted to particular tourist beach sites. This will enable them understand the dynamics and interplay of the phenomena under consideration.

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