INVENTORY OF TOURISM IN CROSS RIVER STATE USING GEOGRAPHICAL INFORMATION SYSTEM (GIS)

BY

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INTRODUCTION

Tourism is one of the industries with the strongest effect on the economy because it helps in developing other sectors. "Tourism is a composite of activities, facilities, services and industries that deliver a travel experience, that is, transportation, accommodation, eating and drinking establishments, entertainment, recreation, historical and cultural experiences, destination attractions, shopping and other services available to travelers away from home. GIS has been commonly used in different fields including tourism, enabling people from different countries and cultures to interact with each other. Tourism is a way of conserving the environment, creating jobs and promoting cultures. Tourism has the potential of becoming the highest generator of foreign currency. Cross river is a state in Nigeria with various tourist attractions which can be identified, mapped and database created for them if the tourist sites can be identified. Hence this paper demonstrates these capabilities of GIS for effective tourism inventory in Cross River state to make it known and readily accessible so that people can have information about them.

STATEMENT OF PROBLEM

The use of Geographic Information System for tourism inventory within Cross River state is pertinent because of the unavailabilty of up to date digital tourism spatial database for proper utilization of tourisim.

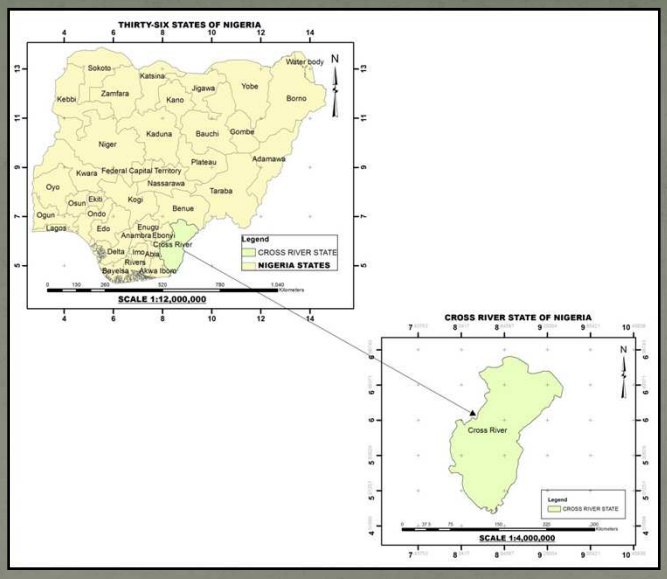
AIM OF THE STUDY

The aim of the study is to create a spatial database for tourism inventory in Cross River State using the technology of Geographic Information System.

OBJECTIVES OF THE STUDY

The objectives of the study include:

1. Database design
2. Geometric data acquisition
3. Attribute data acquisition using social survey
4. Database creation
5. Spatial analyses
6. Information presentation



Location of the study area

METHODOLOGY

Database Design

This involves three interrelated phases which are:

1.Conceptual Design

2.Logical Design and

3.Physical Design

DATA SOURCES

Primary data acquisiton was done using Handheld GPS. Secondary data used for this project was the existing map of Cross River State and the Cross River State Tourism Bureau Brochure (www.crossrivertourism.com)

DATABASE CREATION

The tables for the entities were created and populated in ARCGIS and the attribute tables were linked with geometric data.

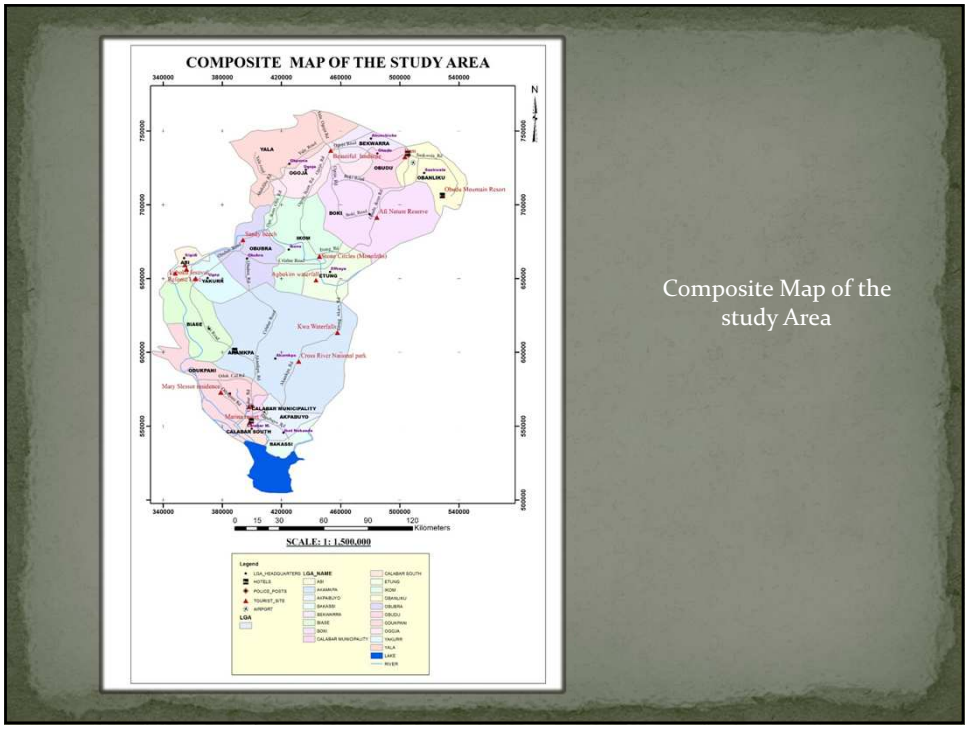
Sample table in Database Creation

Attributes of Site_2

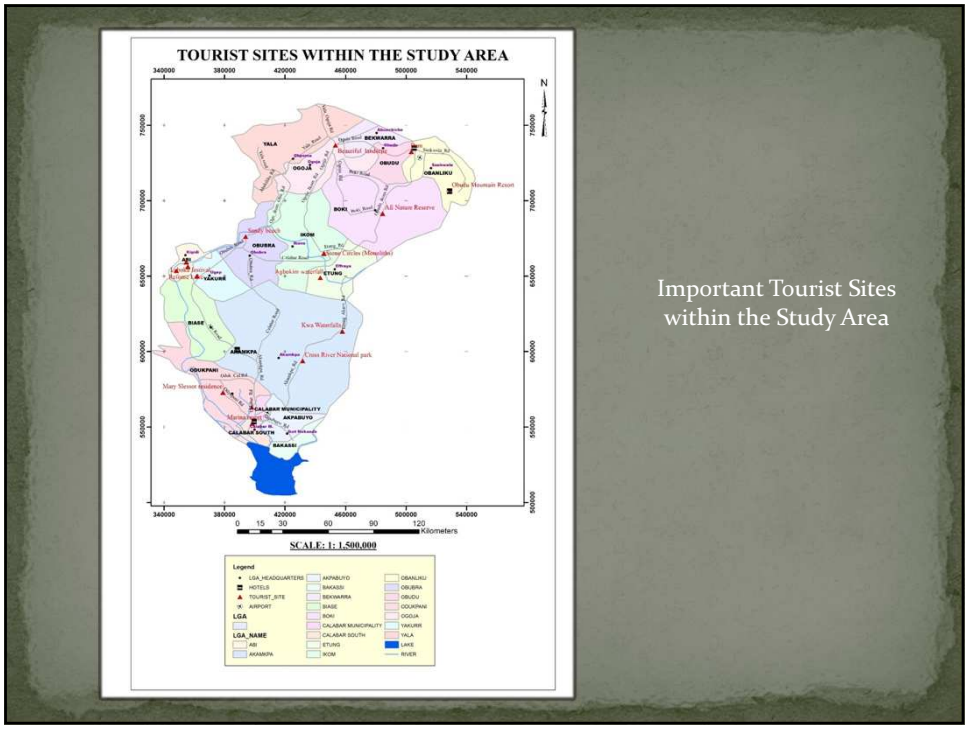
OBJECTID *	SHAPE *	Site_2	TSite_Class	Activities_Type	Tsite_ID	Tsite_location
4	Point	Tinapa	Artificial	Premier buiness and Leisure Resort	202	Cal_municipal
5	Point	Ceramic,p	Natural	Creativity	201	Itigidi_in_Abi
6	Point	Ceramic,p	National	Creativity	201	Ediba_in_Abi
7	Point	Lake	Natural	Fishing,waterfun etc	201	Ebom_in_Abi
9	Point	National p	Natural	Ecotourism.Biodiversity(plants and animals)	201	Oban_in_Akamkpa
10	Point	Water fall	Natural	Waerfall	201	Mkpat_in_Akampa
11	Point	Oasis Hot	Artificial	Eco_logges	202	Uyanga_in_Akamp
12	Point	Game Res	Natural	Gorilla mountains,Wildlife sanctuary,Pandrilus	201	Kanyang_in_Boki
15	Point	Agbo wat	Natural	Waterfall with different colours	201	Agbokin_in_Etug
16	Point	Beach	Natural	Water fun	201	Ikom
19	Point	Ranch Re	Natural	Temperate climate,Cable car,water park etc	201	Obanliku
20	Point	Sandy be	Natural	Waterfun	201	Obubra
21	Point	Mary Sle r	Artificial	Residencial house	202	Akpap_Odukpani
22	Point	Leboku fe	Artificial	Ekpe and yam festival	202	Ugep_Yakurr
23	Point	Marina re	Natural/Artificial	Historical slave trade, Boat regatta	203	Cal_South
24	Point	Dam	Artificial	Fishing and waterfun	202	Obudu
25	Point	Beautiful_I	Natural	Pinic,	201	Ogoja

SPATIAL OPERATIONS

Spatial Analytical functions of Geographical Information System (GIS) distinguishes it from other information systems. The main objective of spatial analysis is to combine and transform geodata from various sources into useful geoinformation for decision makers.



Composite Map of the study Area



Important Tourist Sites within the Study Area

TOURIST_SITE

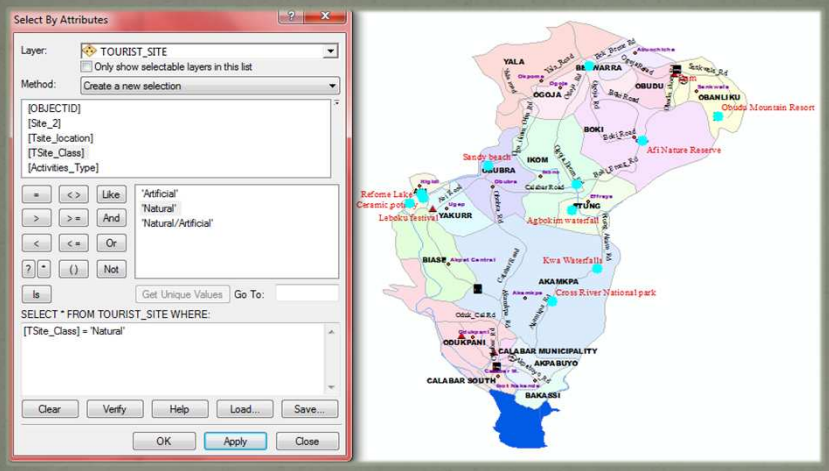
OBJECTID *	Site_2	Tsite_location	TSite_Class	Activities_Type
1	Tinapa	Cal_municipal	Artificial	Premier buiness and Leisure Resort
2	Ceramic,pottery	Itigidi_in_Abi	Natural	Creativity
3	Ceramic,pottery	Ediba_in_Abi	Natural	Creativity
4	Refome Lake	Ebom_in_Abi	Natural	Fishing,waterfun etc
5	Cross River National par	Oban_in_Akamkpa	Natural	Ecotourism.Biodiversity(plants and animals)
6	Kwa Waterfalls	Mkpat_in_Akampa	Natural	Waerfall
8	Afi Nature Reserve	Kanyang_in_Boki	Natural	Gorilla mountains,Wildlife sanctuary,Pandrilus
9	Agbokim waterfall	Agboki in_Etung	Natural	Waterfall with different colours
10	Stone Circles (Monoliths)	Ikom	Natural	Water fun
11	Obudu Mountain Resort	Obanliku	Natural	Temperate climate,Cable car,water park etc
12	Sandy beach	Obubra	Natural	Waterfun
13	Mary Slessor residence	Akpap_Odukpani	Artificial	Residencial house
14	Leboku festival	Ugep_Yakurr	Artificial	Ekpe and yam festival
15	Marina resort	Cal_South	Natural/Artificial	Historical slave trade, Boat regatta
16	Dam	Obudu	Artificial	Fishing and waterfun
17	Beautiful_landscpe	Ogoja	Natural	Pinic,

Spatial Search

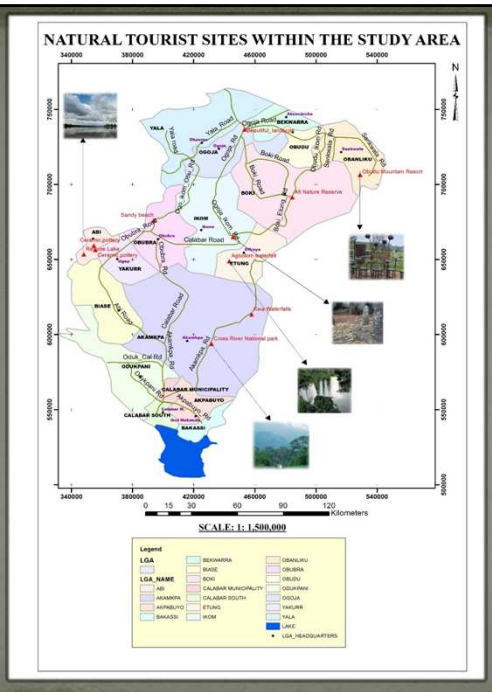
Spatial search operations involves retrieving feaures selectively using user defined logical conditions. A spatial search operation was performed to retrieve all natural tourist sites within the atudy area

Query 1: Select natural tourist sites within the study area

Syntax: [TSite_Class] = 'Natural'



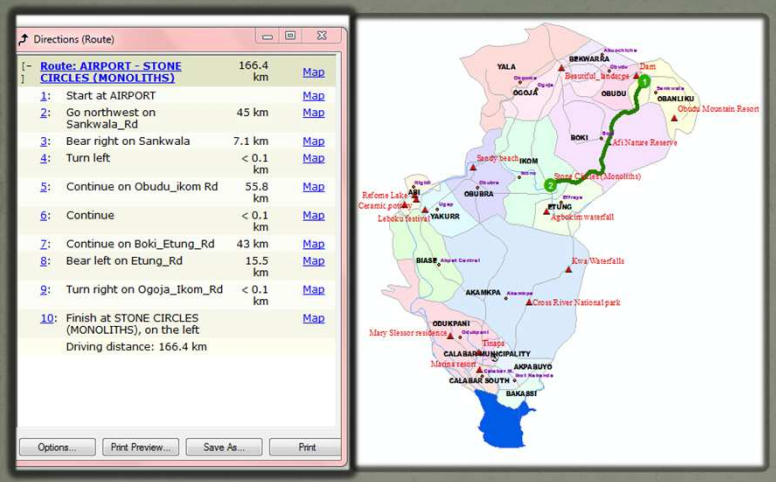
Query for natural tourist sites within the study area



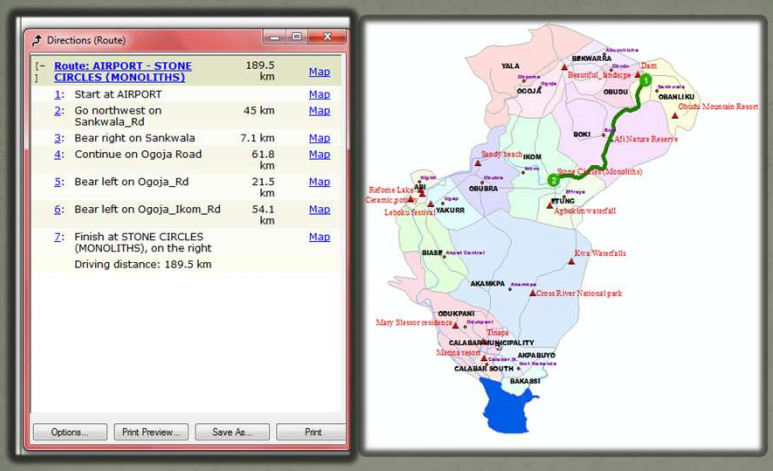
Map of important Natural Tourist Sites within the Study Area

Networl Analysis

The network analysis too is a vital component of a Geographic Information System software. It is use in analyzing transportation line to determine shortest and fastest routes within the network Network analysis is carried out to determine the routes from points on the network to a tourist's site. The first analysis here is to simulate the optimal route a tourist will take when moving within a network from Bebi A trp Airport to Stone Circle Monoliths – a tourist site



Best route analysis from Airport at Bebi A trp to Stone Circle Monoliths tourist site



Alternative route analysis from Airport at Bebi A trp to Stone CircleMonoliths tourist site

Comparison between best and alternative route

LOCATION	BEST ROUTE	ALTERNATIVE ROUTE	DIFFERENCE
Bebi Airport to Stone Circle Monolith tourist site	166.4km	189.5km	23.1km

CONCLUSION

This research has been able to demonstrate the dynamic capacities of Geographic information system application in mapping, analysis and modeling of Geographic phenomenon. This will aid tourism planning authorities, tourists, and government agencies to visualize, plan and access various tourist sites in Cross River State. It will enable tourism authority to plan for security, enable government to have electronic records of the location of each tourism site and there by enable tourist have an overview of tourism resources. It also allows for future updating of the database.

RECOMMENDATIONS

- Detailed information about tourism activities should be put in the database making them easily available and accessible.

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- The tourism database should be made to cover the road network of Cross river State and updated from time to time in other to capture new developing tourism areas and facilities that are present.

THANKS FOR LISTENING