

# Geographical information systems database of cultural heritage resources of Osogbo and their tourism potential

Titilayo O. Olukole  
School of Tourism and Hospitality,  
University of Johannesburg, South Africa.  
P.O. Box 22530, UI, Ibadan, Nigeria.  
[olukoletiti@yahoo.com](mailto:olukoletiti@yahoo.com), [toolukole@uj.ac.za](mailto:toolukole@uj.ac.za).  
Phone : +27744434134, +2348033582150

## Abstract

This paper uses the Geographical Information Systems (GIS) to create a database of the cultural heritage resources of Osogbo such that the cultural information of this heritage sites can be archived and retrieved thereby showcasing their tourism potentials. Osogbo, an ancient Yoruba town, now the capital of Osun State, plays an important role in the history of the Yoruba race, hence the need to preserve her cultural heritage using advancements in technology such as the GIS and Global Positioning Systems (GPS). The spatial locations of the major cultural resources of the area were obtained using a Garmin® Global Positioning Systems (GPS). ArcView GIS software was used in developing cartographic representation of the spatial locations of the cultural resources and then linked to the respective attribute data. This produced a database for archiving, analyzing and displaying the cultural tourism resources of Genesis Art Gallery, Nike Art Gallery, Susan Wenger's Art Gallery, First Palace of Ataoja and National Museum, Osogbo. Such documentation and digital presentation as this intends to highlight Osogbo's cultural heritage and develop her tourism potentials. The outcome of this study is expected to attract more tourists to the area while providing tourism destination managers and planners with an important preliminary tool needed for further development.

**Keywords:** GIS, Database, Cultural Heritage, Tourism, Osogbo.

## INTRODUCTION

Geographical Information Systems (GIS) is an information system for a chain of operation from a survey, collection to storage, analysis and output of spatial information for supporting decision-making (Kim, 2002). Database according to Clarke (2001) is the body of data that can be used in a database management system. While a database manager is a computer programme or set of programmes allowing a user to define the structure and organization of a database, to enter and maintain records in the database, to perform sorting, data reorganization, and searching, and also to generate useful products such as reports and graphs (Olukole, 2008). Today's world is profoundly affected by the Information Communication Technology revolution. This has enabled information and knowledge circulation at an unprecedented speed, changing all

aspects of life and economic, political and socio-cultural activities. In this information Era, it is the ability of a country to use information and communication technology effectively and efficiently that increasingly determines the relevance and competitiveness of a country in the global economy. Tourism is an industry with one of 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" (Tourism and Leisure Committee, 1997).

Cultural heritage resources are what constitute most cultural tourism sites. Cultural tourism on the other hand has

been defined as that type of tourism which includes all movement of persons to specific cultural attractions, such as heritage sites, artistic and cultural manifestations, arts and drama outside their normal place of residence (Richard, 2000). While Silberberg (1995) on the other hand views cultural tourism as visits by persons from outside the host community motivated wholly or interest in the historical, artistic and scientific or lifestyle offerings of a community, region, group or institution. Cultural tourism has been defined as 'the movement of persons to cultural attractions away from their normal place of residence, with the intention to gather new information and experiences to satisfy their cultural needs'.

### **Study Area**

Osogbo is the capital city of Osun State, Southwestern, Nigeria occupying a land mass of approximately 8,602sq kilometer. Osun State is the foremost repository of Yoruba customs and traditions with major historic cities like Ile-Ife and Osogbo. Which is a major point of attraction to Yorubas from places like Trinidad & Tobago, Cuba, Argentina, Brazil, Papua New Guinea, Haiti, South America, Barbados, Jamaica, Mexico, Puerto Rico, Uruguay, Togo, Republic of Benin, Cote-D'Ivoire and Ghana. Yoruba constitute about One Hundred and Forty Million people (140 million) of the World's total population (Jones, 1997). While the city of Osogbo play host to interesting and significant cultural heritage sites among which are the Osun Osogbo (A UNESCO World Heritage Site), Nike art gallery, Susan Wenger's art gallery, Genesis Art Gallery, First palace of Ataoja, and the National Museum Osogbo.

Also, much of research works in Osogbo have focused on the Osun Osogbo grove and the Susan Wenger's contribution to the development and conservation of the grove. However, there is a dearth of information on other cultural tourism sites within the city as well as a digital database of the cultural tourism sites. Hence, the need for a GIS database that would attract more tourists, enhance planning, and

management needed for the development of cultural tourism in the city.

The integration of the knowledge of the GIS into tourism makes tourism centres within a given geographical region readily accessible by an intending tourist. Also, it aids decision-making in tourism development and planning as organizations and communities have to come to terms with the competing economic, social and environmental demands of sustainable development. This work therefore aims at developing a GIS Database of the cultural tourism resources of Osogbo, Nigeria; thereby presenting her tourism resources in a digital form containing graphics with integrated photographs for archiving, analyzing, manipulating and displaying of the tourism information of the area. This could be of a tremendous importance in hosting the cultural tourism resources of Osogbo on the World Wide Web.

## **MATERIALS AND METHODS**

### **Surveys**

In order to have an idea of the Osogbo cultural heritage sites, the city was traversed through a surface survey during which the cultural sites of the area were identified. The unsystematic kind of surface survey was used, the investigators walked across the area of study using a random sampling technique involving the exploration of paths and the recording of their respective locations. This method gave a panoramic view of the cultural sites of Osogbo. With the aim of updating the cultural history and other viable information of Osogbo, ethnographic studies involving the key informant approach were used. The key informant method of ethnographic studies used involved the conduction of oral interviews on one-on-one basis to retrieve important information about the cultural heritage sites. Using archaeological reconnaissance survey as reported by Olukole (2009), a systematic approach was adopted to take inventory of cultural remains while noting their spatial distribution, attribute, and observing their levels of preservation.

## GIS Studies

### Creation of Spatial Data

A topographical map of Osogbo was obtained from the Federal Survey, Lagos, Nigeria. The spatial locations of the various cultural tourism resources of Osogbo were obtained using Garmin® Global Positioning System (GPS) and were represented as points on the graphical map obtained. Resources at each point were captured using digital photography. In order to create a tourism database for the city, the spatial data were used to obtain an enhanced cartographic representation of the digitized maps.

### Data Input

The following materials were used for data input:

1. A3 Scanner was used to scan the topographic map prior to the on-screen digitization, which is the process of converting analogue maps into computer readable format. This involved tracing features or locations on a map sheet and saving them to their corresponding thematic vector layers within a GIS.
2. Personal Computer (PC Pentium IV) with multimedia capability for storing and processing text, graphical and image data was used for data input, processing and analyses.

### Data Manipulation and Analysis

The collected GPS data were downloaded and saved as Text file. The choice of text file format was based on the fact that it is one of the best known methods of data interchange. This file was then imported into ArcView GIS and was added to already digitized topographical base as an event theme using Add Event Theme menu. Identification of data was followed by classification and incorporated into a GIS environment with the aid of the following softwares:

- a. Microsoft Word, which served as medium for processing, editing and display of textual information about cultural heritage sites of Osogbo.
- b. Microsoft Excel was used to key in relational tabular data which were saved in Dbase IV format.
- c. Kodak digital camera software was used in downloading the still images into PC Pentium IV where they were saved as gif (Graphic Interchange Format) files.
- d. Source map software was used in downloading the GPS recorded geographical coordinates into the PC Pentium IV.
- e. ArcView 3.3 GIS software was used to incorporate all texts, tables, maps and image into the GIS environment.

### Creation of Cultural Database

A map of the study area was extracted from the topographical map of Osogbo with the aid of coordinates obtained from the GPS of the area. Photographs of archaeological features were downloaded and saved as jpg. (Joint Photographic Experts Group) file with the aid of the Kodak digital camera software which had been earlier installed on the computer system was used. The attribute (non-locational) information of various points recorded was linked to their respective spatial (locational) features in the ArcView environment with the aid of Microsoft Excel.

The compilation and addition of text information to each location was followed by the hotlinking of edited pictures to their respective feature locations using Arc View scripts. This yielded links showing a concurrent display of graphics and pictures that is, spatial database with integrated photographs for archiving, analyzing and displaying the cultural information of the Osogbo. Thus, a hotlink to a feature on any of the maps would display the information at that point with its spatial location within the Osogbo.

## RESULTS

The findings of this work include spatial and attribute information of notable cultural centres in Osogbo: Nike Art Gallery, Osun-Osogbo Grove, Susan Wnger's Art Gallery, National Museum Osogbo and the Ataoja Palace (Figures 1-5).

### Nike Art Gallery

The Nike Centre for Art and Culture also known as Nike Art Gallery located on latitude N07 47.094, E004 31.537 was opened in 1983 by Nike Olaniyi Davies in order to create jobs for young Nigerians and to encourage Nigerian women in the arts. Besides being a popular tourists centre in Osogbo, it currently enrolls students for training in arts and crafts, while souvenirs are also made by students for sale to tourists.

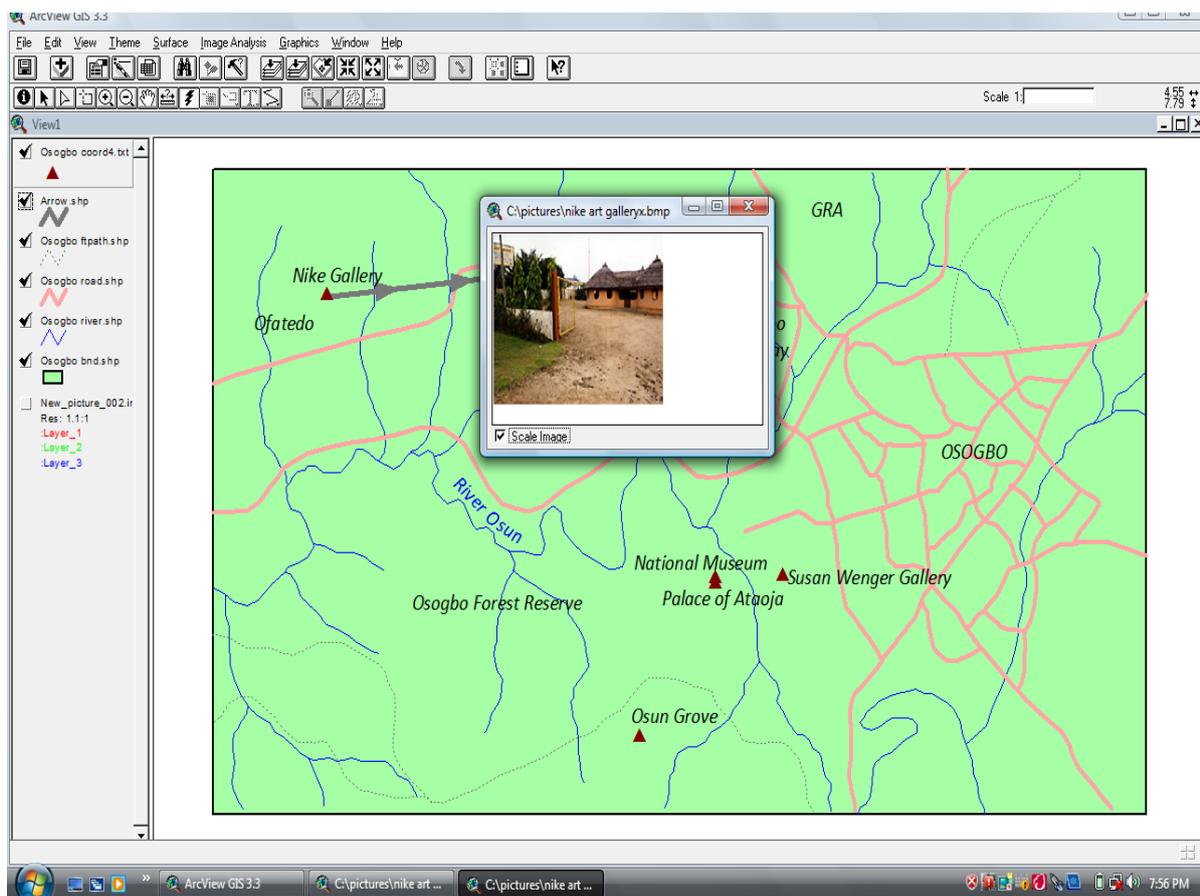


Fig. 1: A GIS database of Nike Art Gallery.

### Osun Oshogbo Grove

Osun Osogbo Sacred grove is located along the bank of Osun River in Osogbo Local Government Area of Osun State, South Western Nigeria. The Sacred Grove located on latitude N07 45.323, E 004 33.023 became a World Heritage Site in 2005. It is about 75 hectares of rainforest vegetation having about four hundred

species of plant of which over two hundred are of medicinal value to the Yoruba people. The site consists of 40 shrines, 2 palaces and many sculptures and other art works. The Osun Oshogbo annual festival which holds annually in August at the Grove with Osun worshippers from all over the world worshipping the Osun Deity is a two week long programme.

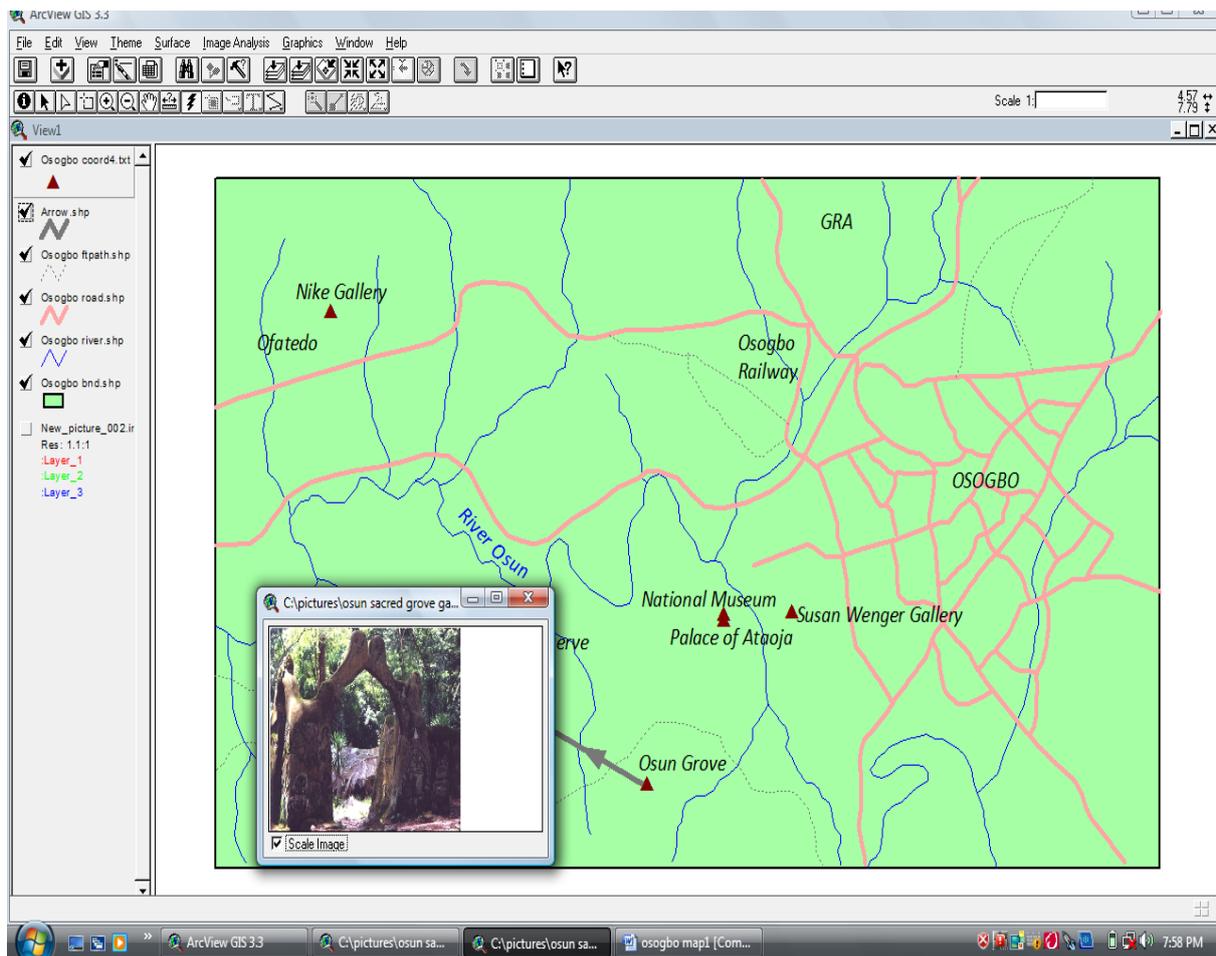


Fig. 2: A GIS database of Osun Oshogbo Grove.

### Susan Wenger Art Gallery

Susan Wenger Art Gallery is named after its founder an Austrian artist locally called "Adunni Olorisa" whose contribution to the recreation of the Osun Grove cannot be overemphasized as an Osun High Priestess. The Art Gallery at 41A Ibokun Road, Osogbo, Olorunda Local

government area is located with geographic coordinates of latitude and longitude N07 46.594, E004 33.205. It is a four-storey building which is a century-old Brazilian architectural masterpiece. It is a popular tourist attraction in Oshogbo where there are different art collections including over a hundred stone, wood and metal artworks.

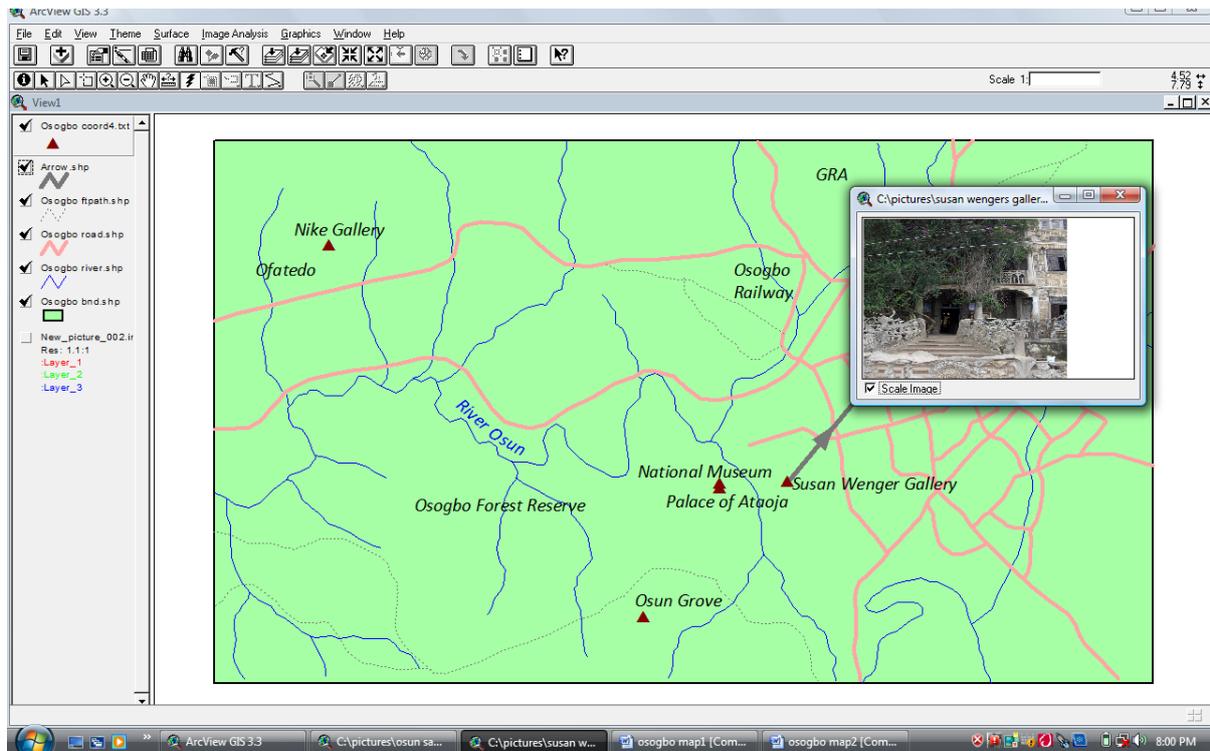


Fig. 3: A GIS database Susan Wenger’s Art Gallery.

### National Museum Osogbo

The National Museum Osogbo is one of the Federal Government owned museums which showcase the artistic values of Osogbo ranging from calabash carving,

wood carving, metal work, cloth weaving, tie-dye etc. The museum is located within latitude N07 45.961, E 004 33.379. It is an ideal place to learn more about Yoruba cultural heritage and Osun Osogbo.

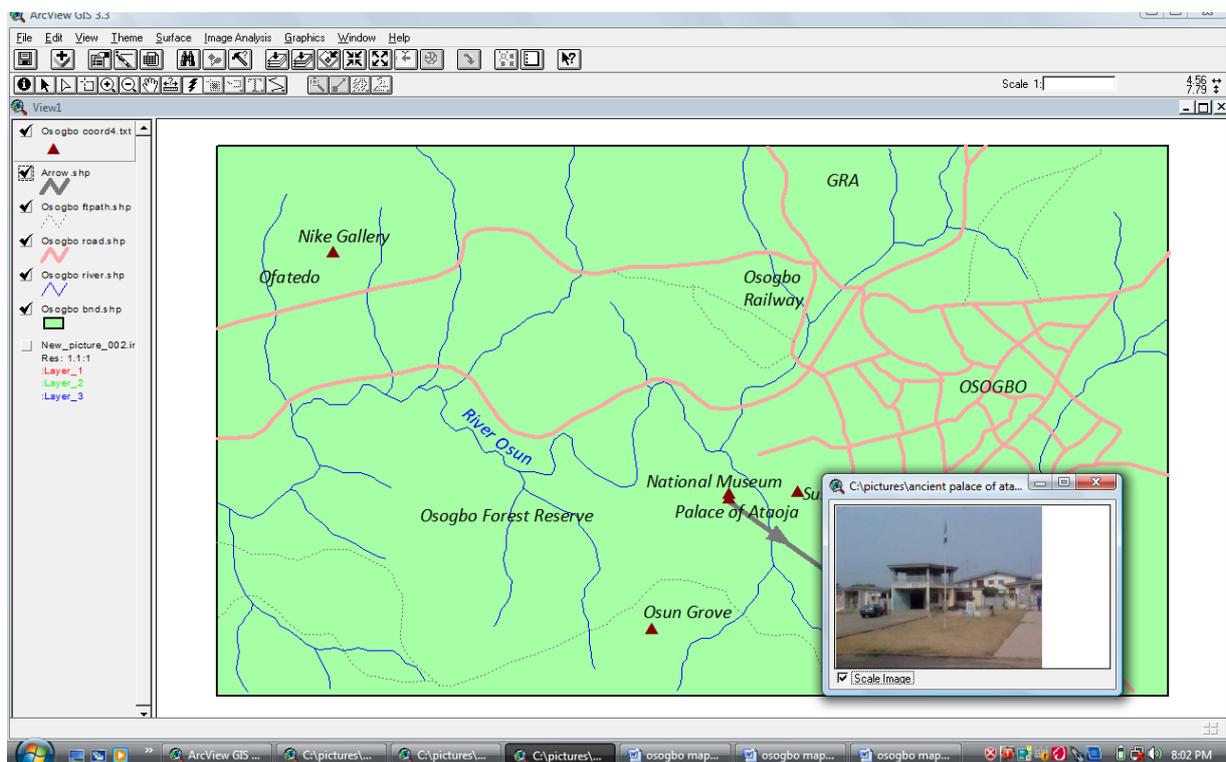


Fig. 4: National Museum Oshogbo (N07 45.961, E 004 33.379)

### The Ancient Palace of Ataoja

The palace is located in the heart of the city and it's an ideal place for tourists to learn more about the city. It has a

museum where all the historical facts about the city are being carefully preserved. The Museum, serves both conservation and educational purposes.

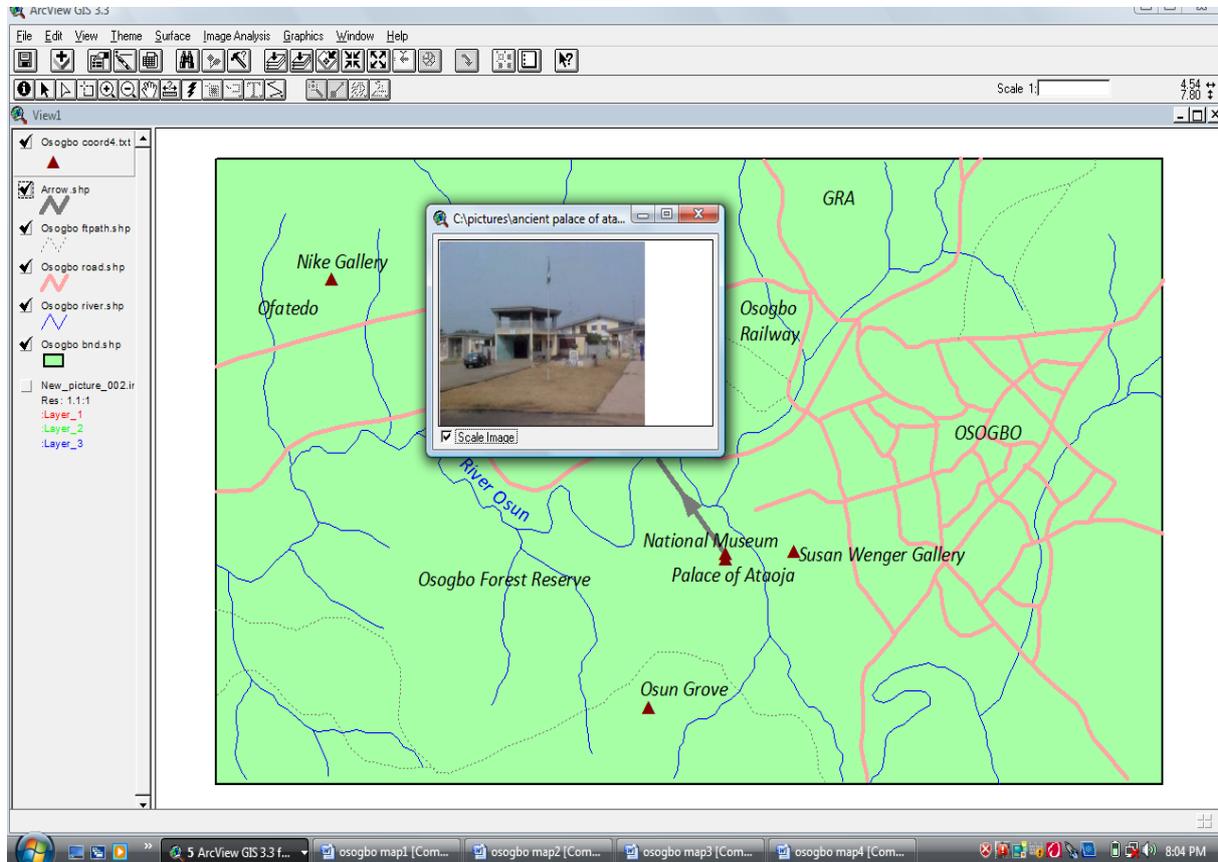


Fig. 5: Ancient palace of Ataoja (N07 45 .939, E004 33. 381).

## DISCUSSION

Cultural resources are currently receiving a fair share in the development efforts of most developing nations. In the tourism industry, this approach has manifested itself in the large number of countries that have sought UNESCO's aid in the development of cultural tourism (Okpoko and Okpoko, 2002). The city of Osogbo is fast developing into a tourist destination of international standard. For tourism potentials of the area to be optimally harnessed, necessary infrastructures and enabling environment with information on tourism resources must be available. Enabling environment in this case refers

to all the parameters required to make a complete tour, such as up to date information, good roads, functional communication system, good accommodation and adequate security. Hence, raw data on tourist sites and resources have to be collated, processed, structured, stored and organized in an easily retrievable form.

Located in Dada Estate, Osogbo, the Nike Centre for Art and Culture was opened in 1983 by Nike Olaniyi Davies in order to create jobs for young Nigerians and to encourage Nigerian women in the areas of

art and culture. The Nike Centre for Arts and Culture enrolls students from different parts of Africa, Europe, America and Canada on traditional arts, religion and culture. The centre also has ties with the traditionalists throughout Nigeria that serve as resources for those interested in investigating Nigerian traditions in more detail (Nike Centre for Arts and Culture, 2010). The centre showcases the rich cultural heritage of the Yoruba people of Nigeria and is a fast growing tourist destination in Nigeria in addition to its contribution in education especially in the areas of arts, culture and religion. This resource which conserve certain aspects of the Yoruba Heritage should be further developed and harnessed to reach its full potential as a tourist site.

The Osun Oshogbo sacred grove is a sacred forest of importance to Yoruba traditions. The grove is located in Olorunda Local government area Oshogbo. The Osun sacred grove is the largest and perhaps the only remaining once widespread phenomenon that used to characterize every Yoruba settlement. The Grove has five sacred spaces and nine worship points, the Osun River, forty shrines, two palaces which corroborate the report of ICOMOS (2005). It is also the site of the annual Osun-Osogbo festival which takes place in August, to reestablish these mystic bonds between the Osun goddess and the people of the town. The festival is a religious event to appease and venerate *oshun*--the Yoruba female deity goddess of beauty, who is also believed to have the power to heal, give children, grant wealth and protect - the festival also provides the forum for the community to renew their allegiance to the king and affirm a sense of group solidarity (Omojola, 2010). Osun is the only woman in the Yoruba Pantheon of orisa given the power of divination, and she is the only female orisa who descended from orun (the world of deities and ancestors) to aye (the earth plane). Her sweet, water healing powers extend around the African diaspora to Haiti where she is known as Erzulie, Freda or Dahomey, to Puerto Rico and Cuba where she is Ochun, and to Brazil where Osun lives as Oxum (Jones,

1997). The revitalisation of the Grove at a time when Groves in other Yoruba towns were disappearing, has given the Osogbo Grove much more than local importance. It is now seen as a symbol of identity for all Yoruba people, including those of the African Diaspora, many of whom make pilgrimages to the annual festival.

Susan Wenger's residence which is Ile Abolubode - better known as 41A Ibokun Road, Osogbo, Olorunda Local Government Area. Covered from top to bottom in bougainvilleas, the four-storey building is a century-old Brazilian architectural masterpiece. And her house is one of the most popular tourist attraction in Oshogbo where there are different art collection and also containing over a hundred stone, wood and metal artworks. She was an Austrian artist initiated into the cult of Obatala, the god of creation and whiteness who in collaboration with traditional artists clearly demarcated sacred places within the sacred grove through the erection of huge and impressive sculptures. Each of these sculptures portrays the divinity or deity of the place and illustrates some aspects of the mythology attached to it. She remains a central figure in Osogbo and an important member of the devotees who are principally in charge of the spiritual nature of Osun festival which gave rise to the name "Adunni Olorisa" (Aduuni meaning "one good to have" and Olorisa meaning the initiated, the divined, keeping contact with superhuman powers). The fusion of art and religion is at the core of Wenger's art and the singular purpose of her work is to protect the sacredness of nature. Her works present to us a mixture of architecture and sculpture.

The museum showcases the artistic values of Osogbo ranging from Calabash carving, wood carving, metal work, cloth weaving, tie-dye etc. The museum is an ideal place to learn more about Yoruba cultural heritage and Osun Oshogbo. The museum is located in Olorunda LGA, Oshogbo. It is enriched with fine collections of arts and crafts as well as archaeological relics showing prehistoric and historical past of the Yorubas. This

Museum not only showcases arts and crafts but serve as a research laboratory, a recreation centre, an educational institute and a conservation centre, hence one can say this museum has been able to meet the criteria for museum establishment as proposed by Herreman (1998) that Museums must be innovative in their professional practice without distorting or distancing it from its traditional objectives, so that it complies with the contemporary needs of the community, of the conservation of the heritage, and in this case, of tourism. It fulfils the roles of interpreting and communicating other cultures for the benefit of the local community by drawing up and implementing strategic plans of exhibition; helping the local community to understand other cultures in a socially healthy way; interpreting and communicating the local culture, both past and present, for the benefit of tourists so that they can understand it; acting as educational centres for local community in respect of introduced cultures; acting as tourists orientation centres in small communities.

The palace is located in the heart of the city and it's an ideal place for tourists to learn more about the city. The palace is located in Olorunda LGA, Oshogbo. The Ataoja is the traditional ruler of the Osogbo people. Like other Yoruba palaces, the Ataoja Palace is a custodian of Yoruba traditional arts and political structure. It has a compound palace structure known as "Agbo-Ile". This is concordance with Olukole's (2010) description of the Alaafin of Oyo's palace. The Palace also has meeting halls where communal meetings take place. There are palace drummers who are both entertainers and communicators which agree with the findings of Olukole (2010) and Omojola (2009). The palace complex includes the king's courtyard, a section that housed the royal family and the open court where all political discussions with the chiefs probably took place.

## REFERENCES

- Clarke, K.C. (2001). *Getting started with Geographic Information Systems*. 3<sup>rd</sup> ed. Upper Saddle River, NJ: Prentice Hall, p2:18.
- Herreman Y. (1998). Museums and tourism: culture and consumption. *Museum International* 50 (3): 4 – 12.
- ICOMOS (2005). World Heritage Nomination – ICOMOS Technical Evaluation Osun-Osogbo Sacred Grove, Nigeria.
- Jones, L. (1997). Performing Osun without Bodies. Documenting the Osun Festival in Print. *Text and Performance Quarterly*, 1997. Vol. 17 p.69-93.
- Kim, D. (2002). GIS for a policy Decision Support in National Tourism Portal. Korea Culture and Tourism Policy Institute. Retrieved online on April 20, 2004 from [www.kctpi.re.kr](http://www.kctpi.re.kr).
- Nike Centre for Arts and Culture (2010). Retrieved online from the [www.osunarts.org.uk/nikeart/](http://www.osunarts.org.uk/nikeart/) on December 17.
- Okpoko, A.I, and Okpoko, P.U., (2002). *Tourism in Nigeria*. Afro-Orbis Publications Limited, Nsukka, Nigeria. 2 :18 – 19.
- Olajubu, O. (2002). The Place of Susan Wenger's Art in Yoruba Religion: A Preliminary Survey. *Ijele: Art EJournal of the African World* 5:1-11.
- Olukole, T.O. (2008). Geographical Information Systems (GIS) Database of the Cultural Tourism Resources of the Old Oyo Empire, Nigeria. *9th International Joint World Cultural Tourism Conference Proceedings*, Seoul South Korea, 539-547.
- Olukole, T.O. (2009).GIS database and Wildlife-Based tourism: The case of University of Ibadan Zoo, Nigeria. *Journal of Tourism Recreation Research India*. pp 213 – 218.
- Omojola, (2009). Songs of the King's Wives. Women, Power and Performance in the Yoruba Public Sphere. *Africa Development* 34(2):47-57.

- Omojola, B. (2010). Rhythms of the Gods: Music and Spirituality in Yoruba Culture. *The Journal of Pan African Studies* 3 (5): 23 – 58.
- Richards, C. (2000). Production and Consumption of European Cultural Tourism. *Annals of Tourism Research*, 23 (2): 261-283.
- Tourism and Leisure Committee's Report (1997). Cited by Marguba L.B (2001). A keynote address on "The Relevance of Tourism (Cultural and Ecotourism) in Nigeria towards our 21<sup>st</sup> Century National Economic Development". In Aremu D (ed.) *Cultural and Ecotourism Development in Nigeria*. Hope Publications, Nigeria, pp 13-19.
- Silberberg, T. (1995), Cultural tourism and business opportunities for museums and heritage sites, *Tourism management*, 16(5), 361-5.