

Economics of Wildlife Tourism: A Case of Nimule National Park, South Sudan

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ABSTRACT

Tourism plays an important role in development and generation of foreign revenues. However, in many countries around the globe its contribution to the development by generation of foreign currency is not known. This study sought to first determine the income by wildlife tourism in Nimule National Park (NNP), second the composition of the tourists visiting the park, third the peak time of the tourists in the park and fourth to determine trends in tourists visiting the park from 2009-2014. Primary data was collected through questionnaires, key informant interviews at the park and 10 respondents from the park personnel. Secondary data was obtained from previous tourists visiting reports, and statistics. The data were analysed using descriptive statistics using PAST statistical softwares programme. The results revealed that the total income raised from wildlife tourism in NNP was 21,548.15 USD for five years (2009-2014). However, the highest income was obtained in 2012 (10,319 USD), followed by 2013 (8,201 USD) and, the least amount was obtained in 2010 (900 USD). A total of 522 tourists representing eleven nationalities visited NNP from 2009-2014 with foreigners making about 92% 482 individuals from Britain (28%), followed by Canada (13%) while Australia was the least (2%). Records on visitation of recreational sites by tourists revealed wildlife watching as the major activity, followed by rafting, photographing and research study as the least activity respectively. Tourists visited Nimule National Park mostly in February, March, May, July, October and November as from 2009-2014 respectively. Tourism activities started quite strongly in 2009 before dropping in 2010, and again picking up steadily until 2013 before falling sharply in 2014. This fall can be attributed mainly to the outbreak of the conflict in December 2013. Tourism can be promising provided there is genuine peace.

Keywords: Wildlife Tourism, Conservation, Economics of Wildlife

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INTRODUCTION

Wildlife tourism involves encounters with non-domesticated animals either in their natural environment or in captivity. It includes a wide range of activities, such as bird-watching, whale-watching, general wildlife viewing, visiting zoos and aquaria, snorkeling to view underwater life, hunting and recreational fishing” (Cooperative Research Centre, 2001). It has evolved over time. In the recent past, before the occurrence of mass tourism, visitors were content with viewing displayed animals in zoological gardens. Nowadays, many tourists prefer to see and interact with wild species in their habitats and experience a much more intimate closeness to authentic habitats (Shackley, 1996).

Tourism potentially constitutes one of the fastest growing sectors in many developing countries. It is the main source of foreign currency for at least 38% of the developing countries generating upto 80% of the foreign earning (Ashley and Roe, 1998; Wilson and Tisdell, 2003; Mintel, 2008). In addition, it provides employment, income for many people and steering development process in most of the countries. Although tourism has many benefits, it brings along with it negative impacts namely economic, social and environmental costs which if not taken care of can ruin the industry. However, these costs depend on a number of factors including the number of tourists’ visiting the country, the structure of the economy of the country offering tourism, the nature of tourism activity; and the type and susceptibility of the local environment to damage (Mvula, 2001; Benson, 2001; Upeneja *et al.*, 2001; Zawacki *et al.*, 2000). Furthermore, tourism is also affected by disease outbreaks, natural disasters and political instability (Tekin, 2015; Baker, 2015).

The Republic of South Sudan (RSS) is the world's newest country, and is in the process of establishing itself as a market-driven economic force on the African continent. One of the key economic opportunities within RSS is the tourism sector. The country is blessed with abundance of wildlife and natural features, including rivers, mountains, and the second-largest wildlife migration in the world. Nimule National Park (NNP) would be one of the model parks for tourism development given its accessibility compared to other parks in South Sudan. It is endowed with unique and outstanding varied scenic landscape. Chief among them are the Fulla Rapids and the Nile River itself. The Nile which is the longest river in the world with breath taking views meanders around and with its other features is one of the saleable assets that the park has. The river presents opportunities for different tourism activities such as rafting, boat riding, and canoeing, sport fishing.

Wildlife viewing experience in the park has been limited by dwindling wildlife populations due to poaching and overexploitation during the civil war. However, with proper protection in place wildlife numbers can easily improve in the park. The park boasts many of wildlife species such as elephants, hippo, Uganda kob, antelope species, and several birds and plant species. The park is the only place in South Sudan where elephants can be easily seen. Another interesting prospect for the park is the possible existence of chimpanzee population utilizing the northern corner of the park. If investigations confirm the existence of this population, this will be a good marketing point for the park.

The tourism industry in South Sudan is very young, and it has not been explored and properly utilized given that for a long time it has been depressed due to the persisting civil war. Apart from the insecurity other challenges that have been crippling the park's tourism industry include lack of infrastructure and marketing. The only lodge available is the Nimule Lodge, which is located in the Buffer Zone adjacent to NNP. Nimule Lodge is a facility owned and under development by the then Ministry of Wildlife Conservation and Tourism (MWC & T). The lodge property is situated on the hill with a panoramic view of the meandering White Nile and NNP itself. It offers approximately 20 beds in numerous individual structures, as well as dining facilities, a swimming pool (partially finished) and conference facilities. As highlighted in other programmes access to the park is limited by bad roads and inadequate boats to cross the Nile.

Tourism is one of the activities taking place in NNP, however, the number of tourists visiting the park per annum and per season is not known. In addition, the peak of tourists visiting the park is also unknown. Furthermore, it is not known whether tourism in the park is growing or decreasing, and the reason behind this increase or decrease is unclear in number as well as money generated that remain to be determined. The generation of this information will enable the contribution of this vital sector to development and generation of foreign revenue.

The objectives of this study were to: determine the income generated by wildlife tourism in Nimule National Park (NNP) from 2009-2014, determine the composition of the tourists visiting the park, determine the peak time of the tourists in the park and to determine trend in tourist visiting the park. Specifically, the study asked the following questions: How much income is generated in Nimule National Park?; What is the composition of the tourists by nationality in Nimule National Park?; Which seasons of the year are most preferred by the tourists in Nimule National Park?, and how do the number of tourists and the income generated by wildlife tourism vary over time?.

MATERIALS AND METHODS

Study area

Nimule National Park lies at the extreme southern end of the South Sudan bordering Uganda border between latitudes 3.35°:3 and 3.49°:2N and longitudes 31.48°:3 and 32.2°:2E (Figure 1). It covers an area of about 410 km² including the buffer zones (Hillman, 1982).

It has a continental type of climate characterized by orographic and conventional rainfall with thunderstorms. The rainy season in the park lasts from April to the end of November while the dry season runs from December to March. The mean annual rainfalls in the park varies from 1000-1200mm, and mean daily temperature is 27⁰ C with the maximum and minimum temperatures being 29⁰C and 24⁰C in March and July respectively. The vegetation of the park is dominated by deciduous

high woodland savannah. It is characterized by broad leafed and more foliage trees some of which are deciduous and others are evergreen. The grass in the park is mostly perennial and grows to a height of 1 – 1.5 meters. The park was established by the British colonial power in 1954, mainly for the protection of now extinct white rhino (*Ceratotherium simum cottoni*) and Nabi, 1956). The fauna of the park includes: elephants (*Loxodonta africana*), Hippopotamus (*Hippopotamus amphibious*), Uganda Kob (*Kobus kob*), Oribi (*Ourebia ourebi*) hyrax (*Procavia capensis*), baboon (*Papio Anubis*), vervet monkeys (*Cercopithecus*), common jackal (*Canis aureus aureus*) and leopards (*Panthera pardus*), among many other mammals. Herpetofauna of the park include Nile crocodile (*Crocodilus niloticus*), Nile Monitor lizard (*Varanus niloticus*), Savanna Monitor lizard (*Varanus exanthematicus*), and African rock python (*Python sebae*) and many other lizard species and amphibian species as well as a diverse avifauna (Baya, 2016; Hillman and Fryxell, 1988).

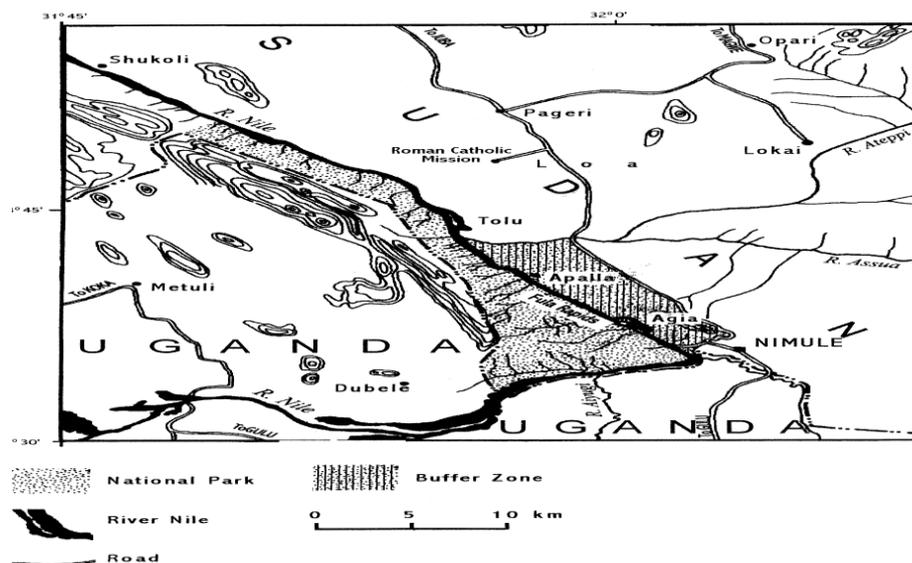


Figure 1. Nimule National Park location

Research design, sample size and sampling procedure

The study was conducted using primary and secondary sources. In the primary, a pilot survey was conducted to test few sample structured questionnaires. This was to evaluate for its strengths and weaknesses and to improve its reliability and for clarity checks. Thereafter, certain adjustments were made and incorporated in the questionnaires.

Data from this survey exercise were collected from both primary and secondary sources with, primary data sources involving the use of questionnaires, oral interviews, observations, image capturing (photographs) by digital camera. Second, primary data was collected through a sample of 50 respondents comprising 30 household respondents and 20 key informants to fill and to return them as soon as they finished. However, a good number of them who were unable to fill were assisted by the researcher (Shilabu, 2008). Secondary data were collected from previous tourist visitor's files and records found at wildlife administration of Nimule National Park from the year 2009-2014. Data about the origins being (international or domestic) were obtained, the purpose of their visit, their entry fee, season of the visit information were also retrieved. This information was then recorded and tallied for further analysis.

Data analysis

The raw data for both primary and secondary sources were coded, entered and managed in individual analytical tools. The data was then subjected to descriptive statistical analysis using statistical softwares program of PAST that integrates spreadsheet-type data entry with univariate statistics, curve fitting, time-series analysis, and simple data plotting in bar and pie chart.

The analysis majorly focused on the independent variables retrieved from previous tourists' records which include: Composition of tourists by nationality, purpose of tourists visiting NNP, income generated from wildlife tourism, peak time in tourism activity, and the trend in tourism activity over the selected six years of wildlife recreational activity. The analysed content was further depicted in frequencies, percentages, means and standard deviation. The results were then displayed in simpler descriptive statistics inform of tables, graphs, and charts.

RESULTS

Income generated through Wildlife Tourism and purpose of visit to the park

The total amount of money raised through wildlife tourism in the five years was Twenty one thousand five hundred and forty eight U.S Dollars (21,548 USD) with the highest income of ten thousand three hundred and nineteen U.S Dollars (10,319 USD) generated through wildlife tourism in the year 2012 followed by an income of eight thousand two hundred and one U.S Dollars (8, 201 USD) in the year 2013 which dropped by 21% from the value observed in 2012. The least amount of income generated through tourism was nine hundred U.S Dollars (900 USD) in the year 2010 (Figure 2).

Tourists visited Nimule National Park mainly for watching wildlife followed by rafting the animals and scenery (Table 1)

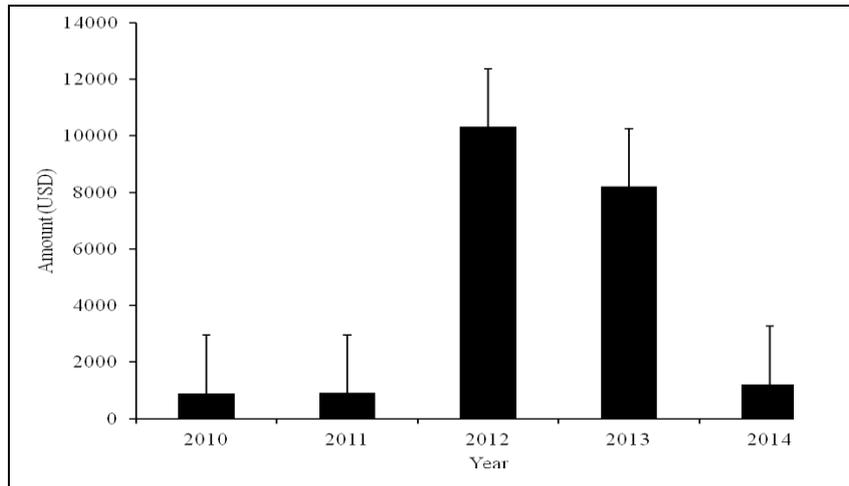


Figure 2. Income accrued to wildlife tourism from 2009-2015

Table 1. Tourists purpose of visiting Nimule National Park from 2009-2014

Year	Wildlife watching	Photographing	Rafting	Research
2009	44.0	32.0	0.0	18.0
2010	21.0	44.0	0.0	0.0
2011	37.0	3.0	29.0	8.0
2012	76.0	0.0	46.0	0.0
2013	96.0	7.0	23.0	22.0
2014	14.0	0.0	0.0	0.0
Mean	48.0	14.3	16.3	8.0
Std. Error	±13.1	±7.7	±7.9	±4.0

Composition of tourists visiting Nimule National Park by nationality

Overall 522 tourists representing eleven nationalities visited Nimule National Park from 2009-2014, with 482 foreigners making the bulk by 92% and only 40 South Sudanese making 8% of the tourists visited the park over the six-year period. British nationals led by having 147, which made

28% of individuals, followed by Canada 13% (70 individuals) and the least was Australia with 2% (12 individuals) only (Figure. 3).

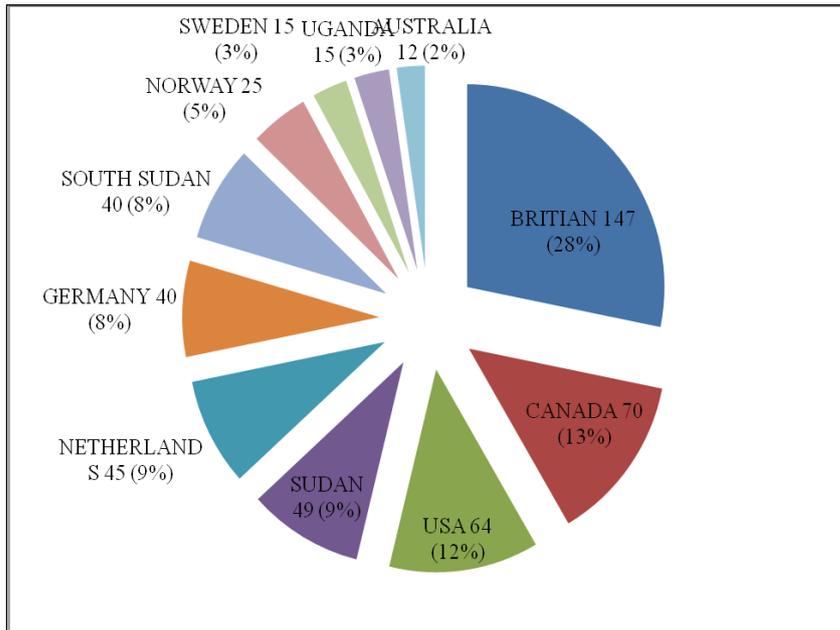


Figure 3. Composition of tourists who visited Nimule National Park from 2009-2014

Peak time and trend of tourism activity in Nimule National Park

Tourists visited Nimule National Park mostly in February, March, May, July, October and November during 2009-2014 period (Figure. 4). Tourism activities started quite strongly in 2009 before dropping in 2010, and again started picking up steadily until 2013 before falling sharply in 2014 (Figure 5).

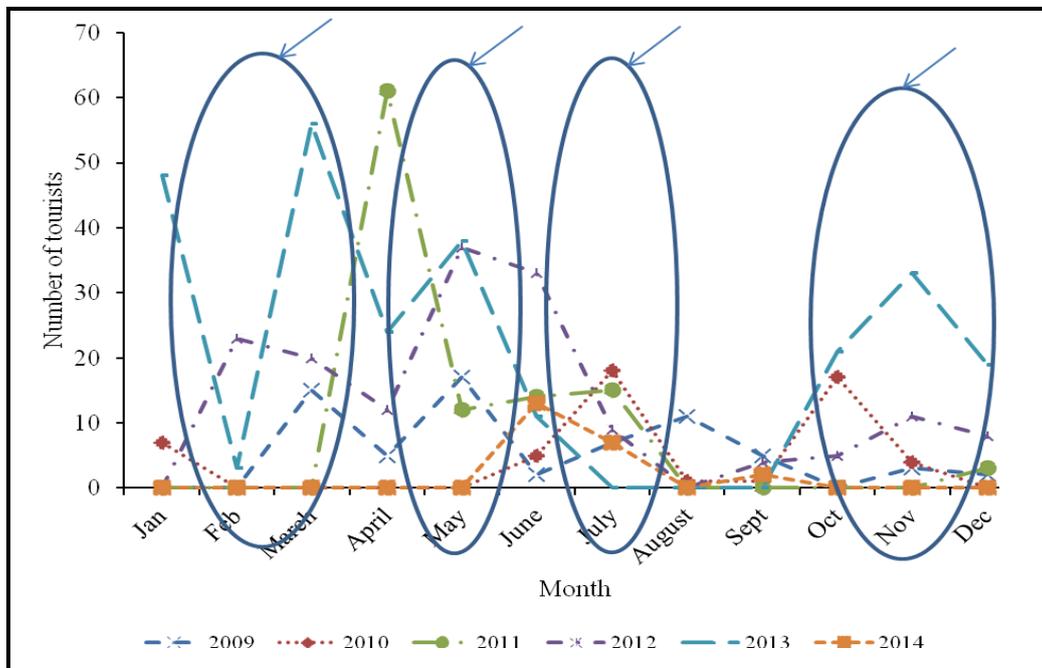


Figure 4. Peak time for tourists’ activites in Nimule National Park from 2009-2014

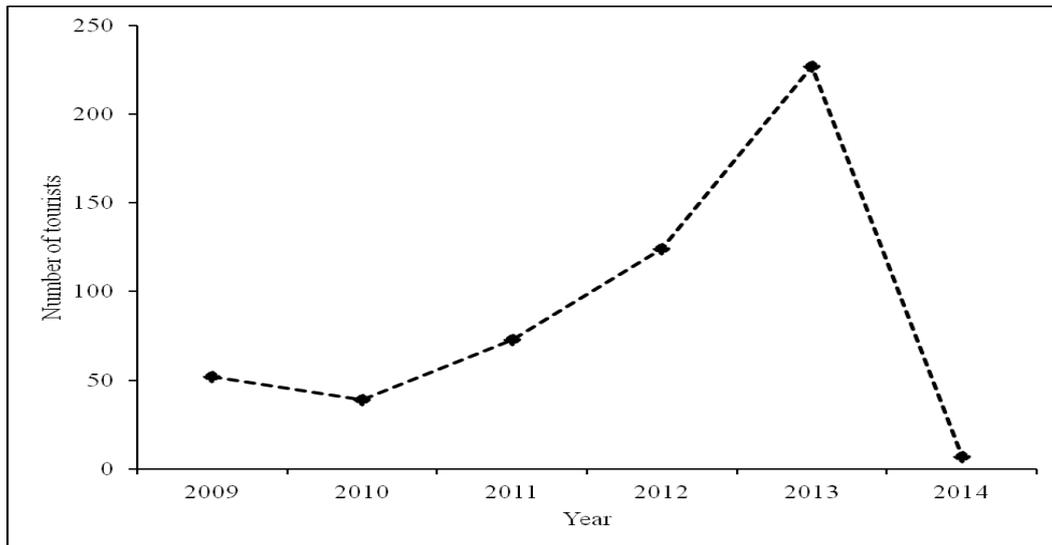


Figure 5. Trend in tourists numbers from 2009-2014

DISCUSSION

The fact that income accrued to wildlife tourism in Nimule National Park is low has been confirmed. This can be attributed to several factors; first, tourism structure in South Sudan is very rudimentary, this is in line with findings of Christie *et al.*, (2013). Secondly, several years of political instability and insecurity made the region unattractive destination for tourists, this is in consensus to the results of Okello & Novelli, (2014). Thirdly, low income, insufficient conservation education and publicity contributed to the low income generated through wildlife tourism in South Sudan which is supported by findings of Mariki *et al.*, (2011). Fourthly, environmental pollution is another factor that might have contributed to low income generated through wildlife tourism in South Sudan, a fact noted by du Plessis *et al.*, (2012). Finally, risk of being attacked by wild animals is yet another factor that could have also contributed to the low income, a fact also supported by Leggat & Durrheim, (1999). The generated amount is far lower compared to that generated by the other countries in the region, which is noted by Damm (2001).

The result that people visit the park to watch wildlife and rafting is because Nimule National Park offers beautiful scenes and the Fulla rapids. This finding concurred with the findings obtained by Mmopelwa *et al.*, (2007) and other investigators that tourists pay to view wildlife and boating. The hypothesis that tourists visiting Nimule National Park come from different countries was found to be true. This is because Nimule National Park is relatively secure and it is the second nearest recreational park with a nice highway in the country, especially for expatriates working in Juba. Nimule National Park is attractive to visitors because it harbors the famous Fulla rapids, the source of the hydroelectric power to-be in South Sudan. The low number of domestic tourists observed in Nimule National Park is similar to what has been observed in Tanzania, and this has been attributed to the low income of the locals, a fact supported by Mariki *et al.*, (2011). Results observed on the composition of tourists visiting Nimule National Park agreed with similar findings reported elsewhere that tourists from various countries pay for viewing African wildlife as well as for rafting and photography. These results also agree with the findings reported by Ezeuduji (2019) and Intergate-immigration (2020) from South Africa, which showed that most visitors who come to the country were from overseas.

The premise that dry season is the preferred season and the peak time for tourists visiting Nimule National Park, was found not to be true. This is because the number of tourists also peaked up in the months of May and July, which are part of the rainy season. However, the reason that many tourists visited the park in these months maybe due to the fact that the earth is getting warmer and rainfall seems to be getting sporadic and unpredictable as a result of global warming. Climate change

predictions for Sudan indicate a significant rise in average temperature, forecasted temperature is expected to range from 1.5°C to 3.1°C during August and between 1.1°C to 2.1°C during January (IPCC, 2001). In addition, these tourists probably visit the park whenever they have free time. In fact, a good number of them visit the park over the weekends.

Finally, the suggestion that the number of tourists and the income generated from wildlife tourism is constant, proved to be not true because the number of tourists rose and slightly fell and then rose again before dropping sharply. The observed steady rise could be associated with the relative peace and the enthusiasm of both the locals and the international community to support developmental activities in South Sudan. The sharp drop experienced in the number of tourists from 2013 to 2014 could be attributed to the crisis of 15th of December 2013. Similar dents in tourists' numbers have been observed elsewhere in the continent, for example, Humphreys & Smith, (2011) reported that war affects tourists in some African countries. Similarly, Christie *et al.* (2013) further indicated that wars negatively influence tourism.

The tourism industry in South Sudan and Nimule National Park in particular is very small and underutilized despite its high potential to add to national revenue. The persisting civil war has crippled the park's tourism that included lack of proper management, inadequate staffing and trainings, poor infrastructure, poor marketing, among others. Besides the above challenges, wildlife-based tourism in Nimule National park still has great potentials and opportunities. If well managed, it would contribute greatly to the national Gross Domestic Product (GDP) of the country and bring development to the rural communities (Hosts). This would further contribute to conservation and management of threatened and nearly extinct wildlife species and it would act as source of attracting more tourists to the country as a whole, thus supporting economic growth and development.

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