

# Socio-Economic Impacts of Farin Ruwa Waterfall Ecotourism Development in Nasarawa State, Nigeria

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**Abstract:** Tourism is a global scale industry with growing impact on the environment which provides new opportunities, when giving attention and developed can generate substantial economic benefits to a nation. Farin Ruwa waterfall has great ecotourism potentials that will contribute more to the socio-economic welfare of the inhabitants and the State but is yet to be fully developed. This study seeks to assess the socio-economic impacts of the waterfall on Farin Ruwa areas in Nasarawa State and examine the problems with the development of the area as attraction centre. Two communities were selected for this study with 3601 projected population from 1991 census to 2021. Yamane's formula was used and sample size of 280 was drawn from Marhai community which constitute 107 sampled respondents and Massenge community which constitute 173 sampled respondents for the study. The descriptive survey research design was used for the study. Data were collected on a 5- point Lykert scale through questionnaire administration in the area. The data were analyzed using descriptive statistics and the Chi-square statistical tool was used in testing the hypothesis formulated while mean ranking method was used to find out the level of impacts. Findings from the study revealed that tourism will bring about positive socio-economic development to the area with 57% representing respondents that agreed to that while on the negative impacts, 54% agreed that tourism development bring negative impacts on the study area. The result of the first hypothesis tested showed that the calculated Chi-Square value of 86.318 was greater than the table value of 36.415, therefore, there is significant positive impact of tourism on the socio-economic development of the area while the second hypothesis shows that the calculated Chi-Square value of 11.651 was less than the table value of 36.415, therefore, there is no significant negative impact on the socio-economic development of area. The results of the mean ranking shows that economic growth and poverty reduction ranked first as the positive impacts of ecotourism development. The study also reveals the poor state of infrastructures and services provided in the areas such as roads, electricity supply and water supply at the site. The study recommends that Government, individuals and corporate organizations such as NGOs should take active part in the development of Farin Ruwa ecotourism to stimulate infrastructural development. Public-private partnership should be adopted for development and management of the ecotourism. Finally, Ministry of culture and tourism should provide the site with tourism facilities as well as making the centre a film village resort.

**Keywords:** Water falls, Socio- economic impacts, Ecotourism, tourism development, tourism potentials

## I. INTRODUCTION

Tourism overtime has become a component part of economies of many countries of the world, serving as a mainstay upon which service sectors thrive (Ayeni and Ebohon, 2012). Many countries regard tourism as an agent of development. In most tourism literature's, most emphasis is on economic benefits derived from tourism, such as contribution to foreign exchange earnings, regional development, government revenues, and creation of employment and income (Okpolo et al., 2002). Tourism is one of the largest industries that have contributed to the socio-economic growth of many countries especially countries where tourism is the backbone of her economy (WTO, 1998).

Tourism development in any nation or country has environmental, social, economic, cultural and political impacts affecting every other aspects or sectors of the nation. Next to oil, tourism is the net foreign exchange earner at the international level. It is the highest employer of labor in the tertiary sector of the World economy and the second largest after agriculture. Ekundayo, et al (2015) asserted that amid the current economic uncertainty, tourism is one of the few economic sector in the world growing strongly, driving economic progress in developing and developed countries alike and most importantly, creating much needed jobs. The importance of tourism cannot be underemphasized as tourism stands out to be among the first three major and rapid growing industries in the world.

According to World Tourism and Travel Commission (WTTC) cited by (Nurhssen, 2016), tourism provides about 9.8 percent of global gross domestic product (GDP) and 10 percent of the world's income and 9.4 percent of employment worldwide, receipts account for a little over 5.7 percent of world export and 4.3 percent of total investment. Many people emphasize the positive aspects of tourism as a source of foreign exchange, a way to balance foreign trade, an "industry without chimney"-in short, manna from heaven. WTTC (2009) points out that tourism provides employment opportunity for many people and as at 2009 it provides 1 in every 15.6 jobs. By 2019, it is 1 in every 13.8 jobs.

Nigeria is a country that is blessed with a lot of tourism potentials and it is painful that attention is being diverted from tourism sector that could provide job opportunities for many Nigerians rather than concentrating on only the oil sector

(Adeniyi, Olugbamila, Olajide, (2018). Apart from oil, tourism is the next world leading export commodity (Ajayi, 2012). It has been estimated that tourism is the sector with the biggest employer of labor in Nigeria as it is generating employment for millions of people. However, one thing is clear, that is the vast tourism potentials of countries like Nigeria is not maximally tapped (Ayeeni, 2013). Kukoyi, et al, (2003) did a study on Ikogosi warm spring as potential geo-tourist site and the study investigated the current status, operation and its contribution to the community and found out that its contributing about 45% of income to the community.

Nasarawa state is one of the nearest states to the Federal capital territory, and expected to compliment tourism in the middle belt area of the country, but almost all the tourism potentials are not developed. Farin Ruwa Waterfall is one of the leading tourist destinations in Nasarawa State mainly because of the rich wildlife resources it sustains and the scenic beauty of the waterfalls. The Waterfall is capable of providing employment for both skilled and unskilled people, generation of revenue and contribution to economic development of the state. According to Ijeomah and Aloa (2007) the proximity of Farin Ruwa Waterfall to Federal capital territory has great advantages if developed will attracts tourists and in turn create employment for more than 35% of unemployed people in Nasarawa State.

The observation shows that the area is faced with the challenges of accommodation, lack of electricity, potable water supply and bad road network. The reality is that the area remains a remote village simply because is not properly developed and the waterfalls becomes less attraction point for tourists. The former administration of Nasarawa State in 1996, ordered the construction of access roads to the site, but was only graded without proper construction. In 2000, the government awarded contract for the construction of choice guest chalets with the hope of establishing a state-of-the-art tourist site, the dream was never actualized. The State government has professed a commitment to the development ecotourism but not much have been done about the development.

Several studies were carried out on waterfalls as ecotourism in Nigeria (Chokor, 1993, Aremu, 2001 and Fragile, 2006). The studies mentioned that Waterfalls provide a wonderful site for tourists to be attracted to and has great impacts for the economic development of the nation but has not examined the impacts. Studies were also conducted on the socio-economic impacts of tourism development in both within and outside Nigeria but non focus on the order of the impacts (Gnanapala and Sandaruwani, 2016; Kozhokulov, Chan, Yang, Issanova, Samarkhanov and Aliyera, 2019; Naluba, 2020; Sam, Akpo, Asuquo and Etefia, 2014, Adebayo, Jegede and Eniafe, 2014). Ijeomah and Alao (2007) assessed the state of development in Farin Ruwa Waterfall ecotourism project and result of the study shows that there are positive impacts in neighboring community, but the development is still at infant stage.

Despite the importance of Farin Ruwa waterfall ecotourism as a tourist attraction, there is no study on the socio-economic impacts of the waterfall in Nasarawa State due to its geographical significant in the middle belt of Nigeria. Therefore, this paper seeks to assess the socio-economic impacts of Farin Ruwa waterfall ecotourism development in Nasarawa State. It is imperative to consider this study as stern for research purposes in that the gains from tourism are enormous and cut across the entire globe. Jobs are generated, revenues are earned, governments are engaged, residents and visitors affected or benefiting; the tentacles are all encompassing.

## II. PURPOSE OF THE STUDY

The main purpose of this study is to assess the impacts of Farin Ruwa waterfall ecotourism development on Nasarawa State with the view of making appropriate recommendations for its enhancement.

The specific objectives of this study are to:

- i. Assess the socio-economic impacts of Farin Ruwa waterfall ecotourism development
- ii. Examine the problems with the development of the area as tourism attraction centre.

### 2.1 Statement of hypotheses

The following hypotheses were formulated to guide the study:

*Hypothesis 1:* Farin Ruwa waterfall Ecotourism development has no significant positive impacts on the socio-economic development of the area.

*Hypothesis 2:* Farin Ruwa waterfall Ecotourism development has no significant negative impacts on the socio-economic development of the area.

## III. LITERATURE REVIEW

Tourism has been viewed by different authors, scholars and organizations from various angles which reflect individual professional background. Tourism has been given different definitions by different people based on their different views or perspectives of tourism. According to Okpoko (2006), Tourism is the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created to cater for their needs. Tourism is regarded as the activities of persons travelling to and staying in places outside their usual environment for not more than one year for leisure, business and other purposes not related with the exercise of an activity remunerated from within the place visited (Olorunfemi and Raheem, 2008). Ecotourism was defined by Lubbe (2003) as an enlightening interactive travel experience to natural and cultural environment that ensures the sustainable use of environmental resources, at an appropriate level, rule providing viable economic opportunities for the tourism industry and local community.

3.1 Typology of Tourism Potentials

The determination of what is tourism potential is a central question that must be answered before model development can occur. It is not an easy concept to define because tourism potential, like the industry itself, is quite subjective and open to personal preferences. The important question to consider in defining tourism potential is: “do the natural resources of the study area provide the necessary elements required for the preferred tourist activity? We can often find different kinds of potentials in a destination providing visitors with different types of experience. Some of these potentials are natural while the others are man-made. They can be broadly divided into four main types:

- Natural features
- Man-made buildings, structures and sites that were originally designed for a purpose other than attracting visitors
- Man-made buildings, structures and sites those are purposely-built to attract visitors and cater for their needs

Special events

Examples of each type of attractions are presented in Table 3.1.

Table 3.1 - The four categories of potentials

Natural features	Man-made, but not originally designed to attract visitors	Man-made and purpose-built to attract visitors	Special events
<ul style="list-style-type: none"> <li>• Beaches</li> <li>• Caves</li> <li>• Forests</li> <li>• Harbours</li> <li>• Mountains</li> <li>• Natural heritage sites</li> <li>• Rivers and lakes</li> <li>• Waterfalls</li> <li>• Rock faces</li> <li>• Wildlife – flora and fauna</li> </ul>	<ul style="list-style-type: none"> <li>• Archaeological sites and ancient monuments</li> <li>• Cathedrals, churches and temples</li> <li>• Cultural heritage sites</li> <li>• Historic gardens</li> <li>• Industrial Archaeology sites</li> <li>• Stately homes and historic houses</li> <li>• Steam railways</li> <li>• Reservoirs</li> </ul>	<ul style="list-style-type: none"> <li>• Amusement parks</li> <li>• Art galleries</li> <li>• Casinos</li> <li>• Country parks</li> <li>• Craft centres</li> <li>• Educational institutions</li> <li>• Exhibition centres</li> <li>• Factory outlets</li> <li>• Garden centres</li> <li>• Health spas</li> <li>• Heritage centres</li> <li>• Leisure centres</li> <li>• Marinas</li> <li>• Museums</li> <li>• Picnic grounds</li> <li>• Safari parks</li> <li>• Theme parks</li> <li>• Waterfront developments</li> <li>• Working farms open to the public</li> </ul>	<ul style="list-style-type: none"> <li>• Arts festivals</li> <li>• Fairs and expositions</li> <li>• Historical Anniversaries</li> <li>• Markets</li> <li>• Religious festivals and events</li> <li>• Sporting events – watching and participating</li> <li>• Traditional customs and folklore events</li> </ul>

Source: Adapted from Swarbrooke, (2005)

3.2 Socio-economic impacts of tourism

Socio-economic impacts are basically concerned with the community. It centers on changes in societal, collective and person esteem value, behavior, social relationships and ways of life, modes of expression and community structure (Douglas and Derrett, 2001; Sims, and D'Mello, 2005). Matheson and Wall (1982) defined impact as “the form of altered human behavior that stems from interactions between agents of change and subsystems on which they impinge”. To them, social and cultural impacts of tourism are the ways in which tourism is contributing to changes in value systems, individual behavior and family relationships, collective lifestyles, safety levels, moral conduct, creative expressions, traditional ceremonies and community organizations. Economic impacts are changes in economic flow directly or indirectly. The promotion of tourism would bring many direct benefits such as employment opportunities in tourism and hospitality sector, development of private enterprise, improved standard of living, social upliftment and improved quality of life, better education and training, sustainable environmental practices and foreign exchange earnings. It also brings about indirect benefits such as infrastructure

development like power, water, sanitation, hospitals and roads, markets for local produce, economic upliftment due to economic multiplier effect to the people (GOI, 2002 and GOM, 2006). Thus, tourism activities are economically beneficial to both the host and the guest.

3.3 Tourism Development and Employment Opportunities

Nigeria as a nation is blessed with both natural and material resources that can be harnessed to aid the economic development of the country by providing revenue and foreign exchange. Tourism plays significant roles in socio-economic development of many nations. This is because it contributes towards alleviating the major political, social and economic problems that characterize the rural areas. It equally helps in developing the urban centres. Tourism has been discovered to be a very important instrument to poverty alleviation, attainment of the millennium development goals (MDGs) and sustainable development (Olorunfemi and Raheem, 2008 cited in Tunde, 2012). Tourism could contribute meaningfully to the economic development of Nigeria if properly harnessed (Dalat, 2010 cited in Ojo, 2014).



In Nigeria the contribution to government revenue from levies on Hospitality sector (registration and other charges) recorded N1.149m in 2004 while N100m was generated in 2009. Furthermore, N313m was generated by company tax (National Bureau of Statistics, NBS). In 2011, the industry contributed about N1, 232.2 billion (3.3 percent) to the GDP in Nigeria. In its report, the WITC forecasts that the industry will generate 897,500 jobs representing 1.4 percent of Nigeria’s total workforce in 2012 and that over the next 10 years, the amount is expected to grow by 6.5 percent per annum to N483.4 billion in 2022. From the foregoing, the only way to have sustainable tourism is through the development of the entire neglected tourist sites in Nigeria. This would translate to increased contribution towards Gross Domestic Product, employment generation, improved economic and social progress within Nigeria and Africa as a whole (Tunde, 2012). The immense socio-economic impacts and benefits of tourism have in recent time been recognized by several states and the Federal Government of Nigeria. Contingent upon this, part of the effort towards diversifying the economy of the nation has been to harness and develop tourism – the untapped non- oil sector (Akpan and Obang, 2012).

Tourism over the years has distinguished itself as one of the major tools for income generation and poverty alleviation in both rural and urban areas in developing nations like Nigeria. Participation in tourism-related economic activities contributes immensely in the community development of localities or places. Hence, the central aim of community development is to positively affect lives and standard of living of a people. Localities with equitable tourism potentials stand a better chance in maximizing the contributions of tourism to their economic lives by actively initiating and participating in various tourism businesses; small and large scale businesses (Elochukwu, 2013). From the foregoing, Nigerian geographical landscape has tourism potential which attracts foreigners that may contribute to the socio-economic development of Nigeria if well and properly developed.

According to George, (2013), the tourism industry offers marvelous opportunities in jobs creation and strengthening of the nation’s economy. The statistics indicate that Nigeria will gain a rise in employment of 897,500, which will translate to N252bn in investment equivalent to 1.6 per cent increments and 1.4 percent annually with the aim of hitting 5.4 percent in 2022. Around 840,000 Nigerians are currently employed directly within the country’s tourism industry, representing 1.4% of the labor force. WTTC expects the figure to rise to 1.6% over the next 10 years. The number of jobs created both directly and indirectly by the industry should reach almost 1.9m this year, according to the WTTC, and is expected to rise to 2.9m by 2022, making up 3.5% of total employment. The tourism sector has made momentous contributions to the nation’s Gross Domestic Product and boosted employment assess in the past four years (Agency Reporter, 2012). WTTC further forecasts in their reports, that in 2012 alone, some 897,500 jobs, representing 1.4 percent of Nigeria’s total

engaged workforce will be generated by the travel and tourism industry.

IV. THE STUDY AREA

Farin Ruwa waterfall is in Farin Ruwa Development Area which was carved out from Wamba Local government areas in Nasarawa state. It has a landmass of 661.11Km2 and is located between Latitudes 09°03' and 09°14' and Longitudes 08° 50' and 08° 45'. Farin Ruwa Waterfall is located on latitude 09°10' and longitude 08° 45'. It is about 120 kilometres away from Lafia, the capital city of Nasarawa State, 30 kilometres away from Wamba, the local government headquarters and about 160 kilometres from Abuja, Nigeria’s federal capital.

The area is a spectacular waterfall and has its source in Bokokos, Plateau State but is seen gushing out from a point in Massenge Community. The economic and commercial activities of the Farin Ruwa residents are predominantly farming, livestock herding, and fishing, hunting and trading. The Ogoni region has a rich cultural heritage.

The Population of the local residents of Farin Ruwa area was collected from National Population commission with marhai 600 people and massenge 683 people as at 1991 and was further projected to 2021 as shown in the table 1

Table 1 Distribution of the population for the study

Area/Organization	1991 Population	2021 projection @3.5%
Marhai	600	1684
Massenge	683	1917
<b>Total</b>	<b>1283</b>	<b>3601</b>

Source: NPC (1991) and Projected, (2021)

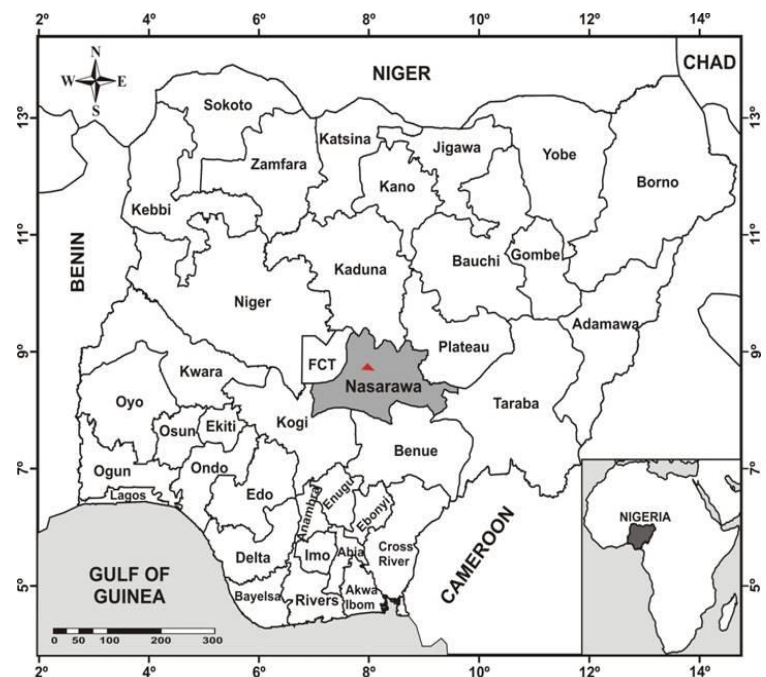


Fig. 1: Map of Nigeria showing Nasarawa State

V. RESEARCH METHODOLOGY

The target population for this study consists of the household head of Marhai and Massenge residents with the number of household as 211 and 340 respectively which derived from the population with the size of 8 persons per household.

Table 2: Distribution of the population for the study

Area/Organization	2021 projection	Household head population
Marhai	1684	211
Massenge	1917	340
Total	3601	551

Source: NPC (1991) and Projected, (2021)

The Taro Yamane’s statistical formula was used to select the sample from the projected population, with this formula, a sample size of 280 persons were selected from Marhai community which constitute 107 sampled households and Massenge community which constitute 173 sampled households for the study.

Data for this study were from primary sources, which were personal survey and the administration of questionnaires. The questionnaires were designed in two forms: Open ended and closed ended questions. A total number of two hundred and eighty (280) questionnaires were randomly administered to source for information from residents of Marhai and Massenge. The simple random sampling technique was adopted in selecting the two communities while the multi-stage stratified random sampling technique and accidental

sampling technique was used to select the two hundred and eighty (280) resident members used for the study. A nine (9) items five points Lykert scale questionnaire was the instrument used for data collection. Descriptive method of data analysis using frequency table and percentages was adopted to analyze the data.

The analyses were based on both the descriptive and inferential statistics were employed. Data from the field were arranged on a 5-point Lykert scale of strongly agree (SA), Agree (A), Undecided (U), Disagree (DA), and strongly disagree (SD). The data were collated, summarized and presented in tables while the hypothesis were tested using the Chi-Square and mean ranking statistical techniques.

Table 3: Lykert scale

Mean Range	Scale	Adjectival interpretation
4.50-5.00	5= Strongly Agree	Very Good
3.50-4.49	4= Agree	Good
2.00-3.49	3= Undecided	Fair
1.51-2.49	2= Disagree	Poor
1.00-1.50	1= Strongly Disagree	Very Poor

Morenikeji and Shuibu (2005)

VI. RESULTS AND DISCUSSIONS

This section was able to seek the opinion of the people or the community where the Farin Ruwa waterfall (FRWF) is located to collect their view of the socio-economic impacts and problem of the FRWF through individual judgment.

Table 4: The Perceived positive socio-economic impacts of FRWF ecotourism development on Farin Ruwa Area

S/N	Socio-economic impact FRWF development	Responses					
		SA	A	U	D	SD	Total
1	Tourism will bring economic growth and poverty reduction	163 (58%)	73 (26%)	28 (10%)	8 (3%)	8 (3%)	280 (100%)
2	Many jobs will be created	90 (32%)	73 (26%)	64 (23%)	28 (10%)	25 (9%)	280 (100%)
3	Create regional development in the neighbourhood	73 (26%)	81 (29%)	81 (29%)	9 (3%)	36 (13%)	280 (100%)
4	Development of infrastructural and facility	36 (13%)	28 (10%)	146 (52%)	17 (7%)	53 (19%)	280 (100%)
5	Bring revenue generation	28 (10%)	53 (19%)	99 (35%)	64 (23%)	36 (13%)	280 (100%)
6	Increased in the standard of living	81 (29%)	81 (29%)	45 (16%)	28 (10%)	45 (16%)	280 (100%)
7	Appreciation of property value	101 (36%)	73 (26%)	53 (19%)	19 (7%)	34 (12%)	280 (100%)
8	Increase physical growth of the area	126 (45%)	81 (29%)	36 (13%)	28 (10%)	7 (3%)	280 (100%)
9	Cultural heritage conservation	109 (39%)	90 (32%)	36 (13%)	27 (10%)	18 (6%)	280 (100%)
	Total =	32%	25%	23%	9%	10%	100%

- SA- Strongly Agree; A- Agree; U- Undecided; D- Disagree; Strongly Disagree

Source: Field work, 2021

Table 4 shows impact FRWF ecotourism development on the surrounding area, 58% of the sampled population Strongly agree that it impact will bring economic growth and poverty, 26% respondents agree, 10% were undecided and 3% are disagree while 3% also strongly disagree. On the jobs

creation, 32% of the sampled populations strongly agree, 26% respondents agree, 23% were undecided and 10% disagree while 9% strongly disagree. In the same 26% of the residents strongly agree that tourism development will lead to regional development, 29% agree with to that, another 29% were

undecided and 3% disagree while 13% strongly disagree. For infrastructure and facility development, 13% of the sampled populations strongly agree, 10% respondents agree, 52% were undecided and 7% representing those that are disagree while 19% strongly disagree.

For revenue generation, 10% of the sampled population strongly agrees, 19% of the respondents agree, 35% were undecided and 23% disagree while 13% strongly disagree. The respondents strongly agree that the impact will lead to increase in standard of living with 29% representing them, 29% of the population agree, 16% were undecided and 10%

disagree while 16% strongly disagree. The sample shows that 36% strongly agree property value will appreciate in the area, 26% agree to that, 19% were undecided and 7% disagree while 12% strongly disagree. It was also revealed that 45% of the respondents strongly agree that the impact will bring about physical growth of the area, 29% agree to that, 13% were neutral and 10% disagree while 3% strongly disagree. For the cultural heritage conservation, 39% of the respondents strongly agree it will conserve their culture, 32% of them agree to that, 13% neither agree nor disagree and 10% disagree while 6% strongly disagree.

Table 5: The Perceived negative socio-economic impacts of FRWF ecotourism development on Farin Ruwa Area

S/N	Negative impacts of Farin Ruwa waterfalls development on the study area	Responses					
		SA	A	U	D	SD	Total
1	Tourism development will increase in crime rate	27 (10%)	163 (58%)	72 (26%)	9 (3%)	9 (3%)	280 (100%)
2	Increase in cost of living	63 (22%)	90 (32%)	73 (26%)	27 (10%)	27 (10%)	280 (100%)
3	Increase in the price of properties	81 (29%)	72 (26%)	81 (29%)	10 (3%)	36 (13%)	280 (100%)
4	Place more pressure on the limited resources	36 (13%)	145 (52%)	27 (10%)	18 (6%)	54 (19%)	280 (100%)
5	Increase social conflicts	99 (35%)	28 (10%)	54 (19%)	63 (22%)	36 (13%)	280 (100%)
6	Environmental pollution	45 (16%)	81 (29%)	82 (29%)	27 (10%)	45 (16%)	280 (100%)
7	Crowding at the centre and congestion	54 (19%)	99 (35%)	72 (26%)	19 (7%)	36 (13%)	280 (100%)
8	Increase in mortality rate	63 (22%)	90 (32%)	72 (26%)	41 (15%)	14 (5%)	280 (100%)
9	Destruction of wild life	64 (23%)	89 (32%)	81 (29%)	29 (10%)	17 (6%)	280 (100%)
	Total =	21%	34%	24%	10%	11%	100%

- SA- Strongly Agree; A- Agree; U- Undecided; D- Disagree; Strongly Disagree

Source: Field work, 2021

Table 5 shows the perceived negative socio-economic impacts of ecotourism development on the Farin Ruwa area. It is noticed that out of a total of 280 respondents, 10% and 58% respectively strongly agree and agree that tourism will bring about increase in crime rate while 6% were not in support with the above views. It was revealed that 22% and 32% respectively strongly agrees and agrees it will increase in the cost of living of the area and 20% were not in support. The result indicates that 29% and 26% strongly agree and agree respectively that it lead to increase in the price of properties. The respondents strongly agree and agree which constitutes 13% and 52% respectively that it will put pressure on land resources. It also revealed that 35% and 10% respectively strongly agree and agree it bring increase in social conflicts, etc. These imply that, out of a total of 280 respondents, 46% agree on the negative impacts. But 33% and (21%) disagree and strongly disagree respectively to the above views.

## VII. ANALYSIS OF HYPOTHESIS

### 7.1 Perceived positive socio-economic impacts

This section shows the analysis of the perceived positive socio-economic impacts of FRWF ecotourism development in

Farin Ruwa area. Chi-Square was used in testing the null hypothesis ( $H_0$ ) which states that: Tourism development has no significant positive impact on the socio-economic development of the study area.

Table 6: Summary of Chi-Square statistical test on the perceived positive socio-economic impacts of ecotourism development in Nasarawa State

N	Degree of freedom	X <sup>2</sup> calculated	X <sup>2</sup> table critical	Alpha level	Result	Decision
280	24	86.318	36.415	0.05	Significant	Rejected

Source: Author work, 2021.

Table 6 reveals that the calculated Chi-Square (X<sup>2</sup>) value is 86.318 while the table Chi-Square (X<sup>2</sup>) value at 24 degree of freedom and 0.05 significant level is 36.415. Since the calculated Chi-Square (X<sup>2</sup>) value of 86.318 is greater than the critical Chi-Square (X<sup>2</sup>) value of 36.415, we reject the null hypothesis and accept the alternative hypothesis ( $H_1$ ) which states that there is significant positive socio-economic impacts of tourism development in the study area.

7.2 Perceived negative socio-economic impacts

This section shows the analysis of the perceived negative socio-economic impacts of FRWF ecotourism development in Farin Ruwa area. Chi-Square was used in testing the null hypothesis ( $H_0$ ) which states that: Tourism development has no significant negative positive impact on the socio-economic development of the study area.

Table 9: Summary of Chi-Square statistical test on the perceived negative socio-economic impacts of ecotourism development in Nasarawa State

N	Degree of freedom	X <sup>2</sup> calculated	X <sup>2</sup> table critical	Alpha level	Result	Decision
280	24	11.651	36.415	0.05	Not significant	Accepted

Source: Author work, 2021.

Table 9 reveals that the calculated Chi-Square (X<sup>2</sup>) value is 11.651 while the table Chi-Square (X<sup>2</sup>) value is 36.415 at 24 degree of freedom and 0.05 level of significance. Since the calculated Chi-Square (X<sup>2</sup>) value of 11.651 is less than the table value of 36.415, we accept the null hypothesis and reject the alternative hypothesis which states that tourism has significant negative impact on the socio-economic development of the area. The study therefore conclude that tourism may have no much significant negative impact on the socio-economic development of the study area from the Chi-square test result but that does not completely suggests that there is no negative impacts. The results of respondents revealed that there are also some negative impacts.

Mean Ranking Analysis of the positive socio-economic Impacts

Table 10: Evaluation of the rating of socio-economic impact of FRWF ecotourism development by respondents

S/N	Opinion	Strongly Agree X5	Agree X4	Undecided X3	Disagree X2	Strongly Disagree X1	Total
1	Tourism will bring economic growth and poverty reduction	163	73	28	8	8	280
2	Many jobs will be created	90	73	64	28	25	280
3	Create regional development in the neighbourhood	73	81	81	9	36	280
4	Development of infrastructural and facility	36	28	146	17	53	280
5	Bring revenue generation	28	53	99	64	36	280
6	Increased in the standard of living	81	81	45	28	45	280
7	Appreciation of property value	101	73	53	19	34	280
8	Increase physical growth of the area	126	81	36	28	7	280
9	Cultural/heritage conservation	109	90	36	27	18	280

Source: Author work, 2021

Table 11: Conversion of the scores from the rating of the socio-economic impacts

S/N	Opinion	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Sum
1	Tourism will bring economic growth and poverty reduction	825	292	84	16	8	1225
2	Many jobs will be created	450	292	192	56	25	1015
3	Create regional development in the neighbourhood	365	324	243	18	36	986
4	Development of infrastructural and facility	180	112	438	34	53	817
5	Bring revenue generation	140	212	297	128	36	813
6	Increased in the standard of living	405	324	135	56	45	965
7	Appreciation of property value	505	292	159	38	34	1028
8	Increase physical growth of the area	630	324	108	56	7	1125
9	Cultural/heritage conservation	545	360	108	54	18	1085

Source: Author work, 2021



Table 12: interpretation of Mean score results

S/N	Opinion	Sum	Mean (sum/280)	Interpretation of result (Consensus opinion)
1	Tourism will bring economic growth and poverty reduction	1225	4.38	1 <sup>st</sup>
2	Many jobs will be created	1015	3.63	5 <sup>th</sup>
3	Create regional development in the neighbourhood	986	3.52	6 <sup>th</sup>
4	Development of infrastructural and facility	817	2.92	8 <sup>th</sup>
5	Bring revenue generation	813	2.90	9 <sup>th</sup>
6	Increased in the standard of living	965	3.45	7 <sup>th</sup>
7	Appreciation of property value	1028	3.67	4 <sup>th</sup>
8	Increase physical growth of the area	1125	4.02	2 <sup>nd</sup>
9	Cultural heritage conservation	1085	3.88	3 <sup>rd</sup>
	Overall Ranking		3.60	Good impact

Source: Author work, 2021

### VIII. PROBLEMS OF FARIN RUWA WATERFALLS DEVELOPMENT

There are many problems which affect the tourism development. These are as follows:

Government lack political will and commitment concern the development of the area and the inefficient administrative procedure of government in implementing tourism policy is a serious problem. Incessant discontinuity in the development of projects meant for the well-being of the people by the government. Accommodation projects which involved the building of chalets and tents for prospective visitors and residents have been abandoned left to their fates and making them to be at the mercies of the elements of weather and marauders. Lack of Infrastructural facilities like accessible roads, power, and pipe borne water, chalets are either dilapidated or absent. The roads to the waterfall, however, are literally impassable

The site lack adequate accommodation for visitors and tourists. The previous government awarded contract for the construction of choice guest chalets with the hope of establishing a state-of-the-art tourist site. His dream was never actualized until he left office and now the facilities are seen vandalized and burnt by fire due to unclear bush around. There is no police post for security of the areas.

### IX. DISCUSSION OF FINDINGS

The findings of the research reveal the following:

1. The respondents perceived that tourism will bring about positive socio-economic development to the area. Out of the total of 280 respondents, 57% agreed that tourism development will bring about socio-economic development in the area and 23% neither

agree nor disagree. While only 19% disagree with the views. The results is in agreement with Naluba (2020); Sam, Akpo, Asuquo, and Etefia (2014) and Elochukwu (2013).

2. On the negative impacts of tourism, out of a total of 280 respondents, 54% agree that tourism development will have negative impacts on the study area and 24% neither agree nor disagree while 21% disagreed on the negative impacts of tourism on the area. This result is not in agreement with Naluba (2020).
3. On the test of the first hypothesis, the null hypothesis which states that there is no significant positive impact of tourism on the socio-economic development of the study area was rejected. This result is not also in agreement with Naluba (2020). This is because; the calculated Chi-Square value of 86.318 was greater than the table value of 36.415 at 24 degree of freedom and 0.05 significant level.
4. On the analysis of the second hypothesis, we accepted the null hypothesis which states that tourism development has no significant negative impact on the socio-economic development of study area. This is because; the calculated Chi-Square value of 11.651 was less than the table value of 36.415 at 24 degree of freedom and 0.05 level of significance.
5. The study therefore concludes that tourism development will have significant positive impact on the socio-economic development of the study area and the state at large. The results of the mean ranking showing that ecotourism development will bring economic growth and poverty reduction as first order ranking follow by increase physical growth of the area, cultural heritage conservation as third order and so on.
6. The study reveals that the poor state of infrastructures and services provided in the areas such as roads, electricity supply, water, and above all tourist centre at the sites. Also, the particular case of telecommunication, this makes it difficult to communicate with the outside world.
7. The study reveals that if government can make provision roads, infrastructure facilities at Farin Ruwa Water Falls will attract investors to invest, revenue generation, and employment, improve standard of living and increase land rate.

### X. CONCLUSION

Tourism has been seen as one of the industries that can improve the economy of a country if well developed. Farin Ruwa Waterfall is a unique tourism potential which will become a major tourist attraction when properly planned and developed. Farin Ruwa water falls is important tourist attractions that can be developed to boost the economic activities of the inhabitants thereby bring about employment opportunities, improved standard of living, foreign exchange



earnings, infrastructural development, cultural and heritage conservation and social wellbeing among others. Its geographical landscape has tourism potential that can contribute to the socio-economic development of the region and Nigeria in general.

### XI. RECOMMENDATIONS

In view of the findings, the study recommends that:

- i. The government should provide infrastructural facilities around the waterfalls. Facilities such as parking space and good road networking should be provided in the area.
- ii. Ministry of culture and tourism should be charged with the responsibility of providing the site with tourism facilities such as museums, parks, restaurant, mini zoo, recreational areas, lodging facilities for tourists, entertainments and halls for seminars or events or conferences and staff quarters.
- iii. Nasarawa State Tourism Board should make the area to be a film village resort for film production
- iv. Government, individuals and corporate organizations such as NGOs take active part in the development of Farin Ruwa ecotourism to stimulate infrastructural development and job creation. Public-private partnership should be adopted for development and management of the ecotourism. In the advanced world, public and private partnership promotes development in any tourism destination.
- v. The rural communities should be educated about the job opportunities available in tourism.
- vi. On the other perceived negative impacts such as increase in crime rate, environmental pollution, increase in price of properties, much pressure on the limited resources, increase social conflicts and congestion, government should work out on proper plan of visitor management system at destination that is the Massenge.
- vii. There should also be public awareness and enlightenment creation about waterfalls on Radio, Television and Social media. There should be bill boards and banners along the road welcoming tourists to Farin Ruwa. Fliers on tourism in Farin Ruwa should be distributed across Nigeria; especially in major public and commercial places.

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