



## Tourists' Perception and Assessment of Ecotourism Development at Ikogosi Warm Spring and Arinta Waterfall, Ekiti State, Nigeria

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### Abstract

Many factors influence tourists' perceptions of the development of ecotourism in any destination. This study examined the tourists' perception and assessment of the rudiments of ecotourism development at Ikogosi Warm Spring (IWS), Ikogosi-Ekiti and Arinta Waterfall (AW), Ipole-Iloro in Ekiti State, Nigeria. The accidental sampling technique was used to select 220 ecotourists (IWS-150, AW-70) as respondents to a structured questionnaire. The data generated were analysed using descriptive statistics of percentages to assess the respondents' perception of the impact of ecotourism on infrastructural development and one-way analysis of variance ( $\alpha_{0.05}$ ) on the impact of socioeconomic variables on the amount tourists are willing to pay at the sites. At IWS and AW, 72.7 and 92.9% of ecotourists, respectively, perceived enhancement of patronage through improvements in road conditions. The ecotourists (IWS: 61.3%); (AW: 47.1%) perceived that electricity and internet services were adequate, while most ecotourists (IWS: 80.7%, AW: 95.7%) noted the existence of cordial ecotourists-community relationship. The age ( $p=0.01$ ), gender ( $p=0.01$ ), educational status ( $p=0.00$ ), occupation ( $p = 0.03$ ) and monthly Income ( $p = 0.00$ ) significantly influenced the amount ecotourists were willing to pay. Age, gender and educational status of tourists are important factors that affect patronage of ecotourism in IWS and AW, and despite the positive perception and assessment of tourists towards ecotourism development at the sites, improved road conditions and standard social amenities will enhance patronage and development at Ikogosi Warm Spring and Arinta Waterfall in Ekiti State, Nigeria.

**Keywords:** Ecotourism, Tourists, Tourism Destination, Perception, Assessment

### Introduction

Perception is the comprehensive environment that is cognitively perceived and experienced, and it serves as the foundation for decision-making (Morin et al., 2009). The strong correlation between psychology and the construct of individuals results in varying perceptions of any tourism product or environmental setting. Consequently, their perspectives are founded on cognitive processes that organise and capture knowledge, experiences, and information through the senses (Lau & McKercher, 2006). Views and relationships with the physical and social environment are significantly influenced by the fact that human beings perceive things differently. Perceptions are socially and culturally constructed and frequently interrelated with a variety of influencing factors, including education, religion, ethnic and family heritage, societal pressure, and physical environment laws and regulations. These variables determine individuals' perspectives and attitudes towards objects. The degree to which an individual is cognisant of ecotourism is directly proportional to their perception of it. Various definitions of ecotourism exist, and the specific definition you choose is contingent upon the individual you consult. Tour operators, government officials, business owners, conservationists, and researchers have invested a significant amount of time to reach a consensus on a common definition; however, they have thus far been unsuccessful. Educational, cultural, adventure, and nature tourism are all considered forms of tourism by certain individuals. While some argue that ecotourism is a distinct category, others consider tourism and historical tourism to be integral components (Dekhili, 2015).

There are five main sectors from which a tourist destination can be viewed: attraction, transportation, accommodation, supporting facilities, and infrastructure. The location's attractions serve as an incentive for tourists to visit, while transportation services facilitate their arrival. Accommodations and supporting amenities (such as banks, restaurants, and hostels) ensure the comfort and convenience of tourists during their stay, and the infrastructure supports the efficient operation of all sectors. Consequently, the development of ecotourism is contingent upon the availability of

infrastructural facilities and attractions, as well as accessibility to the primary attractions (Dekhili, 2015). These elements are essential indicators of a destination's success in the field of ecotourism. The attractions at an ecotourism site may be either natural or artificial. In most cases, the available facilities, such as lodging apartments, could be a factor in the attraction, particularly if they are constructed with care or for aesthetic purposes. The accessibility of these attractions is a critical factor in selecting an ecotourism destination. Accessibility is primarily regarded as essential because it contributes to the assurance of security for visitors to a destination (Ukabuilu et al., 2018).

Successful ecotourism initiatives necessitate security. Visitors who are travelling for business or pleasure are particularly concerned about security, as they are unlikely to risk their safety while away from home. Tour guides must be present to guide visitors through ecotourism sites (Orimaye et al., 2018). The tour facilitators are a crucial component of the ecotourism experience and possess experiential knowledge. They not only furnish visitors with information regarding the history of the site and other attributes, but they also enhance the social and cultural aspects of the visit by providing information that is designed to quell their curiosity, thereby ensuring that the tourism activity is a worthwhile experience. The availability of tourist-related services also influences sustainable tourism. In certain instances, tourists' product selections and visitors' perceptions are influenced by substandard accommodations. According to Gisore and Ogutu (2015), the absence of a coordinated categorisation, classification, and rating system for tourism and hospitality establishments and practitioners has resulted in the utilisation of conflicting systems that offer incompatible services and products. A successful ecotourism development necessitates the consideration of efficient transportation, competitive prices of related products and services (including catering), other ancillary services (including internet services), and the interest of local sellers (particularly in addressing language barriers) (Asuk & Nchor, 2018). Additionally, patronage and the number of visits to a specific ecotourism site over a specified period may be determined by a variety of features. Language barriers, accessibility to the ecotourism site, sensitivity to climate, availability of accommodation, cuisine, and similar perceptual elements may be critical determinants.

### **Aim and Objectives of the Study**

The aim and main objective of this study is to assess and evaluate tourists' perceptions of ecotourism development at Ikogosi Warm Spring and Arinta Waterfall in Ekiti State, Nigeria, and to identify the factors influencing their satisfaction and experiences, contributing to the sustainable development of these ecotourism sites. However, the specific objectives are;

1. To assess the socioeconomic characteristics of respondents at the destinations
2. To elucidate tourists' perceptions of the quality of ecotourism facilities and services provided at the destinations.
3. To evaluate the level of tourists' satisfaction with their overall experience at the two ecotourism sites.
4. To identify the factors influencing tourists' perception of ecotourism development, including environmental quality, infrastructure, and management practices.

### **Methodology**

The study was carried out in Ekiti State, which is situated in the heart of the tropics. It is located between longitudes 4°45' to 5°45' east of the Greenwich Meridian and latitudes 7°45' to 8°5' north of the equator. Ikogosi-Ekiti is a small, sleepy, and quiet town situated in a valley, and the warm spring rises from the surrounding hills. The Ikogosi Warm Springs Site is 150 km<sup>2</sup>, while the nature reserve (core area) is 50 km<sup>2</sup> in size, and the whole landscape consists of fascinating green lush vegetation. This natural and rich vegetation is closely maintained and protected from arbitrary deforestation. The immediate surroundings of the spring (Resort Centre) are about 31.38 hectares. It is highly protected from erosion by tall and evergreen trees. These trees also serve as a sort of canopy under which tourists can stay during the dry season and sunny days. The undulating topography of the entire tourist centre and the symmetry of the surrounding hills add more to the aesthetic beauty of this centre. There is a route that cuts across the tourist centre to the Arinta Waterfall at Ipole- Iloro, which is 6km away from the Ikogosi Warm Springs Tourist Centre. Arinta Waterfall is a spectacle to behold. The falls cascade down the rocky hills from a great height amidst natural forest vegetation to form a flowing pool of spring water. The steep slopes of the overawing ridge and panoramas of a beautiful valley trapped between two ridges meet the eyes. The landscape features a sprawling expanse of lush vegetation set with a patchwork of rust-brown tabs at a distance and a skyline decked with gently undulating ridge tops on the other side. An accidental or availability sampling technique was used to select 220 tourists (Ikogosi Warm Spring – 150 and Arinta Waterfall -70) that visited the ecotourism sites. A total of 220 well-structured questionnaires

were administered according to the influx of tourists at each site. Information on the perception and assessment of ecotourists on ecotourism facilities, such as roads, hotels, electricity and internet service and ecotourists-community relationship. The socioeconomic variables influencing willingness to pay for ecotourism development were identified. The data collected from the questionnaire were subjected to analysis using both descriptive and inferential statistics Analysis of Variance (ANOVA) at p=0.05. ANOVA was used to estimate the influence of socioeconomic characteristics on the amount ecotourists were willing to pay for ecotourism. Numerically, one-way ANOVA is a generalisation of the two-sample t-test. The F statistic compares the variability between the groups to the variability within the groups (Montgomery, 2019). The statistical model for the ANOVA is given below:

$$F = \frac{MST}{MSE}$$

$$MST = \frac{\sum_{i=1}^k (T_i^2/n_i) - G^2/n}{k - 1}$$

$$MSE = \frac{\sum_{i=1}^k \sum_{j=1}^{n_i} Y_{ij}^2 - \sum_{i=1}^k (T_i^2/n_i)}{n - k}$$

where F is the variance ratio for the overall test, MST is the mean square due to treatments/groups (between groups), MSE is the mean square due to error (within groups, residual mean square),  $Y_{ij}$  is an observation,  $T_i$  is a group total, G is the grand total of all observations,  $n_i$  is the number in group i and n is the total number of observations.

**Results**

**Table 1: Tourists' assessment of the ecotourism development in the sites**

Questions	Responses	Ikogosi Warm spring N=150(%)	Arinta Waterfall N=(70%)
Have you visited any site or recreation centre in Nigeria?	Yes	124 (82.7)	70(100.0)
	No	23 (15.3)	-
	No response	3 (2.0)	-
	Total	150 (100.0)	70 (100.0)
Are you visiting the site for the first time?	Yes	106 (70.7)	59(84.3)
	No	42 (28.0)	11(15.7)
	No response	2 (1.3)	-
	Total	150 (100.0)	70(100.0)
What is your major purpose for visiting?	Recreation	118(78.7)	60(85.7)
	Research	12 (8.0)	8(1.4)
	Education	12 (8.0)	2(2.9)
	No response	8 (5.3)	-
	Total	150 (100.0)	70 (100.0)

What interests you most about this site?	Warm and cold spring	108 (72.0)	-
	Waterfall	-	58(82.9)
	River	-	-
	Natural vegetation	10(6.7)	12(7.1)
	Swimming pool	15(10.0)	-
	Gymnasium	10(6.7)	-
	Relaxation centre	7(4.7)	-
	Total	150 (100.0)	70 (100.0)
What is your assessment of the accommodation facilities?	Good	115(76.7)	-
	Fair	25 (16.7)	-
	Poor	10 (6.7)	-
	No response	-	70 (100.0)
	Total	150 (100.0)	70 (100.0)
How would you rate the transportation facilities provided for tourists?	Good	82 (54.7)	-
	Fair	59 (39.3)	-
	Poor	3 (2.0)	-
	No response	6 (4.0)	70 (100.0)
	Total	150 (100.0)	70 (100.0)
What is the road condition?	Good	109 (72.7)	65(92.9)
	Fair	41 (27.3)	5(7.14)
	Poor	-	-
	Total	150 (100.0)	70 (100.0)
How would you rate the social amenities on the site?	Good	92 (61.3)	33(47.1)
	Fair	58(38.7)	5(7.14)
	Poor	-	32(45.7)
	Total	150 (100.0)	70 (100.0)

Source: Field Survey (2014-2016)

Table 1 shows the respondents' assessment of ecotourism development in the two sites. The first-time tourists to Ikogosi Warm Springs and Arinta Waterfall were 70.7% and 84.3% of the respondents, respectively. The purposes of tourists' visitation to Ikogosi Warm Springs and Arinta Waterfall were recreation (78.7% and 85.7%) and research (8.0 and 1.4%), respectively. The tourists were attracted to the main natural resources in the sites, which are the warm and cold springs (72.0%) and waterfall (82.9%) found at Ikogosi Warm Springs and Arinta Waterfall, respectively, the swimming pool in Ikogosi Warm Springs (10.0%) and the natural vegetation at Arinta (7.1%).

The assessment of accommodation facilities by the tourist respondents was 76.7, 16.7 and 6.7% as good, fair and poor, respectively, at Ikogosi Warm Springs, while there was no response from the tourists for Arinta Waterfall, where these facilities do not exist. Also, the assessment of transportation facilities by the tourist respondents was 54.7, 39.3 and 2.0 % as good, fair and poor in Ikogosi Warm Springs, while there were no responses for Arinta Waterfall because none was provided. The road was adjudged good (72.7%) and fair (27.3%) in Ikogosi Warm Springs and good (92.9%) and fair (7.14%) in Arinta Waterfall. The facilities provided were assessed as good (61.3%) and fair (38.7%) at Ikogosi Warm Springs and good (47.1%), fair (7.14%) and poor (45.7%) in Arinta Waterfall.

**Table 2: Tourists' perception and assessment of the ecotourism development in the sites**

Questions	Responses	Ikogosi Warm Spring N=150(%)	Arinta Waterfall N=70(%)
What is your assessment of interpersonal relationships among staff and tourists?	Good	121 (80.7)	67(95.7)
	Fair	25 (16.7)	3(4.3)
	Poor	-	-
	No response	4 (2.7)	-
	Total	150 (100.0)	70 (100.0)
Were you/your group given educational information/material about the site and its natural features when you visited?	Yes	79 (52.7)	-
	No	67 (44.7)	70(100.0)
	No response	4 (2.7)	-
	Total	150 (100.0)	70 (100.0)
If yes, Can you rate in general the level of satisfaction with the information you were provided with according to the following scale:	Satisfied	101(67.3)	25(35.7)
	Unsatisfied	2(1.3)	45(64.3)
	No response	47 (31.3)	-
	Total	150 (100.0)	70 (100.0)
Do you think the site is well managed?	Yes	141 (94.0)	52(74.3)
	No	7 (4.7)	15(21.4)
	No response	2 (1.3)	37 (52.9)
	Total	150 (100.0)	70 (100.0)
Can you rate the general level of satisfaction when you visit the site according to the following scale:	Satisfied	143(95.3)	55(78.6)
	Unsatisfied	7 (4.7)	15(21.4)
	Total	150 (100.0)	70 (100.0)
Would you visit the site again in future?	Yes	142(94.7)	70(100.0)
	No	5(3.33)	-
	No response	-	-
	Total	150 (100)	70(100)
What is the maximum amount you will pay to enter the site? (#)	1000	22(14.7)	10(14.3)
	700	6(4)	-
	600	11(7.3)	-
	500	67(44.7)	35(50.0)
	400	16(10.6)	-
	300	11(7.3)	-
	200	7(4.7)	21(30.0)
	Free	1(0.7)	2(2.9)
	No response	9 (6.0)	2 (2.9)
	Total	150 (100.0)	70 (100.0)

Source: Field Survey (2014-2016)

The perceptions of the tourists to site official relationships and satisfaction are presented in Table 2. The highest percentages (80.7 and 95.7%) of the respondents claimed that the relationships between the tourists and site officials were good and fair (16.7 and 4.3%) in Ikogosi Warm Springs and Arinta Waterfall, respectively, while none gave poor as an answer. The proportion of tourists who agreed that they were provided with educational materials about the sites and their natural features was 52.7 and 0%, while 44.7 and 100.0% disagreed at Ikogosi Warm Springs and Arinta Waterfall, respectively. Many of the tourists (94.7 and 100.0%) would wish to visit again based on satisfaction at 95.3 and 78.6% in Ikogosi Warm Springs and Arinta Waterfall, respectively.

**Table 3: One-way ANOVA of the Influence of Socioeconomic Characteristics on the Amount Ecotourists Are Willing to Pay**

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F	p-value
Gender	15.0	1	15.0	6.11	0.014*
Marital Status	4.31	1	4.31	2.31	0.13
Educational Level	25.5	1	25.5	7.75	0.009*
Age	19.8	1	19.8	6.91	0.012*
Religion	1.98	1	1.98	0.91	0.35
Occupation	11.4	1	11.4	4.78	0.032*
Monthly Income	26.3	1	26.3	8.25	0.004*
<b>Error</b>	145.0	100	1.45		
<b>Total</b>	250.29	106			

Significant at  $p=0.05$ 

Source: Field Survey (2014-2016)

The relationships between the socioeconomic characteristics of respondents and the amount they would be willing to pay to access the tourist sites are shown in Table 3. The amount tourists would be willing to pay as entrance fees to the sites is significantly influenced by age ( $p=0.01$ ), gender ( $p=0.01$ ), educational status ( $p=0.00$ ), occupation ( $p=0.03$ ) and Monthly income ( $p=0.00$ ). However, Marital status ( $p = 0.13$ ) and religion ( $p = 0.35$ ) do not have a significant impact. Additionally, the percentage of tourist reasons for visitation to the ecotourism sites are shown in Figures 1 and 2, while the medium of information about the ecotourism sites is shown in Figures 3 and 4. Present this, especially the salient points! They are linked to the first portion of this paper.

### Discussion

The two sites fulfil the purposes of recreation, especially as the main natural resources in the sites constitute the focus of attraction. At Ikogosi, warm and cold-water ooze out of hills from different sources only to meet at a point downstream, each maintaining its thermal identity. An additional attraction is provided in the form of an artificial feature- the swimming pool.

Lucas (2000) observed that the flow of tourists to a tourism destination will generate economic growth when it is readily accessible and offers a variety of activities. The attraction at Arinta Waterfall consists of watching the water cascading the steep escarpments and the youth having a cool bath in the giant pool under a serene environment while a few would take research interest in the diverse and unique flora probably for traditional medication potentials. The site staff volunteered that many tourists come in the company of friends and family members with food, drinks, games, etc. The children's visitors consisted mostly of primary and nursery school pupils on an excursion, that is, for education. The interviewed tourists claimed, as earlier noted by Charles and Goeldner (2005), that ecotourism helps them to relax, recuperate from illness, get entertained and be relieved from boredom.

The impact of hospitality management has become crucial to attaining the purposes of rest, relaxation, leisure, relief from boredom, etc. which was emphasised for tourism as a means to relax the brain and mind and also for the proper

functioning of the muscles. Babalola and Olapade (2014). The awareness campaigns of these sites are very limited. Also, the picnic cabin in Ikogosi Warm Springs is not well beautified, while there are none in existence in Arinta Waterfall. However, the tourists were satisfied with the level of management at the sites. Likewise, the hotel at Ikogosi Warm Springs provides a homely feeling, and most tourists commended the staff for the inadequate accommodation and the good manner of approach in attending to their various needs. However, some tourists expressed concern about the room rates that were considered too expensive. Most visitors to the other sites usually lodged at the Ikogosi Warm Springs Hotel or looked for alternative accommodation in the hotels at Efon Alaaye.

However, these demerits notwithstanding, most tourists would want to repeat their visits to these sites because people like to visit beautiful places but also have an interest in the most awful and worst or to gain exciting experiences provided the destinations are packaged well and marketed to the people they are suited for (Nona, 1993). The restaurant of Ikogosi Warm Springs Hotel serves local dishes: *Iyan* (pounded yam), *amala* and semolina, along with various soups and sauces such as *egusi*, *ewedu*, *gbegiri*, vegetable (*eforiro*) etc., which tourists described as delicious and so appreciated the restaurant management as the workers served well, made them important and feel at home. One-way ANOVA **tests** for differences between groups based on a single factor (or independent variable) with multiple levels (Field, 2018). The ANOVA table helps identify which socioeconomic characteristics significantly influence ecotourists' willingness to pay. Significant results (Table 3) highlight areas where policy or business strategies could be targeted to enhance revenue generation based on demographic factors.

### Conclusion

The success of ecotourism development at any site requires agreement between decision-makers on the meaning of the term and the promotion purposes. The tourists who would appreciate and enjoy the luxurious resorts may be disappointed by poor accommodation and limited facilities. Tourists' perception and assessment of the site attractions, as well as their relationship with staff and hospitality management, will greatly encourage ecotourism developments, especially in Arinta Waterfall, where there are no accommodations for tourists and very limited facilities. Also, age, gender and educational status of tourists are important factors that affect patronage of ecotourism in Ikogosi Warm Spring and Arinta Waterfall, Ekiti State, Nigeria.

### Recommendations

1. The management plan should emphasise an effective awareness campaign through information communication technology (ICT), television, radio, and print media to bring the recreation and tourism potential of the sites to the consciousness of the national and international public.
2. The standard of facilities needs to be maintained and improved at Ikogosi Warm Springs to keep attracting visitors and giving them a sense of satisfaction, while the construction of good infrastructure will enhance patronage in Arinta Waterfall.
3. The picnic site should be more beautified through landscaping, which should involve planting carpet grass around the huts. The need for a higher level of sanitation should be stressed so that left-over food scraps from picnickers are disposed of promptly to prevent infestation from flying insects and ants.
4. A better staircase should be constructed to the source of the spring, and the water pouring from the source should be well-channelled to prevent overflowing and wastage, especially during the rainy season.
5. Additional facilities such as horse riding, display of some animals and renovation of the abandoned zoo will add to the vistas. Special shows of unique animals, like the Mona monkey (*Cercopithecus mona*) on the site, can be organised and publicised to attract tourists.
6. A certain agreed percentage of the revenue generated from the site should be used for corporate social responsibility projects in the host community, such as the provision of social amenities (light, water, health facilities, scholarship awards, etc).
7. At Arinta Waterfall, the signpost is old and should be re-painted or changed; the inscriptions have been re-written as these have already faded.

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## Appendix

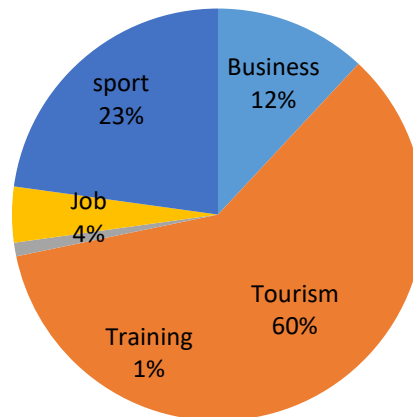


Figure 1: Ikogosi Warm Spring Tourists' Reasons for Visiting Ekiti State  
Source: Field Survey (2014-2016)



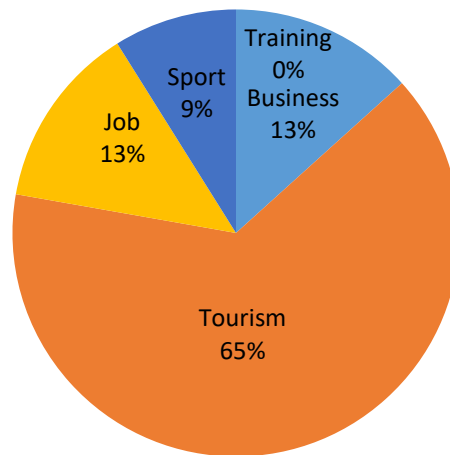


Figure 2: Tourists' reasons for visiting Arinta Waterfall, Ekiti State  
Source: Field Survey (2014-2016)

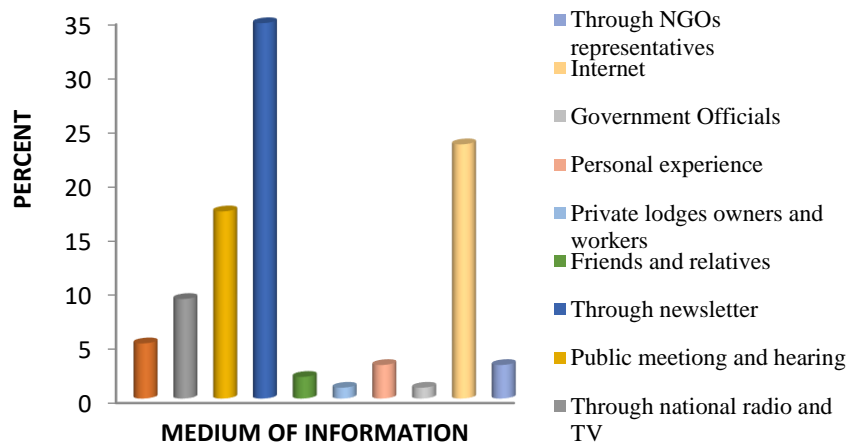


Figure 3: Medium of information about ecotourism at Ikogosi Warm Springs  
Source: Field Survey (2014-2016)

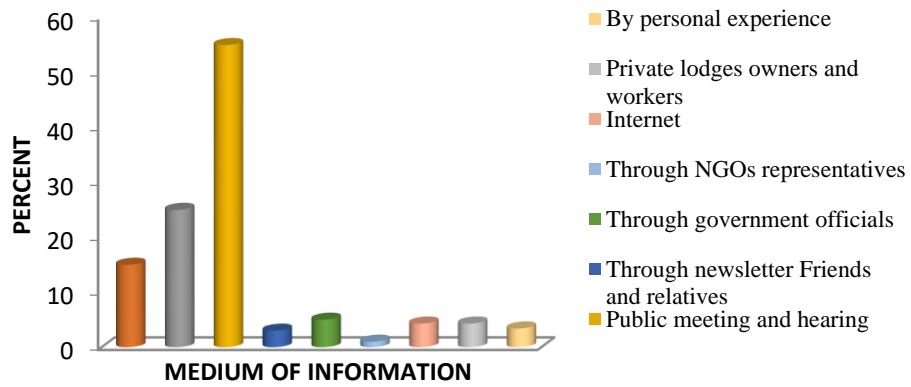


Figure 4: Medium of Information about ecotourism in Arinta Waterfall  
Source: Field Survey (2014-2016)