



IMPACT OF ECOTOURISM ON RURAL PEOPLE AND ENVIRONMENT IN BASTAR DISTRICT OF CHHATTISGARH, INDIA

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Abstract

This study is an attempt to understand the impact of ecotourism on rural people and environment in Bastar district of Chhattisgarh. Bastar is a land of diverse geography and culture, its topography boasts a varied range of flora and fauna. It is home to numerous rare and endangered species. Ecotourism is increasingly recognising as a community development tool with significance economic contribution. This paper examines local economic development of destination communities especially the tribal's in study area. It reveals that community intervention in ecotourism has helped to reduce their excessive dependence on forest resources for their livelihood. The investigation was completed on very famous waterfalls (Tirathgarh & Chitrakote waterfall) at Bastar district of Chhattisgarh during the year, 2016. To achieve results, surveyed 200 tourists and shopkeepers and their necessity of infrastructure facilities and present development related to the ecotourism sector in study area.

Results revealed that the attitude of local people in tourism centres towards tourism development is positive and tourism has a major impact on the economic life of the destination population. From the study it was also find out that the tourism officials have not succeeded in bringing awareness of benefit of tourism to the local people. It is suggested that the Government should take speedy measures to educate the societal benefit of tourism development through various types of programmes. Further, Government should form co-operative societies of educated and trained youth in destinations and provide support to run various kinds of tourism enterprises.

Key words: Tirathgarh waterfall, Chitrakote waterfall, Kanger Valley national Park, Ecotourism, Livelihood etc.

Introduction

Tourism is one of the most important economic, social, cultural and political phenomena of the twentieth century (Ceballos-Lascurian, 1996). Today tourism is described as the world's biggest industry on the basis of number of jobs created, number of clients served and its contribution to global Gross Domestic Product (GDP). Statistics produced by the World Travel and tourism Council (WTTC, 1999) indicate that tourism generates 11 percent of global GDP, employs 200 million people and transports nearly 700 million international travelers per year, a figure that is expected to double by 2020. The size of the industry and its rate of growth present both opportunities and threats for biodiversity conservation.

Tourism is an important sector of the economy and contributes significantly in the country's GDP as well as Foreign Exchange Earnings (FEE). With its backward

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and forward linkage with other sector of the economy, like transport, construction, handicraft, manufacturing, horticulture, agriculture, etc., tourism has the potential to not only be the economy driver, but also become an effective tool for poverty alleviation and ensuring growth with equity.

Chhattisgarh is a newly formed state, a part of Central Indian Plateau, on the Deccan trap situated in the heart of India. It has 1, 35, 153 Sq. Km. Area bearing more than 2.554 carores of the human population (Census, 2011). It is divided in 27 districts for better administration. Chhattisgarh, is a part of India that rarely comes up in the vocabulary of a tourist guide, the lack of publicity has protected it's yet to be explored natural beauty and cultural heritage from the prying eyes of a seasoned traveler. Chhattisgarh is a land where contradictions exist harmoniously side by side, lending the state a charm of its own, untainted by influences from the rapidly

progressive places in the rest of India. This is the perfect place for niche tourism, ethno-tourism, ecotourism and most significantly, sustainable tourism to unfold in its full glory. Tourism of Central India offers specialized ecotourism package for Chhattisgarh so that you can explore the virgin highlands of Central India and spread the word around as to how great your experience of touring. Chhattisgarh is a hilly terrain set against the fertile plains of river valley such as those of Indrawati, Shivnath and Mahanadi, 44% of Chhattisgarh is densely forested with tropical foliage. It is hardly surprising then that Chhattisgarh is home to 3 National Park and 12 Wildlife Sanctuaries that are a must visit for anyone who takes on an eco-tour in Chhattisgarh.

Bastar is famous natural beauty and its diversity, tribal customs and cultures that are distinct to other parts of the state. Besides, your eco tour would be arranged in such a way that you get a glimpse of the tribal life without interfering with their daily routine. Walks, treks, rafting and parasailing can also be indulged in, along with occasional trip to the village market. Here you can see the most popular sport of the tribe's cockfight in progress as you sip Salphi or a drink obtained from Mahua flower.

Eco tourism in Bastar also includes ethnic tourism where you can attend tribal dance functions, wedding and local festivals. Bastar ecotourism is a form of tourism involving visiting fragile, pristine and relatively undisturbed natural areas, intended as a low impact and often small scale alternative to standard commercial tourism. Its purpose may be to educate the traveler, to provide funds for ecological conservation, to directly benefit the economic development and political empowerment of local communities, or to foster respect for different cultures and for human rights. Ecotourism typically involves travel to destinations where flora, fauna and cultural heritage are the primary attractions. Bastar ecotourism is intended to offer tourists insight into the impact of human beings on the environment and to foster a greater appreciation of our natural habitats.

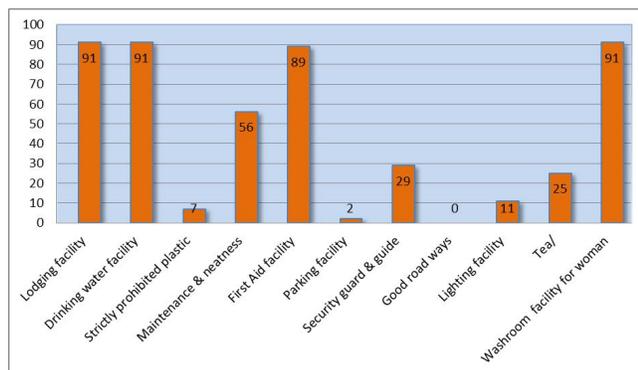


Fig. 1: Infrastructure developments and opinions of tourists in Tirathgarh waterfall at Kanger Valley National Park.

Hence, the research focused on the Ecotourism deals with the status, infrastructure development and its sustainable management in Tirathgarh waterfall of Kanger Valley National Park and Chittrakote waterfall of Lohandiguda at Bastar district of Chhattisgarh state.

Materials and Methods

The investigation was carried out in very famous waterfalls of Bastar district of Chhattisgarh state *i.e.*, Tirathgarh waterfall (Kanger Valley National Park) and Chittrakote Waterfall (Lohandiguda) during the year 2016. The study deals with the ecotourism status, infrastructure development and its sustainable management. Chhattisgarh state has been divided into three agro-climatic zones *viz*; Central Chhattisgarh plains, Southern Bastar Plateau and Northern hills of Sarguja. The study sites fall under the Southern Bastar Plateau agro-climatic zone of state.

First study site of our research is Tirathgarh waterfall situated on Munga Bahar river cascades down from a height of 100 ft. in the form of several steps and an ancient Shiv-Parvati temple is also present here. The waterfall comes under the Kanger Valley National Park which is located near 39 km away from southeast of Jagdalpur, headquarter of Bastar district on Jagdalpur-Bhadrachalam National Highway No. 221, is one of such floristically rich protected areas. It lies between 18°45' to 18°56'30 N latitude and 81°51'30 to 82°10'E longitude and covers an area of 200 km². The valley is in fact one of the last pockets of almost virgin forests still left in the peninsular region. To protect this unique ecosystem, it has been proposed as biosphere reserve under the Man & Biosphere (MAB) programme of UNESCO. The park consists fauna of Tiger, Panther, Wildcat, Spotted deer, Sambhar, Barking deer, Wild Pig, Jackal, Langur, Rhesus Macaque, Sloth bear, Flying squirrel, Python, Hyena, Rabbit, Crocodile, Otter and Civet etc. Around the park fauna includes birds of Prey, Scavenging birds, Water

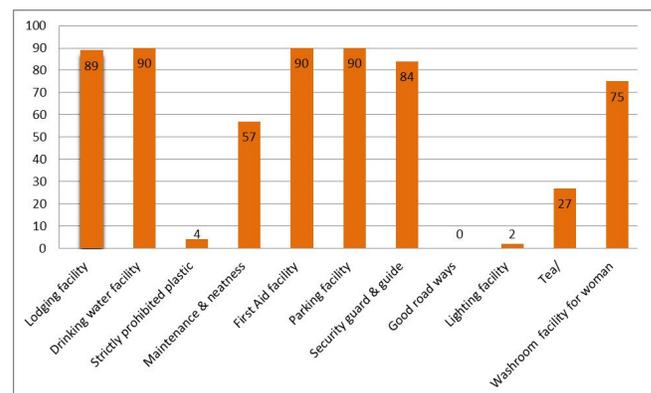


Fig. 2: Infrastructure development and opinion of tourists in Chittrakote waterfall at Lohandiguda.

Table 1: Infrastructure development and opinion of shopkeepers in Tirathgarh Waterfall at Kanger Valley National Park.

S. No.	Name	Lodging facility	Drinking water facility	Strictly prohibited plastic	Maintenance & neatness	First Aid facility	Parking facility	Security guard & guide	Good road ways	Lighting facility	Tea/Tiffin	Washroom facility for woman
1	Aasmati	✓	✓		✓	✓				✓	✓	✓
2	Sukhmati	✓	✓		✓	✓				✓	✓	✓
3	Fagnu Singh	✓	✓		✓	✓				✓	✓	✓
4	B.S. Thakur	✓	✓	✓	✓	✓				✓	✓	✓
5	Samal Dai	✓	✓		✓	✓				✓	✓	✓
6	Koushal Singh	✓	✓	✓	✓	✓				✓	✓	✓
7	Sukhdai	✓	✓			✓				✓		✓
8	Dasbatti	✓	✓		✓					✓	✓	✓
9	Manbahar Thakur	✓	✓			✓						✓

birds, Peacock, Pheasants etc. this nature forest is one of the favorable habitats for our State Bird “Hill Mynah” reason behind it, Park declared as natural habitat of state birds. The reptile includes, Lizards and the insect include Butterflies, Moths, Dragonflies and Grasshopper etc. other important thinks it is provide Butterflies habitat. Due to the favorable habitat condition inside the park government established Butterfly zone in which diversity of Butterfly was found more.

The second site of our research is Chitrakote waterfall, the pride of Chhattisgarh also happens to be India’s best kept secret. Referred to as the Niagara fall of India, Chitrakote has the distinction of being the broadest waterfall in India. It is located at a distance of 35 km to the West of Jagdalpur city. Which is surrounded by dense forest, with fed by the Indrawati river. The

sight of the waters flowing through dense vegetation and cascading from a height of about 95 fit attracts thousands of tourist. The most spectacular view of the waterfall is during the monsoon when the river flows in its full furry and touches both the banks.

The climate of Bastar region is hot & humid and the climate of whole year can be divided into four seasons *i.e.* summer, rainy, spring and winter seasons. Mean annual minimum temperature is 18.2°C and the mean annual maximum temperature is 34.98°C. Geographically Bastar is located in the southern part of Chhattisgarh and situated at a height of 2000 fit plateau from sea level. The borders of Bastar district are Maharashtra state in the west and Orissa state in the east. The areas are generally undulating with the red sandy soil but in some area it is rocky and boulder.

Table 2: Infrastructure development opinion of shopkeepers in Chitrakote waterfall at Lohandiguda.

S. No.	Name	Lodging facility	Drinking water facility	Strictly prohibited plastic	Maintenance & neatness	First Aid facility	Parking facility	Security guard & guide	Good road ways	Lighting facility	Tea/Tiffin	Washroom facility for woman
1	Ranvatti	✓	✓	✓	✓	✓	✓	✓			✓	✓
2	Hemant Verma	✓	✓		✓	✓	✓	✓		✓	✓	✓
3	Chhotu Baghel	✓	✓		✓	✓	✓	✓		✓	✓	✓
4	Gaytri Kashyap	✓	✓	✓		✓	✓			✓		✓
5	Sumitra	✓	✓	✓		✓	✓					✓
6	Jayanti Mourya	✓	✓	✓		✓	✓					✓
7	Lucky Nisad	✓	✓	✓		✓	✓	✓		✓		✓

Table 3: Market assessments in Tirathgarh Waterfall at Kanger Valley National Park.

S. No.	Shopkeeper Name	From	Education qualification	Occupation	Cold Drink	Snacks	Biscuit	Tea /Tiffin	Fruits	Per month Income	Annual	Opinion
1	Aasmati	Tirthgarh	Uneducated	Daily needs	✓	✓	✓	✓		10000	109000	Infrastructure of the shop should be reconstructed & made attractive to attract more tourists.
2	Sukhmati	Tirthgarh	Uneducated	Daily needs	✓	✓	✓	✓		12000	150000	There is no proper facility for drinking water so there should be tubewell.
3	Fagnu Singh	Tirthgarh	7 th class	Daily needs	✓	✓	✓	✓		6000	75000	There is no proper facility for drinking water so there should be tubewell.
4	B.S. Thakur	Tirthgarh	Uneducated	Daily needs	✓	✓	✓	✓		9000	150000	Infrastructure of the shop should be reconstructed & made attractive to attract more tourists.
5	Samal Dai	Tirthgarh	Uneducated	Daily needs	✓	✓	✓	✓		12000	150000	There should be gardening facility for tourist.
6	Koushal Singh	Tirthgarh	M.A.	Daily needs	✓	✓	✓	✓		15000	180000	Shade for tourist, Road side plantation, cleanness the outside & Lodging facility for tourist.
7	Sukhdai	Tirthgarh	Uneducated	Lai murra						1500	30000	Infrastructure of the shop should be reconstructed & made attractive to attract more tourists.
8	Dasbatti	Tirthgarh	Uneducated	Daily needs	✓	✓	✓	✓		6000	100000	Infrastructure of the shop should be reconstructed & made attractive to attract more tourists.
9	Manbahar Thakur	Tirthgarh	12 th class	Daily needs	✓	✓	✓	✓		11000	150000	There is no proper facility for drinking water so there should be tube well.

The primary data was collected by using interview schedules, group discussions and personal interview. A common interview schedule was used for all stakeholders consisting of both open ended and closed ended questions. The marketers, shopkeepers were also interviewed personally. To gather information from villagers and group discussions exercise was performed. The basic idea behind this exercise was to know the expectation of

villagers from tourism and how they can contribute in conservation of that area. Secondary data was also collected from the office of Tourism department and Kanger Valley National Park office, at Jagdalpur district headquarter.

Results and Discussion

During the study both the study sites we are visited

Table 4: Market assessments in Chitrakote waterfall at Lohandiguda.

S. No.	Shopkeeper Name	From	Education qualification	Occupation	Cold Drink	Snacks	Biscuit	Tea /Tiffin	Fruits	Per month Income	Annual	Opinion
1	Ranvatti	Chitrakote	Uneducated	Daily needs	✓	✓	✓	✓		4000	60000	Infrastructure of the shop should be reconstructed & made attractive to attract more tourists.
2	Hemant Verma	Chitrakote	Uneducated	Daily needs	✓	✓	✓	✓		8000	100000	Lack of promotion & publicity, There is no proper facility for drinking water so there should be tube well.
3	Chhotu Baghel	Chitrakote	12 th class	Daily needs	✓	✓	✓	✓		12000	150000	There should be lodging facility for tourist, There is no proper facility for drinking water so there should be tube well, & Lack of promotion & publicity.
4	Jayanti Mourya	Chitrakote	Uneducated	Daily needs	✓	✓	✓			4000	50000	There is no proper facility for drinking water so there should be tubewell & There should be public toilet for tourist.
5	Gaytri Kashyap	Katnar	Uneducated	Daily needs	✓	✓	✓			5000	60000	There is no proper facility for drinking water so there should be tubewell & There should be public toilet for tourist.

and surveyed number of times to collect the information about impact of ecotourism on rural people and environment including infrastructure developmental status of waterfalls discussing with villagers and tourists at the Bastar district waterfalls area (Tirathgarh and Chitrakote). The present study has shown that the sustainable development of ecotourism in Bastar has required various dimensional developments based on nature, minimum impact management and environmental education, contribution to conservation and contribution to local community both directly as well as indirectly.

Fig. 1 and 2 showed the percentage outcomes of observations related to opinions and Infrastructure facilities of total 90 tourists in each Tirathgarh waterfall and Chitrakote waterfall, that revealed the case of lodging facilities, drinking water facilities, strictly prohibited neatness, first aid, parking, security and guidance, good road way, tea/tiffin and washroom for women. In which

more focused on lodging, drinking facility, first aid and washroom facility for women by people opinions which are primarily necessity of any tourist place.

The observation shown on table 1 and 2 reveals that the opinion of 9 and 7 shopkeepers of Tirathgarh waterfall and Chitrakote waterfall respectively, about their necessity of infrastructure facilities and present developmental status of place and future needs. Observations indicates the lack of affordable lodging facility, drinking water facility, medical facility, good parking facility, security guard and guide facility, lighting facility, restaurant facility and washroom facility especially for woman tourists etc. The opinions of shopkeepers in both the study sites regarding parking facility, security guard, guide and good road ways were not more focused by the government.

The local market assessment was analysed through local shopkeepers opinions observations recorded during the study showed on table 3 and 4 for both the study

Table 5: Observation of plastic items collection in dustbin on Tirathgarh Waterfall at Kanger Valley National Park.

S. No.	Spots of Dustbin	1 st Week		2 nd Week		3 rd Week		4 th Week		5 th Week		6 th Week	
		Plastic Poly-thene	Plastic bottle										
1	Near Waterfall	12	8	31	19	13	7	47	17	30	18	35	19
2	Near Parking	7	5	38	18	7	3	31	12	19	25	17	27
3	Near Barrier	21	13	46	23	11	7	18	6	19	13	19	19
4	Near Shop	28	19	26	16	28	11	53	20	47	28	58	37
5	Near Stairs	8	3	34	21	11	3	29	11	38	17	42	31

sites. In Tirathgarh waterfall the shopkeepers were generate maximum income (Rs. 15000/-) per month followed by Rs. 12000/-, Rs.10000/- and Rs. 9000/- per month whereas minimum income (Rs. 1500/-) per month was recorded by selling different items like cold drink, snacks, biscuit and tea/tiffin were more sold. In Chitrakote waterfall the shopkeepers were generate maximum income (Rs. 12000/-) per month followed by Rs. 8000/-, Rs. 5000/- per month whereas minimum income was recorded (Rs. 4000/-) per month. In spite they were not earned more income because they are depended on some special occasion, holidays, festivals and sometimes fair organized by the state government.

The table 5 and 6 was showed very important observations regarding environmental, cleanness and pollution of Tirathgarh waterfall and Chitrakote waterfall. During the study we recorded no good management about pollutants like management of plastics, pouch, bottle, polythene, carry begs and other waste materials, dustbin facility, maintains staff facilities etc. The purposes of this discussion, environmental impacts considered here include

both the direct and indirect impacts on the natural environment. Advantageous and detrimental environmental impacts are found. It should be noted that the severity of impacts depend upon the type of activity as well as the type of ecosystem affected. With the exception of obvious impacts such as trampling of vegetation and changes in wildlife habits and pattern.

The Tourism can contribute to sustainable development by having less impact on environment in comparison to other industries, by playing a positive role in awareness generation for conservation, by providing economic incentives to protect habitat and since it depends on environment as part of its product, it is motivated to protect them (WTTC and IHRA, 1999). Though it holds good at an industry level but less at an individual operator level, whose business is affected by seasonality (Buckley, 1995).

In recent years there have been concerns over global environmental degradation and ways to combat them. Tourism can provide the justification and help, pay for

Table 6: Observation of plastic items collection in dustbins on Chitrakote waterfall at Lohandiguda.

S. No.	Spots of Dustbin	1 st Week		2 nd Week		3 rd Week		4 th Week		5 th Week		6 th Week	
		Plastic Poly-thene	Plastic bottle										
1	Near Waterfall	16	9	39	21	17	9	41	12	43	17	35	10
2	Near Shop	9	11	31	27	7	6	37	17	9	29	21	13
3	Near Last stop	28	20	29	23	18	11	18	7	13	17	19	19
4	Near Parking	22	15	32	19	31	13	50	10	23	28	53	37
5	Near Road side	6	5	41	25	41	4	24	13	31	11	42	31

conservation of local natural areas, archeological and historic sites, arts, crafts and cultural tradition and overall improvement of environmental quality because these are attractions for the tourists. However, if not well planned, developed and managed properly, tourism can result in congestion, pollution and other environmental problems (Bramwell, 1990; Buhalis and Fletcher, 1995). Uncontrolled use by the tourists of nature areas and historic sites may lead to their deterioration. Over commercialization of cultural traditions can result in degradation of the areas cultural heritage (Bhattacharya and Banerjee, 2003).

Tourism and environment are closely interrelated. The natural and built environment provides many of the attractions for the tourists and tourism development can have both negative and positive impacts on the environment. Sustainable tourism development depends on protecting the environmental resources for tourism (Boo, 1991; Butler, 1991). The type and intensity of the environmental impacts of tourism depends on the interaction between the type of tourism development, the socio-economic and other characteristics of tourists and the natural, socio-economic and institutional characteristics of the host area. The environment is being increasingly recognized as a key factor in tourism. In the last decade of the twentieth century, it was noted that tourism depends ultimately upon the environment, as it is a major tourism attraction itself, or is the content in which tourism activity takes place (Holden, 2000). The relationship between tourism and the environment is taking place on various levels. In addition to direct tourism impacts on the environment through *e.g.*, pollution, noise and disturbance, indirect, irreversible and long term consequences between tourism and environmental quality is characterized by dynamic feedback mechanisms (OECD, 1980 and 1994).

Conclusion

Ecotourism, is no doubt, is a significant tool for local regeneration and development of rural areas. The important fact is that most of the protected areas are the habitats of indigenous people. The ecotourism programme could generate good number of employment opportunities to the local people. For this purpose several entrepreneurial initiatives have been taken to accommodate the destination communities. Tourism is one of the most important industries of the world and contributes substantially to the economies of all the

countries. Even in India, which gets a very small proportion of world's foreign tourist, tourism is the third largest foreign exchange earning activity. However the share of nature based tourism is very small in India. There are many reasons why National Parks and landscapes in India are not the destinations of tourist. Therefore it is extremely important to evolve a strategy by which ecotourism could be established as an industry on sustained basis.

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