



## Socio-economic Impact of Tourism Activity on Local Stakeholders of Sanjay Gandhi National Park, Borivali, Mumbai

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### ABSTRACT

Nature-based tourism has the potential to enhance global biodiversity conservation by providing tourism based employment and alternative livelihood strategies for local people, which may alleviate poverty in and around protected areas. The objective of the present investigation was to analyse the socio-economic impact of tourism activity on local stakeholders of Sanjay Gandhi National Park (SGNP), Borivali, Mumbai (Maharashtra). For this study, the data were collected by using questionnaires and in-depth interviews of local stakeholders of National park during the period August 2014 to April 2015. The findings of the analysis proved that, the significant positive economic impacts among the service providers of SGNP was increased employment and earning opportunities, enhanced standard of living, more investments, infrastructural development, new business linkages and opportunities. Respondents were either directly employed in the park or allowed to provide private service to the visitors. Nearly 75% of the respondents obtained full-time employment by means of the park. The findings suggested that the tourism has succeeded in creating maximum positive change gaining household electronic appliances among the stakeholders. Another aspect of loan borrowing capacity of stakeholder was increased significantly and the number of loan borrowers was nearly 80%. Similarly, substantial (60%) improvement was also seen in educational level. The living conditions of the service providers were found to be better after the generation of employment through SGNP.

### Key Words:

Ecotourism, Protected Areas, SGNP, Socio-economic Impact

### INTRODUCTION

In India, tourism in protected areas (PAs) is increasing rapidly with an annual growth rate ranging from 7 to 43 per cent (Karanth and DeFries 2011). PAs tourism is considered a crucial aspect

of PA management. However, the conservationists are divided over the effect tourism has on the fulfilment of objectives of the PAs. Some believe that tourism in PAs is detrimental to conservation while others contend that tourism would

ultimately build a congenial atmosphere by harnessing support from local stakeholders (Joppa et al. 2008; West et al. 2006). Presence of PAs in itself provides very few avenues of employment or even livelihood for local residents. On the contrary, increased conflict with wildlife may antagonise the people against PAs. Tourism and its related service sectors have been seen upon as opportunities to generate revenue as well as pacifying locals by generating livelihood and employment (Karanth and Nepal 2011). At policy level, the involvement of local residents is recognized as a principle component of ecotourism (Anon. 2008). On ground level, the PA managers find it useful to engage local stakeholders in the management of tourism in the PAs. However, few studies have assessed actual impact of engagement of locals directly involved in tourism related activities.

Stakeholders in PA based tourism are those who have a direct interest in, and are affected in different ways, by park and tourism management policies include local community, park management, tourism operators and tourists (Eagles 2002). Objective of the present investigation was to analyse the socio economic impact of tourism activity on local stakeholders of Sanjay Gandhi National Park (SGNP), Borivali, Mumbai, Maharashtra.

## METHODOLOGY

### Study Area

Sanjay Gandhi National Park (SGNP) (72°51'49" to 72°58'32" E, 19°08'20" to 19°20'44" N) is a relatively small national park with an area of around 87 sq. km. and was declared so on 16.01.1996 (Fig. 1). It derives its significance from its role in maintaining the local environment of the metropolitan Mumbai, Greater Mumbai and Thane cities. Its headquarters is in Borivali. The forest habitat is completely isolated into a vast matrix of urban land use. The forests are mostly dense moist deciduous throughout the area. SGNP represents unique and fragile ecosystem being the only national park in one of the least represented

biogeographic zones i.e. Malabar Coast of Western Ghats (5A Malabar Plains).

SGNP is bestowed with immense biological, ecological, archaeological, environmental, recreational & educational values. Owing to its typical location, it bears a very high value for nature tourism and Eco-tourism. The main tourist attractions in SGNP include toy train *Vanrani*, tiger and lion safari, ancient Kanheri caves, nature trails, boating, Mahatma Gandhi memorial, Nature Interpretation Centre, etc.

### Data Collection and Analysis

This survey was part of a study carried out during August 2014 to April 2015. The data for this study was obtained through face-to-face (in-person) interviews with stakeholders. Primary data was gathered from a sample of service providers at SGNP. Presently total 25 stakeholders are providing different types of services in SGNP. To represent each type of service, stratified random sampling was conducted to select 16 stakeholders. For the proposed work, the questionnaire was divided into two parts for better understanding the status of the stakeholders. The first part was on profile characteristics, status, and domestic infrastructure before and after starting service provision in SGNP; Results were calculated as proportions of total sample size. Other data were analyzed as averages or medians.

To see the economic impact of tourism activity on service providers opinion of the respondents was sought on 14 different parameters that indicate the socioeconomic status of the families of the respondents. Accordingly, the respondents were categorised into three groups based on their agreement, disagreement and neutrality to the impact parameters. A weightage of three was given for agreement, two for neutrality and one for disagreement. Only in case of the impact parameter related to hike in food price which was weighted as one for agreement, two for neutrality and three for disagreement. Weighted sum of the three opinions was taken to represent the rank of the impact parameter.

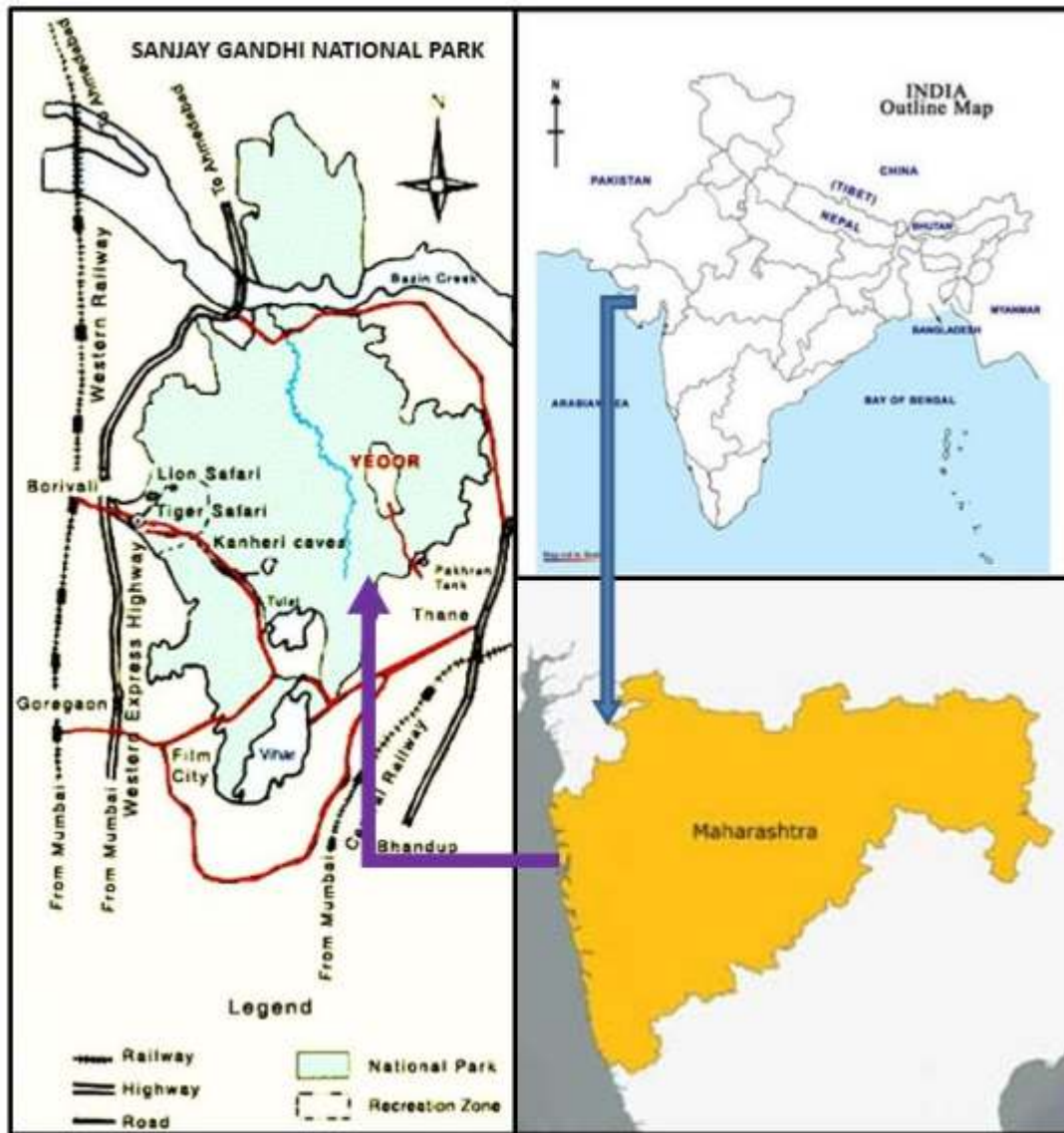


Fig. 1 Map of Sanjay Gandhi National Park, Borivali

## RESULTS AND DISCUSSION

### Distribution of the respondents according to their profile characteristics

Sixteen surveyed respondents provided different services including maintenance of the park (forest guards), guiding tourists, driving tourists through safari vehicles, renting bicycles, vending eatables, photography. The profile characteristics of respondents is summarised in table 1. Out of 16 service providers, 81.25 per cent were male and 18.75 per cent were female. Maximum (50.00 %) of respondents were in the

20-30 years age group and 31.25 per cent of the respondents were from 31-40 years age group, while only 6.25 per cent each of them were from less than 20, and 41-50, 51-60 age groups. Half (50.00 %) of the respondents were married, while remaining of them were unmarried. High school education was the highest educational attainment for most of the respondents (31.25 per cent). About 18.75 per cent of respondents each had achieved higher secondary and post-graduation. Similarly, 12.50 per cent of respondents each had achieved and primary and under-graduate education. Only a small number of respondents

(6.25 per cent) had not received any formal education. Respondents with 4-member family were highest in proportion (31.25 per cent) followed by 5-member families (22.50%). On the other hand, one-member and three-member families were represented by 6.25 per cent respondents each.

The findings of the study are not in conformity with the findings of Tym (2008),

maximum 32.4 per cent in 25-44 age group and 4.7 per cent in 75 and over age group. Gopalan (2006), maximum 41.5 per cent were secondary educated and minimum 9.1 per cent were primary educated. These findings were similar to the studies conducted by Rietveld (2007), about 80 per cent of respondents were not benefited from Wildlife Works, while less than 20 per cent were benefited.

**Table 1.** Distribution of the respondents according to their profile characteristics

Sl. No	Parameters	Number of respondents	Percentage
<b>Gender</b>			
1.	Male	13	81.25
2.	Female	3	18.75
<b>Age</b>			
1	Less than 20	1	6.25
2	20-30	8	50.00
3	31-40	5	31.25
4	41-50	1	6.25
5	51-60	1	6.25
<b>Marital Status</b>			
1.	Married	8	50.00
2.	Unmarried	8	50.00
<b>Education Level</b>			
1.	Primary (up to 7 <sup>th</sup> class)	2	12.50
2.	High school (8 <sup>th</sup> to 10 <sup>th</sup> class)	5	31.25
3.	College	3	18.75
4.	Graduation	2	12.50
5.	Post-graduation	3	18.75
6.	Illiterate	1	6.25
<b>Family Size</b>			
1.	One	1	6.25
2.	Two	2	12.50
3.	Three	1	6.25
4.	Four	5	31.25
5.	Five	2	12.50
6.	Six and More	5	31.25

### Distribution of the respondents according to their employment status and monthly income

Out of total 16 service providers, only seven persons were in permanent employment of forest department. Maximum number of them was forest guard (42.86%) whereas, 28.75 per cent were tourist guide and 14.29 per cent were extension officers. Majority (37.50 per cent) of the service providers had up to Rs. 2000 monthly income from other than SGNP source, 25.00 per cent were earning Rs. 10000 and above per month and 12.50 per cent each of the service providers belonged to Rs. 2001-4000, Rs. 4001-6000 and Rs. 8001 to 10000 earning group. Out of 16 service

providers maximum (75.00 per cent) were working full time in SGNP. On the other hand, 12.50 per cent were part time and 12.50 per cent belonged to other group who worked as guide only on holidays or sometime in peak season. One fourth of each service providers (25.00 per cent) had monthly income up to Rs. 2000 and Rs. 4001-6000. Whereas, 18.75 per cent were in Rs. 10001 and above income category, while 12.50 per cent each of them were having Rs. 6001-8000 and Rs. 8001-10000 income. Remaining 6.25 per cent of the service providers had Rs. 2001-4000 monthly income. The data in respect of employment status and monthly income of the respondents is shown in table 2.

**Table 2.** Distribution of the respondents according to their employment status and monthly income

Sl. No	Parameters	Number	Percentage
	Position in SGNP*		
1.	Guide	1	11.11
2.	Driver	2	22.22
3.	Photographer	1	11.11
4.	Selling of fruits, drinking water and cycling services, etc	5	55.56
	<b>Monthly income from other than SGNP source (Rs)</b>		
1.	Upto 2000	3	37.50
2.	2001 – 4000	1	12.50
3.	4001 – 6000	1	12.50
4.	8001 – 10000	1	12.50
5.	10001 and above	2	25.00
	<b>Types of Services</b>		
1.	Full time	12	75.00
2.	Part time	2	12.50
3.	Holiday, peak season	2	12.50
	<b>Monthly income from SGNP (Rs)</b>		
1.	Upto 2000	4	25.00
2.	2001 – 4000	1	6.25
3.	4001 – 6000	4	25.00
4.	6001 – 8000	2	12.50
5.	8001 – 10000	2	12.50
6.	10001 and above	3	18.75

\*excluding forest guard

## Status of Domestic Infrastructure Before and After Association with SGNP

### House types and utilities

Almost 56.25 per cent of the service providers working in SGNP were having house ownership. Rest of the service providers did not have their own house, so they were residing in rented houses. In case of type of house (*Kaccha/Pukka*), 68.75 per cent service providers were having own house to stay and after association with SGNP the number changed from 68.75 per cent to 87.50 with the increase by 18.75 per cent. Among this, 62.50 per cent respondents were having bedrooms in their house. A huge majority (93.75 per cent) of the respondents were having drinking water facility before the existence of SGNP and the number changed to 100.00 per cent, and now all are having drinking water facility in an area. Earlier, the availability of electricity was in 75.00 per cent houses, which now changed to 81.25 per cent houses of service providers. More than three fifth (62.50 per cent) were having cooking gas and toilet facilities and this number remained same before and after attachment with SGNP. Thus, it was observed that the change was positive in types of house (*Kaccha/Paccha*), drinking water, and electricity facility of service providers. The details regarding domestic infrastructure before and after association with SGNP of the service providers are furnished in table 3.

This is supported by the findings of Rietveld (2007), maximum live in house with mud walls and grass roof average 2.8 rooms in house. Maximum do not have electricity they use paraffins 34.3 per cent have access to water through pipe and others buy from neighbours, relatives. Most of the people are not having sanitation facilities.

### Household appliances

With regard to household appliances, majority of the service provider in SGNP were found to have clock (87.50 per cent), television

(75.00 per cent), fan (75.00 per cent), chair (68.75 per cent), and table (56.25 per cent). Less than one fifth (18.75 per cent) of the service providers were having dining table with them. Negative change was seen in utilization of radio and sewing machine where change was by 6.25 percent. Change increased positively in the use of appliances like refrigerator, laptop and LED/LCD. Due to, increase in the needs and facilities of service providers through development and improvement of SGNP area the positive change in use of household appliances was found (Table 3).

### Vehicles

The findings pertaining to possession of vehicles revealed that majority of the service providers working in SGNP possessed bicycles (31.25 percent) and 25.00 per cent were having motorcycles before working in SGNP, whereas the number of motorcycles increased to 37.50 per cent with difference of 12.50 per cent after working as service provider in SGNP. The number of service provider possessing car before association with SGNP was 6.25 per cent and this number changed to 12.50 per cent with difference of 6.25 per cent after working in SGNP (Table 3).

### Others

It was observed that after working in SGNP the educational level of service providers had increased with maximum difference of 37.50 per cent. The children of service providers started getting education. Health care facility remained constant at 87.50 per cent but increase in employment was noticed by 12.50 per cent. Loan/credit borrowed and family income recorded an increase of 25.00 per cent. Regular saving also had increased by 6.25 per cent due to generation of employment in SGNP (Table 3).

The findings are in conformity with the findings of Rietveld (2007), 80.0 per cent says the educations of children have positively changed while 19.2 say no.

**Table 3.** Domestic infrastructure before and after association with SGNP

Sl. No	Particulars	Before	After	Change
<b>House Types and Utilities</b>				
1.	House ownership	9 (56.25)	9 (56.25)	
2.	Type of house ( <i>Kaccha/Paccha</i> )	11 (68.75)	14 (87.50)	3 (18.75)
3.	Bedrooms in house	10 (62.50)	10 (62.50)	
4.	Drinking water	15 (93.75)	16 (100.00)	1 (6.25)
5.	Electricity	12 (75.00)	13 (81.25)	1 (6.25)
6.	Cooking gas	10 (62.50)	10 (62.50)	-
7.	Toilet facilities	10 (62.50)	10 (62.50)	-
<b>Household Appliances</b>				
1.	Radio	9 (56.25)	8 (50.00)	-1 (-6.25)
2.	Television	10 (62.50)	12 (75.00)	2 (12.50)
3.	Refrigerator	6 (37.50)	10 (62.50)	4 (25.00)
4.	Sewing machine	7 (43.75)	6 (37.50)	-1 (-6.25)
5.	Clock	12 (75.00)	14 (87.50)	2 (12.50)
6.	Sofa set	3 (18.75)	4 (25.00)	1 (6.25)
7.	Fan	11 (68.75)	12 (75.00)	1 (6.25)
8.	VCR/DVD	3 (18.75)	4 (25.00)	1 (6.25)
9.	Dining Table	2 (12.50)	3 (18.75)	1 (6.25)
10.	Chair	11 (68.75)	12 (75.00)	1 (6.25)
11.	Table	9 (56.25)	12 (75.00)	3 (18.75)
12.	Computer	4 (25.00)	4 (25.00)	-
13.	Laptop	1 (6.25)	5 (31.25)	4 (25.00)
14.	LCD/LED Television	2 (12.50)	6 (37.50)	4 (25.00)
<b>Vehicles</b>				
1.	Bicycles	5 (31.25)	5 (31.25)	-
2.	Motorcycles	4 (25.00)	6 (37.50)	2 (12.50)
3.	Cars	1 (6.25)	2 (12.50)	1 (6.25)
<b>Others</b>				
1.	Access to healthcare	14 (87.50)	14 (87.50)	
2.	Access to education	12 (75.00)	13 (81.25)	1 (6.25)
3.	Increase in employment	2 (12.50)	2 (12.50)	-
4.	Regular saving pattern	6 (37.50)	7 (43.75)	1 (6.25)
5.	Loan/credit borrowed	5 (31.25)	9 (56.25)	4 (25.00)
6.	Increase in annual family income	8 (50.00)	12 (75.00)	4 (25.00)
7.	Increase in education level of family members	10 (62.50)	16 (100.00)	6 (37.50)

\*Figures in parenthesis indicate percentage

### Economic impact on local stakeholders

The ranking of impact parameters according to the opinion of stakeholders is presented in table 4. These rankings revealed that in the opinion of majority of the respondents (93.75%), due to SGNP, there had been increase in education, health and sanitation facilities in this area. This parameter was ranked first with a total score of 47. Two parameters i.e. creation of jobs and increased business activity were tied at second rank indicating that tourism had positive influence through enhanced employment opportunities and business activity.

In Indian context, taking electricity, water and roads to the last household has assumed significant socio-political importance. Parameters related to these facilities were all tied at third rank thus indicating that people perceived tourism as a

vehicle of these facilities. Similarly, increased demand of historical and cultural exhibits was placed at third rank clearly showing the underlying impetus of tourism to promote this type of business activity. However, this is a local phenomenon and would be visible only at PAs where historical and cultural sites are embedded and attract tourists. There was virtually no disagreement over these parameters among respondents. Most of the other parameters had positive impact perceived by respondents.

The findings of the study are not in conformity with the findings of Liu et.al (2012) maximum 0.70 per cent were non tourism and minimum 0.64 per cent were tourism saying tourism developed has helped to improve public services and living environment.

**Table 4.** Economic impact on local stakeholders

Sl. No.	Impact Parameter	Respondents (N=16)			Weighted sum	Rank
		Agree	Neutral	Disagree		
1.	People in SGNP area live better now because tourism has Improved local economy	10 (62.50)	5 (31.25)	1 (6.25)	41	V
2.	Tourism has created jobs for people in this area	15 (93.75)	-	1 (6.25)	46	II
3.	Traders make more business because of tourism	14 (87.50)	2 (12.50)	-	46	II
4.	Many people are investing in this area because of tourism	11 (68.75)	4 (25.00)	1 (6.25)	42	IV
5.	There has been development in the community because of tourism	13 (81.25)	2 (12.50)	1 (6.25)	42	IV
6.	Tourism has improved transportation to this area	11 (68.75)	5 (31.25)	-	43	III
7.	Because of tourism, there has been improvement in water and electricity supply in this area	11 (68.75)	5 (31.25)	-	43	III
	The visit by visitors to this area has increased the	6	1	9		



Sl. No.	Impact Parameter	Respondents (N=16)			Weighted sum	Rank
		Agree	Neutral	Disagree		
8.	prices of food items	(37.50)	(6.25)	(56.25)	35	VIII
9.	The price of land in this area has gone up because of tourism	10 (62.50)	2 (12.50)	4 (25.00)	38	VII
10.	Improvement in investment, development and infrastructure spending	6 (37.50)	6 (37.50)	4 (25.00)	34	IX
11.	Increases Tax /revenue	10 (62.50)	3 (18.75)	3 (18.75)	39	VI
12.	Increase in public utility infrastructure	8 (50.00)	7 (43.75)	1 (6.25)	39	VI
13.	Increase in demand for cultural and historical exhibits	12 (75.00)	3 (18.75)	1 (6.25)	43	III
14.	Increase of educational, health and sanitation facilities in this area	15 (93.75)	1 (6.25)	-	47	I

\*Figures in parenthesis indicate percentage

### Levels of impact of tourism on local stakeholders

It is noticed from table 5 that, maximum number (43.75 per cent) of the service providers had experienced low impact of tourism on them.

There was high impact of tourism on 31.25 per cent of the service providers and medium impact of tourism was observed on 25.00 per cent the of service providers.

**Table 5.** Levels of impact of tourism on local stakeholders

Impact	Respondents (N=16)	
	Number	Percentage
Low (upto 35)	7	43.75
Medium (36 to 37)	4	25.00
High (38 and above)	5	31.25
Total	16	100

### CONCLUSION

The service providers employed by SGNP were better in respect of possession of house types and utilities, household appliances, vehicles and other facilities. Tourism in SGNP has proved successful in creating positive impact on local people and all the stakeholders of the area through it varied in its level. In other words, the living conditions of the service providers from SGNP were better after generation of employment through SGNP.

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