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A Comparison of Impact of Agri-tourism as Perceived by Multiple Stakeholders in Maharashtra and Goa

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ABSTRACT

The study was conducted to assess the impact of agro tourism as perceived by its stakeholders. Forty-five agri-tourism Centres (ATCs) drawn from Maharashtra (30) and Goa (15) and 200 visitors (100 from each state) were selected for the study. The impact was measured in terms of change in employment days and perceived overall socio-economic changes. An average number of employment days in Maharashtra and Goa had increased from 149 to 202 man-days/year and 117 to 208 man-days/year, respectively after 2016. Significant changes were observed in the installation of new irrigation system and new farm structure for activities and games in Maharashtra whereas in Goa, ATC farms witnessed significant improvement in the installation of new processing and post-harvesting equipment and arrangements for entertainment along with the installation of a new irrigation system. ATC hosts showed significant social changes in social participation, increase in external contacts, recognition and awards. A significant difference was observed among the compared benefits as perceived by tourists in terms of learning more about nature, to think about their values, recalling good times from the past and to have a change from their daily routine.

INTRODUCTION

Agriculture and its allied activities are on the brink of a change for both the farmers as well as consumers. Agri-tourism is one such activity where people from the outside visit a farm on vacation. Agri-tourism may be defined as "rural enterprise which incorporates both a working farm environment and a commercial tourism component" (Fennel and Weaver, 1997; McGehee, 2007). Barbieri and Mshenga (2008) referred to agri-tourism as any practice developed on a working farm to attract visitors. Agri-tourism is the nascent growing sector in the tourism industry. The concept has been successfully implemented in Indian states like Maharashtra, Kerala, Rajasthan, Goa, Jharkhand, Gujarat, Punjab and Himachal Pradesh. Rural based tourism activities strengthened the women empowerment and socio economic upliftment, household decision making, enhanced participation in educational activity and supplement family income (Slathia et al., 2015). It has become a new avenue for earning income for rural farmers. Farm visits, farm stays and trail visits are gradually picking up amongst tourists to experience something different from clichéd sightseeing packages of a destination. It has brought numerous changes in the farm as well as socio personal life of hosts. McCool and Martin (1994) reported that host community viewed tourism to provide socio-cultural benefits to the community such as tourism creates opportunities for cultural exchange. Agri-tourism creates a win-win situation for both the farmers as well as the tourists (Chadda and Bhakare, 2012).

The farmers get benefitted by deriving an extra source of income and tourist hunger for a natural and peaceful environment is satisfied. Frequency of income generation increases from once a year to once a week. Gender bias is reduced as both male and female get equal opportunities to earn from the employment generated through various allied activities like Emu, organic and dairy farming.

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Rural tourism creates employment for rural people and generates income for them (Yavanarani, 2013). The villagers can provide better food and education for their children and their quality of life will improve as a supplementary source of income along with their agricultural income. The rural people can learn from modern culture and can overcome some blind traditional values and beliefs which pose a challenge to overall development (Afroz et al., 2017). The present study aims at assessing and quantifying the socio-economic changes as perceived by different stakeholders.

METHODOLOGY

The study was conducted in purposively selected Maharashtra and Goa states during 2016-17 to 2018-19 by following quasi experimental research design with the concept of before-after studies. The sample respondents in the present study comprised of forty-five agri-tourism centres drawn from two states (30 from Maharashtra and 15 from Goa). The total number of 200 agri-tourists (visitors) included 100 visitors each from respective states selected for the study. The socio-economic impact was measured in terms of employment generation and overall socio-economic changes in terms of farm-material possession, expenditure pattern, farm changes, standards of living, operator's economy and social participation. For the present study the year 2016 was selected as a benchmark. The three years before 2016 was considered as "before" data whereas changes after 2016 were considered after. After consultation with agri-tourism experts and agencies working in the agri-tourism field, the researcher found that after 2016 there was significant growth and development in the field. Moreover, some of the ATCs that were surveyed established in 2016. Employment generation was measured as the total number of man-days employed on the respondent agri-tourism host's farm in a year. The total number of man-days used on the respondent agri-tourism host's farm in a year before adoption and three years after agri-tourism was found out to compare if there was any change (increase/ decrease) in the employment generation on account of adoption. The change was measured separately for ATCs of Maharashtra and Goa. The statistical significance of the change in employment generation was measured using t-test. McNemar test was used to analyze pre and post-test study designs, as well as being commonly employed in analyzing matched pairs and case-control studies.

The personal benefit is also a component of impact assessment as perceived by tourists in both states was measured on a five-point continuum from no benefit to highly beneficial. Mann-Whitney U test was used to compare the perceived personal benefits from agri-tourism centres between Maharashtra and Goa tourists. A semi-structured interview schedule containing appropriate questions for data collection was prepared. The data were collected by personal interview as well as focused group discussion methods. The Statistical Package for the Social Sciences (SPSS Version 17) was used to perform the statistical analysis.

RESULTS AND DISCUSSION

Employment is an indication of economic activity engaged in any sector. Here, in the sampled 45 ATCs combined of both states, the data was collected according to the timeline and categorised as before (2013-15) and after (2016-18). Impact of agri-tourism on the generation of employment is given in table 1shows that average number of employment days in Maharashtra has increased from 149 to 202 man-days/year after 2016. There was also an increase in average employment days from 117 to 208 man-days/year in Goa after the same time. The t-test results indicate that the increase in the number of employment days per year was statistically significant. Agriculture being labour intensive activity needs the economic advantage of employment in itself. It can be ascertained that the considerable increase in the employment generation in the agri-tourism was due to its growth and development. It suggests that positive impact was seen in the sampling area in terms of employment generation. Chandrashekhara (2018) also quoted agri-tourism as employment opportunities to the farmers including their family members and other local youths. Agri-tourism can contribute in a big way in optimally utilizing the agricultural land in India, generate additional income to the farmers and provide employment (Chadda and Bhakare, 2012). The above findings are consistent with observations of Flanigan et al., (2015); Hara and Naipaul (2008).

The overall socio-economic impact of agri-tourism on hosts/ operators was conceptualized as a combination of parameters such as material changes, changes in expenditure pattern, overall farm changes, changes in standard of living, changes in financial status and change in social participation. Some of the parameters were measured categorically and few on a continuum. The results in Table

Table 1. Changes in employment generation as the impact of agri-tourism initiative

S.No.	Descriptive	Maharashtra		Goa		Total	
	statistics	Before	After	Before	After	Before	After
1.	Mean	149.10	201.80	116.75	207.78	265.85	409.58
2.	SE	10.11	10.51	8.83	13.03	18.94	23.54
3.	SD	63.96	66.48	55.82	82.41	59.89	74.13
4.	CV	0.43	0.33	0.48	0.40	0.23	0.21
5.	Skewness	1.32	0.71	0.59	1.67	0.02	0.58
6.	Range	257.00	238.00	256.00	426.00	262.00	332.00
7.	Minimum	68.00	112.00	15.00	99.00	166.00	422.00
8.	Maximum	325.00	350.00	271.00	525.00	357.00	729.00

t-test results for change in employment

States	t -stat	P(T<=t)two-tail	t Critical two-tail	Level of Significance
Maharashtra	6.865	<0.001	2.023	**
Goa	8.072	<0.001	2.023	**

*Note: ** Significance at 1 per cent level; (Figures in man days)*

Table 2. Components and significance of socio-economic impact of agri-tourism in Maharashtra (n=30)

S.No.	Particulars	McNemar Statistic	Extract Pr>= S	Level of significance
A.	Material Changes			
1.	Pump set/ Bore well	6.000	0.0610	NS
2.	Tractor/ Van/ vehicle/bullock cart	5.000	0.0625	NS
3.	Drip /sprinkler irrigation system	23.000	<0.001	**
4.	Structures for activities and games like swings, wooden furniture, lawns etc.	21.000	<0.001	**
B.	Change in expenditure pattern			
1.	Food items	1.471	0.3323	NS
2.	Education	6.004	0.0020	*
3.	Healthcare	5.261	0.0647	NS
4.	Social Function	0.818	0.5488	NS
C.	Overall farm changes			
1.	Purchased new lands	1.600	0.3438	NS
2.	Improved the existing lands	5.333	0.0386	*
3.	Diversified cropping system	13.500	<0.001	**
4.	Leased out lands for cultivation	5.762	0.0266	*
5.	Purchased additional livestock	1.333	0.3877	NS
D.	Changes in standards of living			
1.	Had better health care	0.889	0.4807	NS
2.	Had better nutritious food	1.471	0.3323	NS
3.	Spent more money on clothing	3.769	0.0923	NS
4.	Spent more for religious, marriages and other ceremonies	0.818	0.5488	NS
E.	Changes in financial status			
1.	Repaid old loans	6.390	0.0520	*
2.	Increased savings/ deposits	5.000	0.0504	*
3.	Invested money on other enterprises	7.316	0.0034	*
4.	Incurred loss and debts	2.000	0.5000	NS
F.	Change in social participation			
1.	Many farmers approach me for agritourism related information	2.25	0.2101	NS
2.	Emerged as a leader/ progress farmer	1.00	0.4545	NS
3.	Become effective communicator as agritourism host	2.25	0.2101	NS
4.	Outside contacts increased	23.14	<0.001	**
5.	Subscribed farm publications and general publications	6.81	0.0488	NS
6.	Received awards/ recognition	12.56	<0.001	**
7.	Served as a resource person in the training programme on agri-tourism	4.00	0.1250	NS

*Note: ** Significance at 1 per cent level; * Significance at 5 per cent level*

2 showed that for the material changes McNemar's test statistic revealed that there were significant changes in the adoption of innovative technologies by ATCs such as drip irrigation and modern structure for tourism and entertainment were installed to great extent due to concept of agri-tourism. However, bore well and other vehicles were already present with them; hence no significant changes in their ownership pattern were observed. Agribusiness ventures require high investment at initial stages but once the business crosses breakeven point, the returns will bring changes in the material possession (Prabhakar, 2015). These findings are consistent with Huff and Munro (1985); Pinky and Kaur (2014). Karampela et al., (2016).

The changes in expenditure pattern was measured on a continuum revealed that there was a significant increase in the expenditure for education. This was because they spent savings from the extra income generated from ATC to the education of their family members as well as for themselves under training programmes. Overall farm changes of agri-tourism on operators revealed that there were significant changes in improving their existing lands, diversifying the cropping system and leasing out extra lands for cultivation. This was observed because agri-tourists expected that the farms must be rich in crop diversity and high standard of agriculture with multi enterprises in it. Moreover, the farmers also felt that without improving their lands regularly it was difficult to stay in the business. The good returns over the years also a motivation factor for improving lands and focusing on agri-tourism. Changes in standard of living revealed that there was no significant difference in their standard of living due to agri-tourism.

Changes in their financial status revealed that there was a significant change in their capacity to repay the old loans, more intention of savings and invested money on other enterprises in case of Maharashtra sampled agri-tourism centres. There was no significant change in incurring losses and debts. Although the majority of agri-tourism operators did not receive direct sales from this activity, they perceive it as important for the continued operation of their farm. Agri-tourism was also perceived as having a positive impact on farm profits (Tew and Barbeiri, 2012). The changes were been observed in their social participation in latest years as a result of agri-tourism. Increment in outside contacts, awards and recognition were perceived as highly significant factors in the overall social participation. These findings are in line with Barbieri and Mshenga (2008) who discussed in their study that social participation was both ingredient and outcome of any successful agri-tourism.

The data in Table 3 revealed the significant changes in socio-economic conditions of agri-tourism hosts/owners in Goa. There were highly significant changes in the adoption of innovative technologies by ATCs such as new processing and post-harvest equipment and modern structure for tourism and entertainment were installed to great extent to fulfil the concept of agri-tourism. There was also significant change noticed in case of installation of drip irrigation in recent years due to agri-tourism. Whereas, bore well and other vehicles were already present with them, hence no significant changes in their ownership pattern were observed. These results indicate that the venture was not only improving farmers' condition but also changing their behaviour and attitude towards innovative technologies. They were more interested to adopt technologies both to showcase to the tourists and enhance crop productivity with high efficiency.

The second component i.e. changes in expenditure pattern revealed that there were no significant changes in it except for a change in the increase in expenditure for social functions. This was because they spent savings from the extra income generated from ATC to social activities and festivals, which also included their tourists. Moreover, the Goa farm tourism units were service oriented and large area based. Hence, agri-tourism is an added advantage to attract all type of tourists other than tourists who seek entertainment.

Overall farm changes were the third component in the socio-economic impact of agri-tourism on operators revealed that there were significant changes in improving their existing lands. All others were perceived as not so significantly changed in recent years just because of agri-tourism. This was observed since Goa farm was more focused on horticultural crops such as spices, flowers, plantations, fruit orchards and processing plants. They can't change the crop diversity regularly as in the case of Maharashtra. Since the main occupation in Goa is tourism, therefore they try to keep intact that biodiversity. But, they improved their lands in terms of hygiene and sanitation, levelling of undulated barren lands for showcasing some crops and installing an innovative irrigation system. There was no dearth of water in Goa as such observed but because of the farm tourism unit, owners felt that the irrigation

Table 3. Components and significance of socio-economic impact of agri-tourism in Goa (n=15)

S.No.	Particulars	McNemar Statistic	Extract Pr>= S	Level of significance
A.	Material Changes			
1.	Pumps set/ Bore well	2.00	0.5000	NS
2.	Tractor / Van/ vehicle/bullock cart	1.00	1.0000	NS
3.	Drip /sprinkler irrigation system	9.00	0.011	*
4.	New processing and post-harvest equipment	14.00	<.0001	**
5.	Farm shed/cottages	3.00	0.2500	NS
6.	Cold storage structure	2.00	0.5000	NS
7.	Structures for activities and games like swings, wooden furniture, lawns etc.	17.00	<.0001	**
B.	Change in expenditure pattern			
1.	Food items	1.47	0.3323	NS
2.	Education	0.69	0.5811	NS
3.	Healthcare	0.89	0.4807	NS
4.	Social Function	5.56	0.0309	*
C.	Overall farm changes			
1.	Purchased new lands	0.40	0.7539	NS
2.	Improved the existing lands	6.37	0.0192	*
3.	Diversified cropping system	2.78	0.1797	NS
4.	Leased out lands for cultivation	0.11	1.0000	NS
5.	Purchased additional livestock	1.333	0.3877	NS
D.	Overall changes in standards of living			
1.	Provided better education to children	2.41	0.2006	NS
2.	Had better health care	2.67	0.2188	NS
3.	Had better nutritious food	5.00	0.0625	NS
4.	Spent more money for clothing	3.00	0.2500	NS
5.	Spent more for religious, marriages and other ceremonies	4.00	0.205	NS
E.	Overall economic changes			
1.	Repaid old loans	4.00	0.1250	NS
2.	Increased savings/ deposits	4.45	0.0654	NS
3.	Invested money on other enterprises	0.67	0.6875	NS
4.	Incurred loss and debts	4.45	0.0654	NS
E.	Change in social participation			
1.	Many other farmers approach the owner for agri-tourism related information	6.00	0.0313	*
2.	Emerged as a leader/ progress farmer	2.31	0.35	NS
3.	Become effective communicator as agri-tourism host	13.29	<0.001	**
4.	Outside contacts increased	14.00	<0.001	**
5.	Subscribed farm publications and general publications	8.33	0.0063	**
6.	Received awards/ recognition	5.00	0.0625	NS
7.	Served as a resource person in the training programme on agri-tourism	3.00	0.25	NS

*Note: ** Significance at 1 per cent level; * Significance at 5 per cent level; NS: Non-significant*

Table 4. Comparison of the Perceived personal benefits from agri-tourism farms between Maharashtra and Goa tourists (n=200)

S.No.	Personal Benefits	Maharashtra (Sum of ranks)	Goa (Sum of ranks)	Mann-Whitney U test	Z	p value
1.	Spend time with their family in farm	9723.5	10376.5	4.676	-0.847	0.397
2.	Learn more about nature	9117.0	10983.0	4.067	-2.419*	<0.05
3.	Be with people having similar values	9466.0	10634.0	4.416	-1.529	0.126
4.	Give their mind a rest	9832.0	10268.0	4.782	-0.566	0.571
5.	Experience new and different things	10117.5	9982.5	4.932	-0.175	0.861
6.	Think about their personal values	10902.0	9198.0	4.148	-2.217*	<0.05
7.	Recall good times from the past	10899.5	9200.5	4.150	-2.211*	<0.05
8.	Enjoy the smells and sounds of nature	9458.0	10642.0	4.408	-1.542	0.123
9.	Share their agri-tourism skills	10121	9979	4.929	-0.184	0.854
10.	Have a change from their daily routine	9110	10990	4.060	-2.458*	<0.05
11.	Experience solitude	10656	9444	4.394	-1.571	0.116

**significance at 5 per cent level*

unit would improve yield and enhance the efficiency along with a component of showcasing to tourists.

The data related to changes in standard of living revealed that there was no significant difference observed in their standard of living due to agri-tourism as such. Changes in their financial status revealed that there was no significant change in any of its components. It is observed due to the fact that Goa ATCs were well established and economically sound farms, which have recently included the component of agri-tourism within them. Hence, the agri-tourism unit has only brought behavioural changes among the owners rather than significant economic change. Although a majority of agri-tourism operators do not receive direct sales from this activity, they perceive it as important for the continued operation of their farm for promotion of Ayurveda and naturopathy.

Changes in social participation are one of the most important components of the socio-economic impact of agri-tourism. The results (Table 3) revealed that notable improvement in their social participation was observed over the recent years due to agri-tourism than before. Increment in outside contacts, improvement in communication with hosts, subscription to agricultural magazines and awards and recognition were perceived as highly significant factors in the overall social participation. This was observed due to focus on agriculture along with other entertainment aspects in Goa. The major social change notable here was the subscription to agricultural magazines, which is a sign of positive impact of agri-tourism on the owners in the recent years. These findings are in line with Barbieri and Mshenga (2008) who discussed in their study that social participation is both ingredient and outcome of any successful agri-tourism.

Mann-Whitney U test in Table 4 revealed that visitors to Maharashtra sampled ATCs perceived 'thinking about their personal values' was important than all other possible benefits listed. It was followed by their liking to 'recall good times from past and experiencing solitude'. The situation was different for Goa with the visitors' maximum preference towards the benefit of change from daily routine followed by benefit of learning from nature. The four perceived benefits among the visitors were found significantly differing between the states at 5% level of significance. Visitors preferred to learn more from nature and to have change from daily routine in Goa than Maharashtra. This may be due to the fact that the former state is richer in biodiversity than latter and the tag of final destination of entertainment to Goa had made the tourists to respond in such direction. At the same time, visitors in Maharashtra preferred benefit of thinking personal values and recalling good times form past than Goa tourists. This may be due to the fact that the agri-tourism farm in former state was little away from cities and authentic rural life and way of life made them to form such opinions.

CONCLUSION

Even though the impact assessment is relative and moderately quantitative but it showed visible changes in the sampled areas. Presently the sector needs policy and research backstopping that includes institutional interventions and government strategies and suggestions for agri-tourism development. Reduction of high initial investment through introducing low cost construction materials through intense research and case studies would bring the establishment cost to minimum level so that even the semi-medium and small farmers can also think of the venture. Provision of loan through PACS/ Commercial banks under MUDRA or startup scheme will encourage the young and interested farmers to take this venture. Provision of subsidy for low cost agri-tourism farms would strengthen as an agri-tourism. This would not only augment the impact of this venture in positive note to enhance the income of the customers but reaching out to the urban tourists to bring to their roots.

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