

# Economic Outcomes of Community-Based Ecotourism in Coastal Odisha of Puri District

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## Abstract

Community-based ecotourism (CBET) has evolved as an important form of sustainable tourism, combining conservation goals with local economic advancement. Here, as is the case of Puri in Odisha State, tourism economy is very important but the conventional model has largely led to marginalisation of many and inadequate community participation. The objective of this study was to determine the economic benefits that will be accrued from community-based ecotourism on local communities in Puri, with particular reference to income earnings, employment opportunities, business expansion, standard of living and general economic perception during peak tourism period. Descriptive cross-sectional research design was used. The primary data was gathered from 160 respondents through a structured Community-Based Ecotourism Economic Impact Questionnaire. The study was carried out in the Puri town and Sea Beach blocks in November, December 2025, and January 2026. Simple random sampling method was used within the tourism workers occupational sub-groups. The data were analysed by descriptive statistics, and the percentage is represented in tables and figures. Ecotourism a boon for the economy of Puri. The community-based ecotourism has had a positive impact on the economic status of local people in Puri. Increased policy support, infrastructure development and strategies for year-round tourism are necessary to maintain and maximise these benefits.

**Keywords:** *Community-based ecotourism, economic impact, livelihood development, employment generation, sustainable tourism*

## Introduction

Community based ecotourism (CBET) has become a model of sustainable tourism, which aims to establish a middle ground between environmental conservation and socio-economic development through active involvement of the local communities in the tourism planning, management and as well as benefit-sharing. CBET focuses on local empowerment, livelihood, and conservation of natural and cultural heritage, unlike traditional tourism. According to scholars in India, the increased attention to ecotourism has been motivated by the interests in the effects of mass tourism and the necessity to provide alternative methods of incomes to rural

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and coastal communities(O. P. Kumar, 2023; S. Kumar et al., 2023). Odisha is an important ecotourism attraction as it boasts of various ecosystems, extensive coastline, wetlands, wildlife parks and cultural heritage. Tourism is now a significant part of the state economy, and the growth is noted in religious tourism, coastal tourism, rural tourism, and nature tourism (Panigrahi et al., 2022).Puri, specifically, is one of the primary pilgrimage and coast tourism destinations that receive millions of visitors each year. Nonetheless, the models of tourism development in Puri have been rather standardized and have frequently led to the stress of the environment, uneven distribution of economic gains, and a lack of involvement of the communities(Zhuang et al., 2019).

The challenges have brought to the fore alternative tourism models that put in consideration the livelihoods and sustainability within the locality. There are varying results of ecotourism projects as seen in empirical studies throughout India. A study conducted at the Dandeli Wildlife Sanctuary showed that ecotourism created entrepreneurship opportunities but the community was not actively involved in the planning and management of the activities and the distribution of the economic benefits was uneven (Maruti & Pawar Rohit, 2013). Correspondingly, it was observed that ecotourism designates employment and economic motivation on conserving the wildlife, but it did not completely empower the communities socially and politically as studies in Bhitarkanika Wildlife Sanctuary indicated(Das & Chatterjee, 2020, 2023). In the western region of Odisha, the local population was witnessing a poor livelihood change as a result of the disconnect between policy and practice in the enforcement of eco - tourism (Pujar & Mishra, 2024). The involvement of the community has been noted to be one of the key successes to ecotourism. Study has conducted a systematic review that supports the institution of proactive community participation in promoting economic gains, conservation, and social sustainability while omission of collaboration and sharing of benefits becomes an ongoing issue (Tiwari et al., 2024). The community-managed nature tourism projects in Odisha have produced positive results and simulated a local empowerment that was not equal among the demographic groups(J. Behera & Deb, 2024). In the lake of Chilika, the stakeholders felt both negative and positive economic effects but the involvement of the community was limited, which limited the benefits that could be achieved(Samal & Dash, 2024; Sethy & Senapati, 2023). Newer variants of tourism such as spiritual tourism are also demonstrating that Odisha can evolve tourism that is community-centered and locally controlled, leading to sustainable economic development(Nair, 2024).Other developmental forms of tourism, such as geotourism, are also indicating that Odisha has opportunities to develop tourism on a community-based infrastructure and locally-based control (Wani et al., 2025).

Examples of community-based economic development of Odisha could be found in its recent endeavours in the integration of tourism within the local With the expansion of literature, the majority of research has been conducted on the subject of the protected areas and wetlands in Odisha, and there is very little empirical research on urban destinations such as the coast and Puri city, which offers a variety of research opportunities (A. K. Behera & Chandra, 2025). Consequently, the economic effect of community-based ecotourism in Puri needs to be reviewed to comprehend the role of CBET in income, employment, and entrepreneurship, development of the community. This study filed this gap by examining the economic

performance of CBET at Puri with an aim of informing sustainable tourism policies and inclusive development strategies.

### **Need of the Study**

In Puri, the influx of tourists in the peak months of November, December and January not only stimulate economic activities but also put pressure on resources and communities locally. In spite of the obvious importance of tourism to economic development in Odisha (Panigrahi et al., 2022), conventional tourism patterns in Puri have had inclusive effects and marginal involvement by local constituency (Zhuang et al., 2019). As the literature from Odisha and India in general suggest community-based ecotourism could be beneficial for local development when it is successfully implemented across Odisha and in India (Das & Chatterjee, 2020, 2023; Tiwari et al., 2024). As a result, it is crucial to evaluate the economic impact of CBET in Puri during peak season as November, December and January seasons for promoting green inclusive growth and sustainable tourism planning.

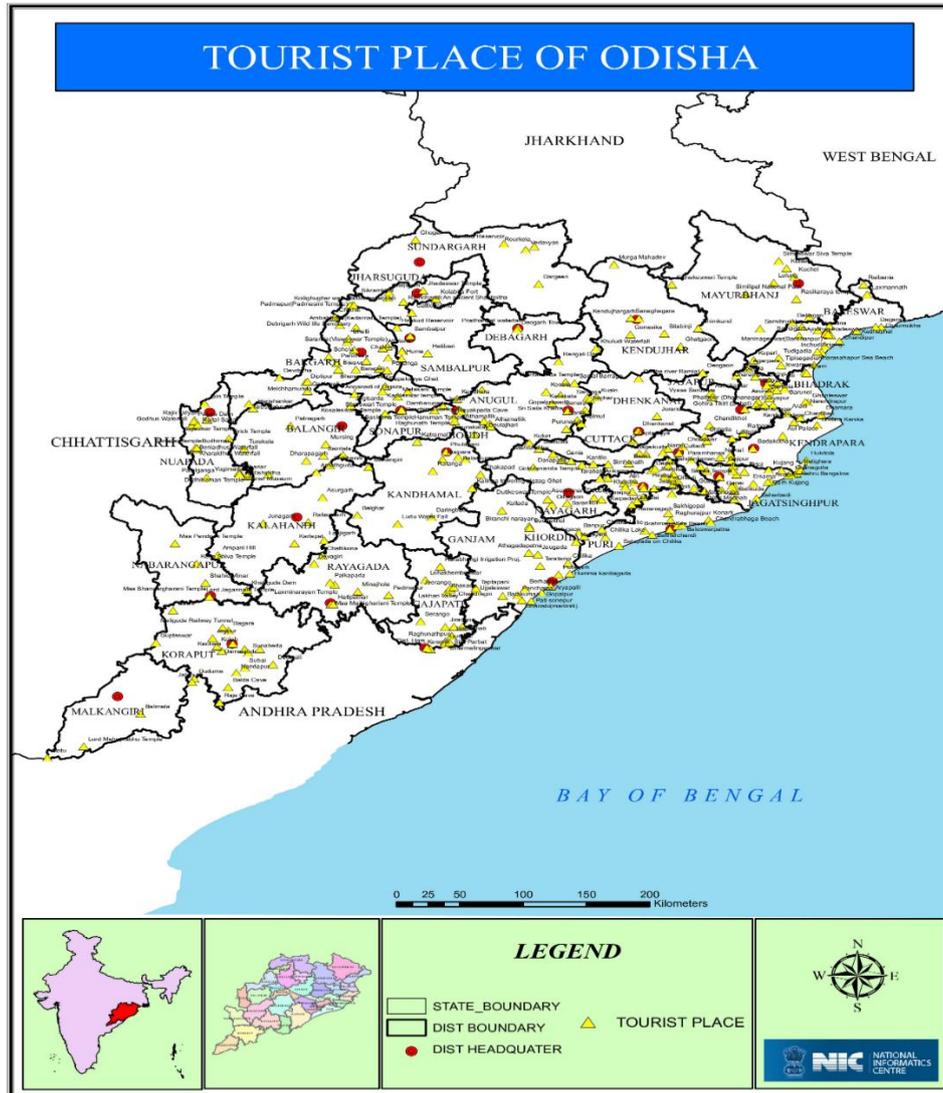
### **Materials and Methods**

#### **Study Design**

This study applied a Descriptive Cross-Sectional method in assessing the economics of CBET in Puri. This method must attempt to cover: (i) socio-economic parameters of ground-truth; and (ii) stakeholder feelings at some time period (Das & Chatterjee, 2020; Mohanty et al., 2024). This technique can be used to estimate income generation, wage and job creation, business development, and community benefits of ecotourism activity. The focus was on getting firsthand information from the community members who are engaged in the livelihoods related to tourism, for reliability and local relevance.

#### **Study Area**

The study area was Puri district of Odisha, specifically the neighbourhoods of Puri town and Sea Beach (major tourism hotspots). Earlier works have also reported the case of Puri as a growing tourism economy, enabled for community-based development by sustainable tourism endeavours (Azharunnisa et al., 2024; Zhuang et al., 2019). The high tourist season from November to January is ideal for studies of the economic impacts of CBET in peak season.



Source: <https://mapinside.in/odisha-tourist-map/>

## Questionnaire

The primary data were obtained by using a structured Community Based Ecotourism Economic Impact Questionnaire for Puri district. The questionnaire contained 10 major sections focusing on the respondents' socio-demographic profile, sources of income, change in income after ecotourism development, employment opportunities and business expansion benefits within their community for the period under study, household living conditions, savings and investment behaviours exhibited by households (by type), economic challenges (and degree of severity as perceived by them) that individuals experienced resulting from CBET development and general perception/shared view regarding its overall status. Respondents were classified into sub-populations based on their occupation related to tourism activity (store owner, guide, homestay provider, transport provider and handcraft seller and fisher). The subgrouping, enabled a deeper comprehension of economic benefits to different kind of livelihood groups from ecotourism development as piloted elsewhere in community tourism study (J. Behera & Deb, 2024; Pujar & Mishra, 2024).

## Data Analysis

These data were imperilled to the descriptive statistical approach for summarising and interpreting the economic impact of CBET in Puri. Percentage was used to enumerate socio-demographic characteristics, sources of income and employment generation business expansion, community benefits with clarity and order. Tabulation was done to facilitate clearness and compare between variables(Das & Chatterjee, 2020; Mohanty et al., 2024).

## Procedure

Fieldwork was conducted over 3 rounds, where high season was the baseline: November 2025 December 2025 and January 2026. These are the peak months when most of the tourists visit Puri and like other regions of India, Puri has also two main seasons – Dry & Monsoon seasons. A simple random sampling method was used and 160 data were collected. The recorded data were statistically analysed as perception (in percentage) by the descriptive statistical technique (EXCEL).

## Result

**Table 1: Socio-Demographic Information**

Variable	Group	N	%
Gender	Male	85	53.125
	Female	75	46.875
	Total	160	100
Age (Years)	Below 25	35	21.875
	26-35	24	15
	36-46	26	16.25
	46-55	30	18.75
	Above 55	45	28.125
	Total	160	100
Education	No formal education	15	9.375
	1 to 5	25	15.625
	6 to 10	40	25
	11th to 12 <sup>th</sup>	45	28.125
	Graduate & above	35	21.875
	Total	160	100

Occupation related to tourism	Shop owner	35	21.875
	Guide	25	15.625
	Homestay owner	15	9.375
	Transport provider	53	33.125
	Handicraft seller	20	12.5
	Fisher	12	7.5
	Total	160	100

The analysis approach was centred on investigating these economic indicators (income generation, employment generation, and entrepreneurship promotion) as well as changes in living standards and perceived community benefits of ecotourism development as echoed in the existing literature on ecotourism impact assessment(S. Kumar et al., 2023; Tiwari et al., 2024). Results The results were grouped in tables for a clear and systematic interpretation.

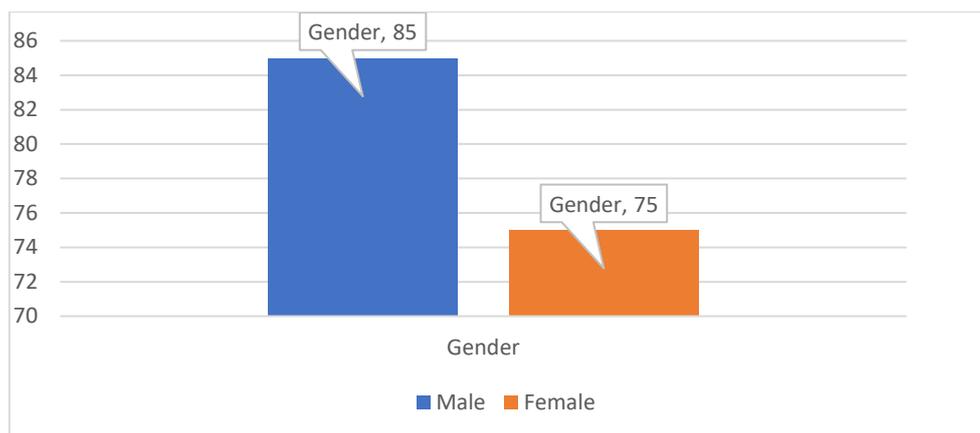


Figure 1 Participants Gender

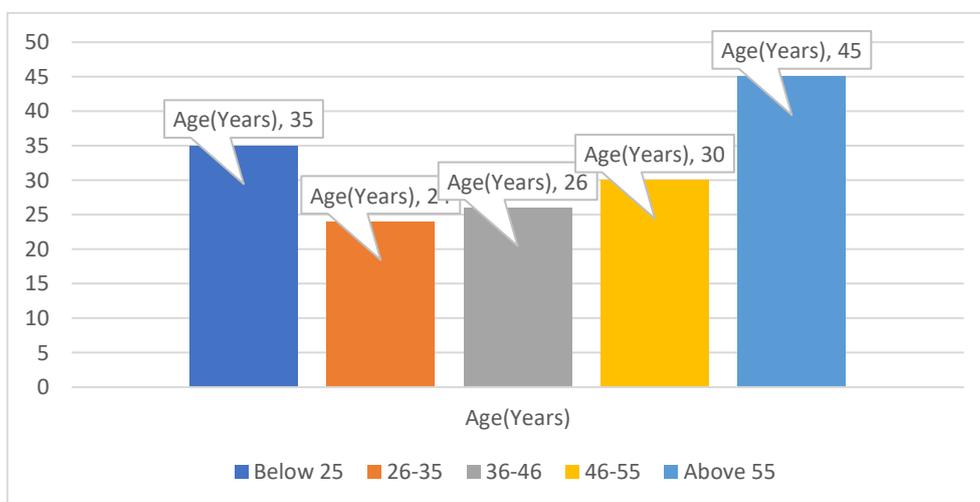
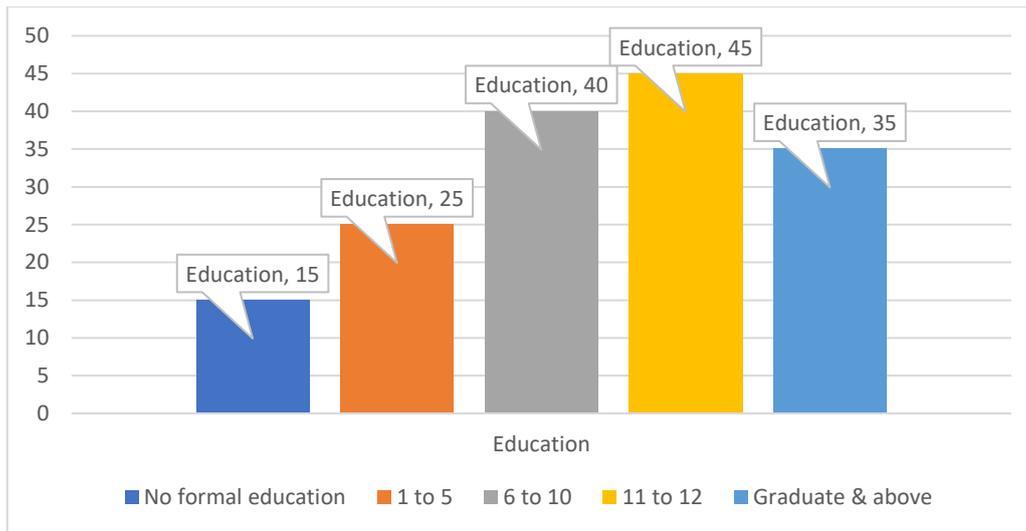
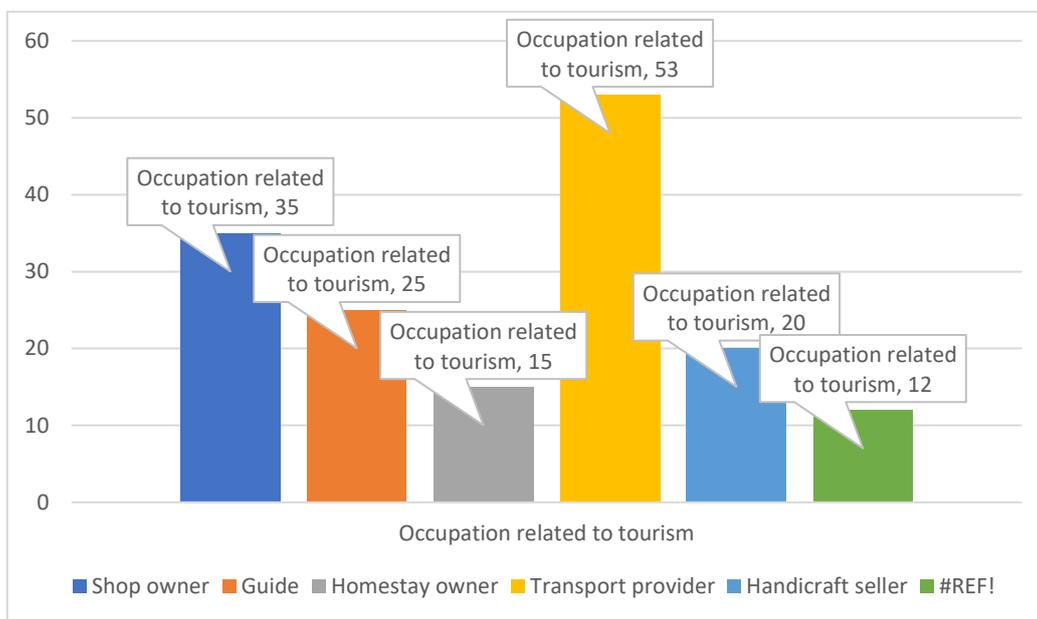


Figure 2 Participants Gender age wise



**Figure 3 Participants Education**



**Figure 4 Participants Occupation related to tourism**

**Table 2: Source of Income**

		N	%
Main source of household income	Ecotourism activities	70	43.75
	Agriculture	30	18.75
	Fishing	42	26.25
	Private job	12	7.5
	Government job	6	3.75
	Less than 25%	5	3.125

Percentage of income from ecotourism	26–50%	24	15
	51–75%	61	38.125
	More than 75%	70	43.75

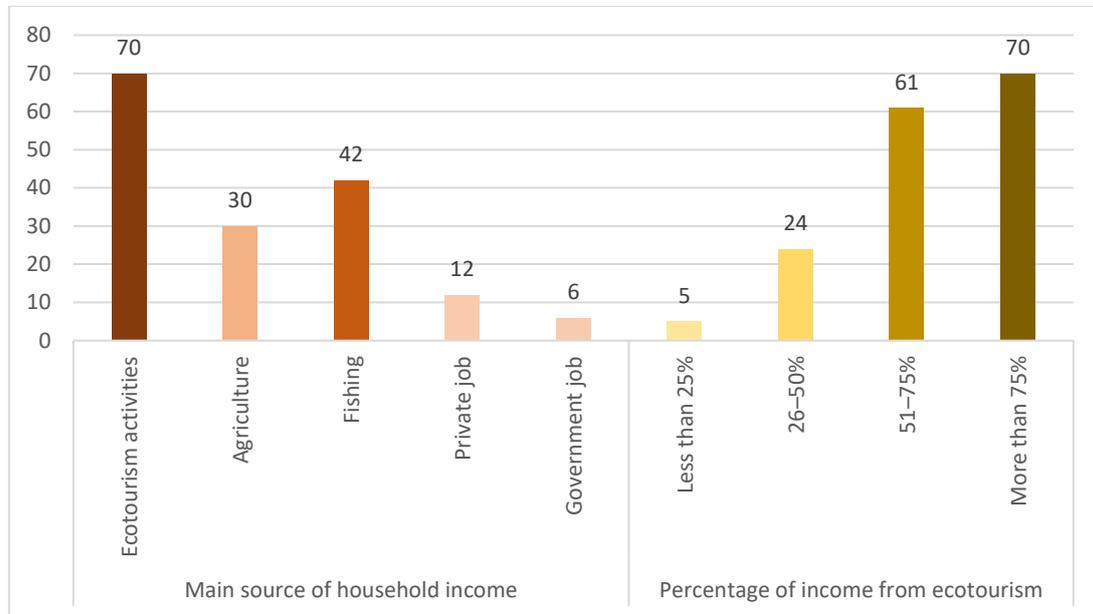


Figure 5. Source of Income

Table 3. Income Change After Ecotourism Development

		N	%
Income	Monthly income before ecotourism (approx. 15000 per month):	73	45.62
	Current monthly income (approx. above 20000 per month.)	87	54.37
Income changes due to ecotourism	Increased significantly	112	70
	Increased slightly	43	26.87
	No change	4	2.5
	Decreased	1	0.62

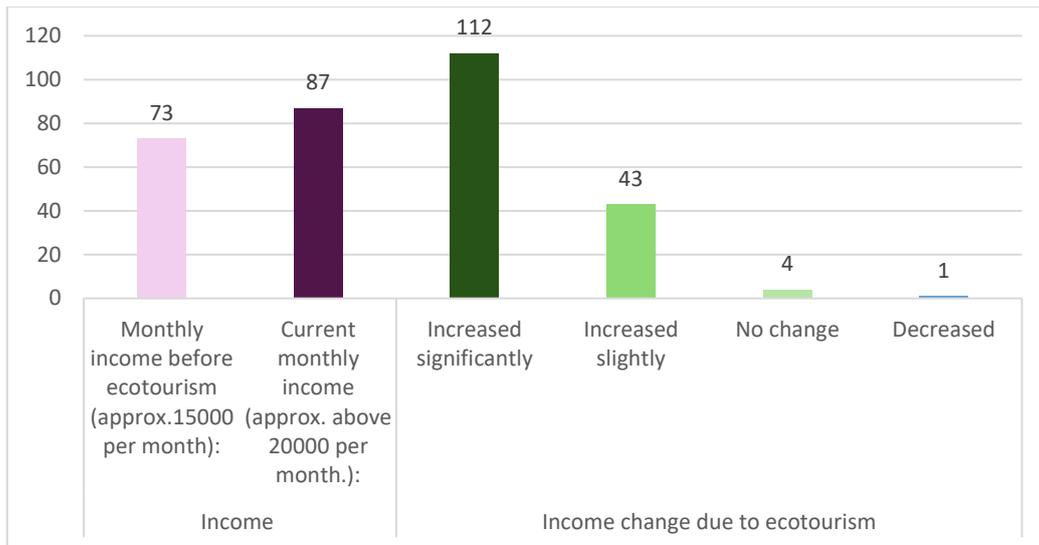


Figure 6. Income Change After Ecotourism Development

**Table 4. Employment Opportunities**

		N	%
Ecotourism created new job opportunities in family/community	Yes	145	90.62
	No	15	9.37
Members employed due to ecotourism	1	3	1.87
	2	8	5
	3	14	8.75
	More than 3	135	84.37

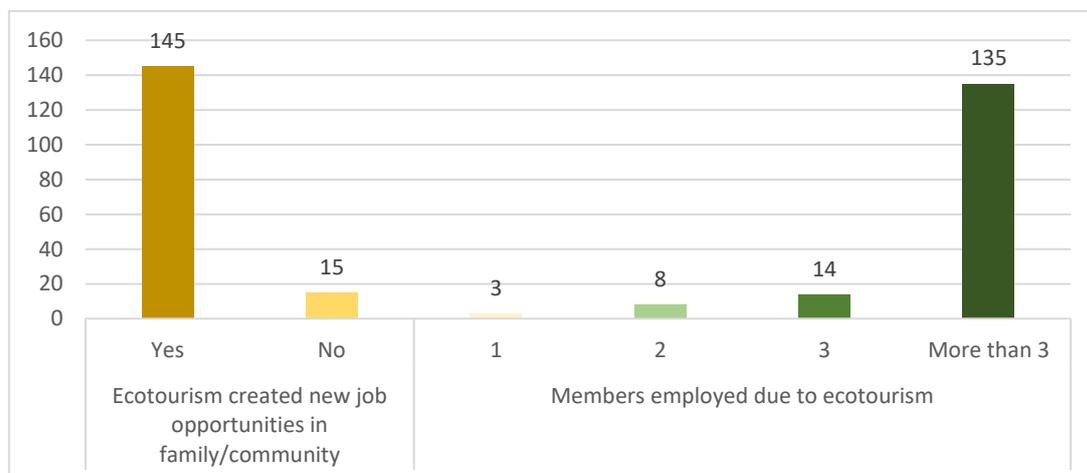


Figure 7. Employment Opportunities

**Table 5. Business Growth**

		N	%
New business started related to ecotourism	Yes	127	79.375
	No	33	20.625
Type of business	Homestay	48	30
	Food stall	52	32.5
	Grocery Shop	26	16.25
	Transport	18	11.25
	Guide service	16	10

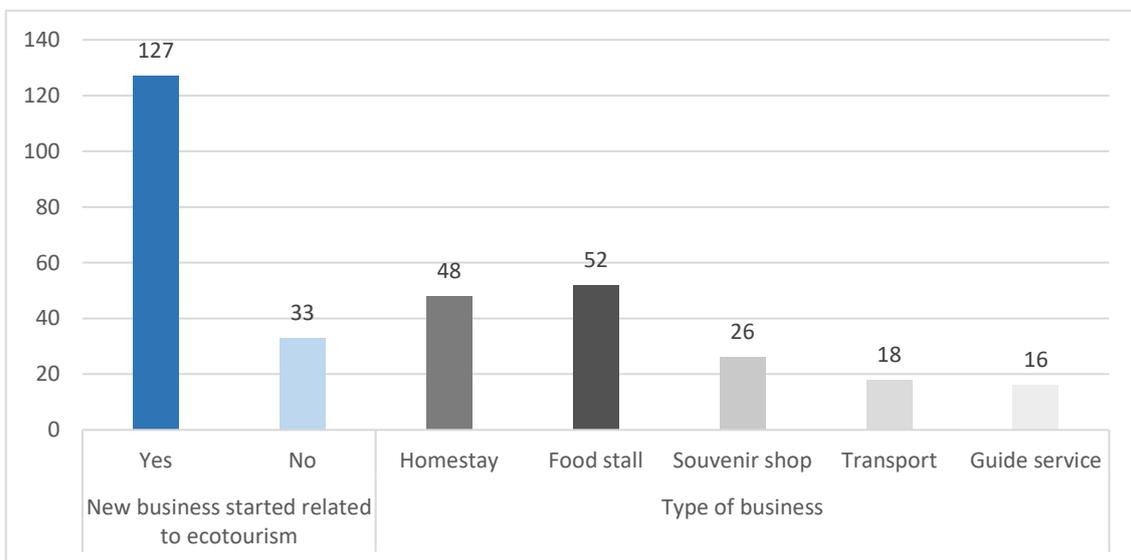


Figure 8. Business Growth

**Table 6. Community Benefits**

		N	%
Benefits Occurred	Improved income	68	43
	Better infrastructure (roads, water, electricity)	24	15
	More local employment	34	21
	Increased market demand for local products	20	13
	Improved standard of living	14	8.8

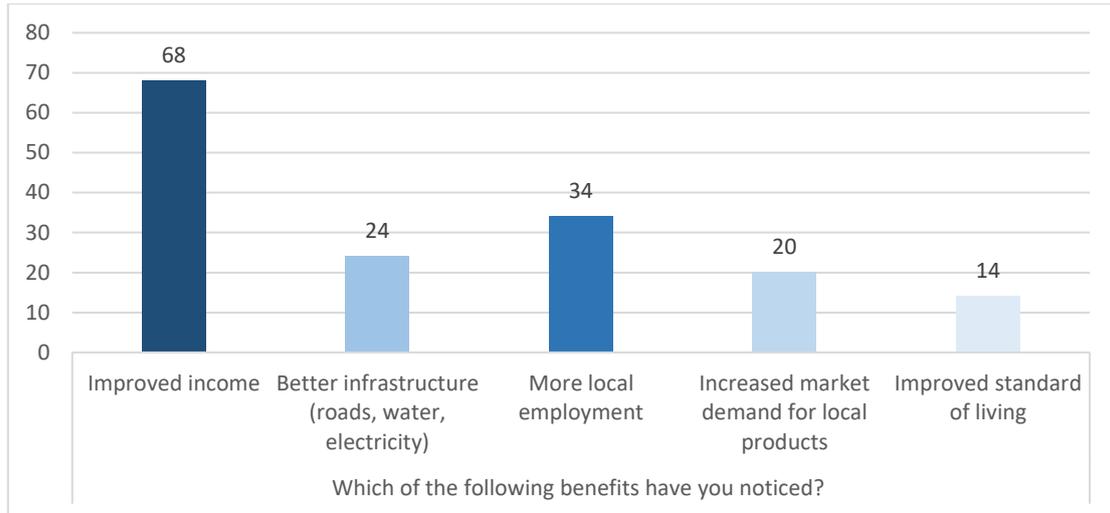


Figure 9. Community Benefits

**Table 7. Household Living Conditions**

	N	%
Household living condition After ecotourism development	Improved greatly	127 79.375
	Improved moderately	33 20.625
	Remained same	0 0
	Worsened	0 0

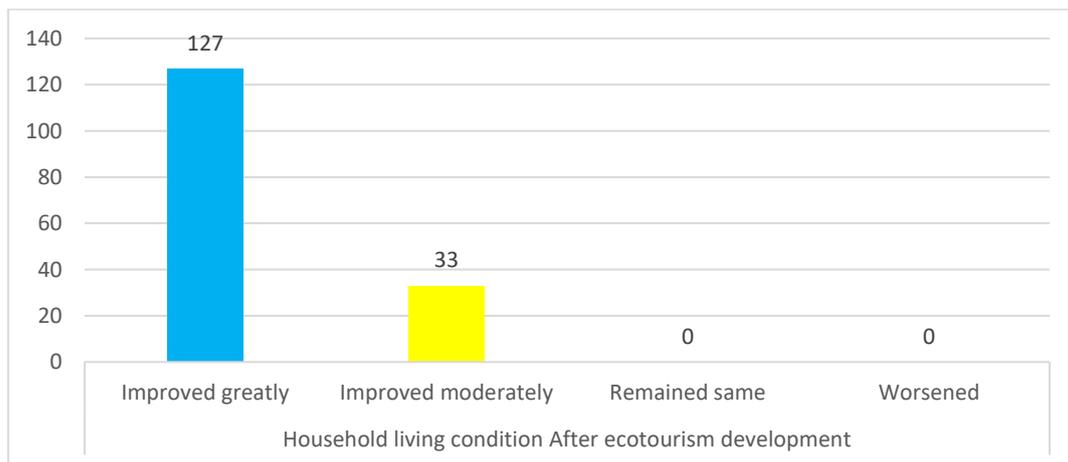


Figure 10. Household Living Conditions

**Table 8. Savings and Investments**

	N	%
Yes	160	100

Saving capacity increased due to ecotourism income	No	0	0
Invest/saving area	Bank	34	21.25
	Education	23	14.375
	House improvement	43	26.875
	Business	37	23.125
	Health	23	14.375

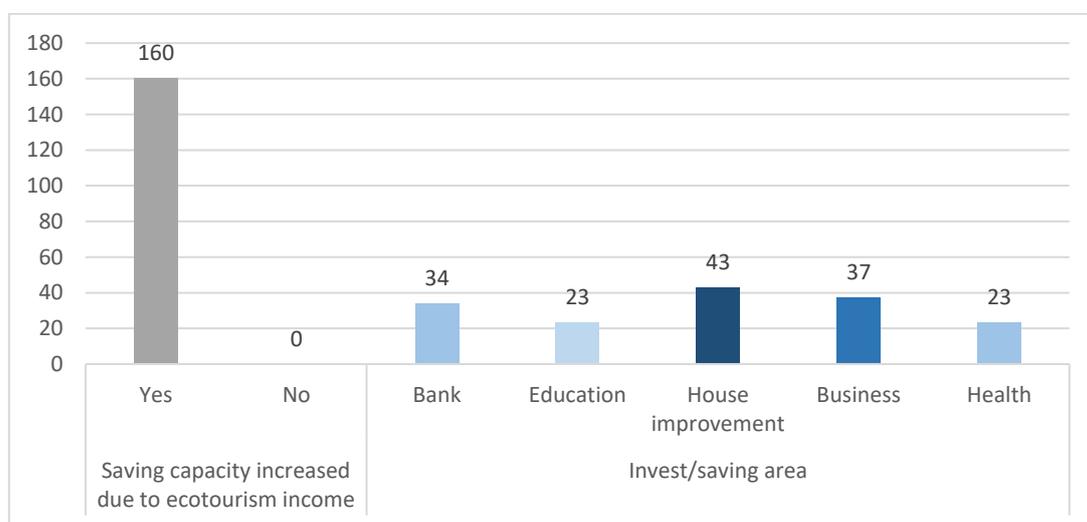


Figure 11. Savings and Investments

Table 9. Challenges and Economic Problems

		N	%
Economic challenges face in ecotourism activities	Seasonal income	43	27
	Lack of tourists in off-season	34	21
	High competition	45	28
	Lack of training	23	14
	Low government support	15	9.4

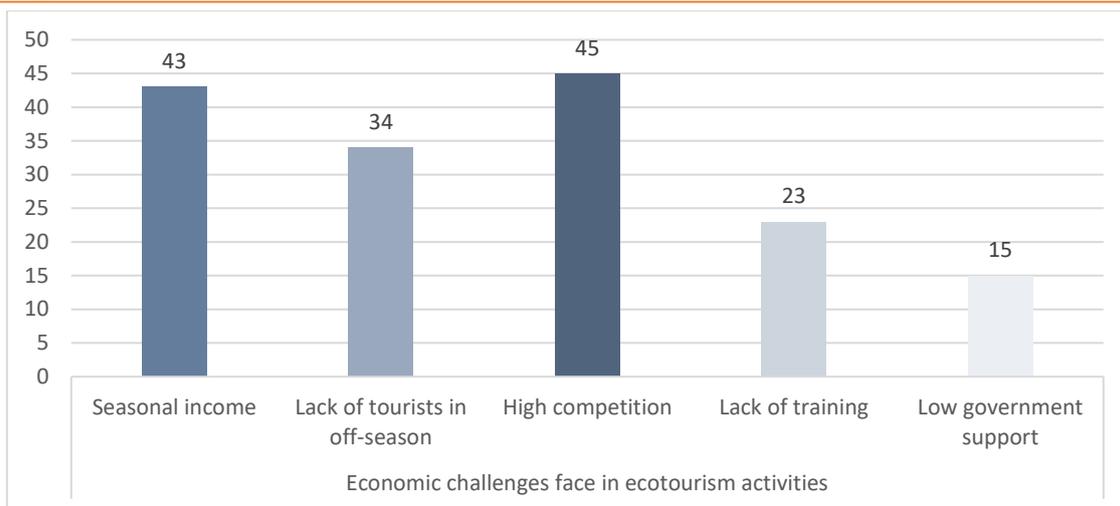


Figure 12. Challenges and Economic Problems

**Table 10. Overall Economic Perception**

		N	%
Overall, the economic impact of community-based ecotourism in Puri	Very positive	102	64
	Positive	48	30
	Neutral	10	6.3
	Negative	0	0
	Very negative	0	0
Should be ecotourism further promoted in Puri?	Yes	160	100
	No	0	0
	Not sure	0	0

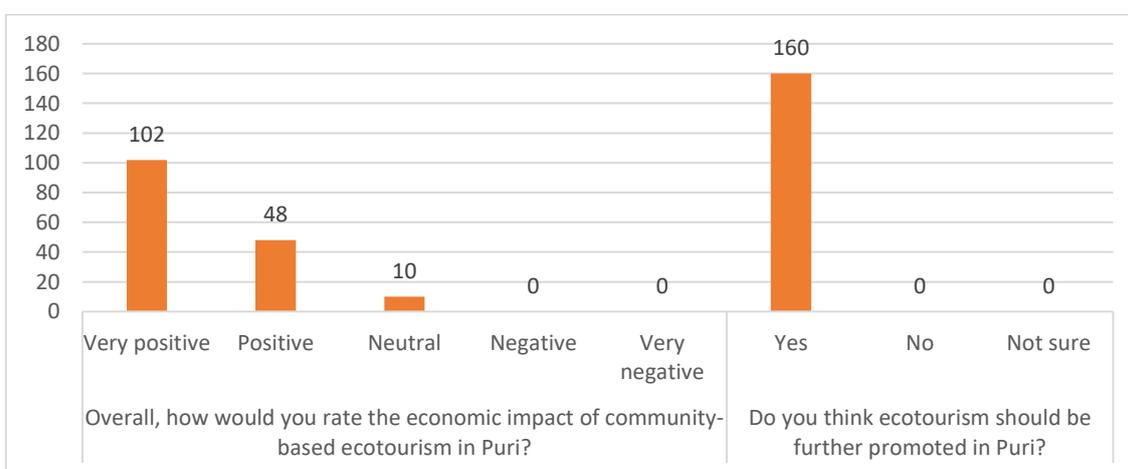


Figure 13. Overall Economic Perception

## Analysis

The socio-demographic profile of the respondents is provided in Table 1 and Figures 1-4. The sample was balanced in gender (only marginally higher in male than female), standing at 53.12% and 46.87% respectively. Most of the respondents were in the above 55 age unit (28.12%) and the 11<sup>th</sup> to 12<sup>th</sup> level of education making it evident that ecotourism activities were actively participated by well-experienced and moderately educated people in the study area. The occupational group with the highest number was transport providers (33.12%), then there were shop owners (21.87%), and guides (15.62%). Table 2 and figure 5 indicate the sources of income among households indicating that 43.75% of the respondents depended on ecotourism as a source of main household income. It is worth noting that 81.87 % of them depended on tourism activities economically since they earned above half their earnings through ecotourism. Table 3 and Figure 6 indicate that income increased with a considerable growth following the establishment of ecotourism with 70 % of respondents reporting that there was an increase in monthly income and only 0.62 % mentioned that there was a decrease in income. This attests to the good financial input of CBET. Table 4 and Figure 7 show the effects of employment wherein 90.62% found new employment opportunities in families and communities with over three members working in most households (84.37%). Table 5 and Figure 8 show significant growth in the business because 79.37 % of the respondents ventured new businesses in the ecotourism field especially food stalls (32.5%), homestays (30%).

Table 6 and Figure 9 indicate community level benefits indicating better income (43%) and employment (21%) and development of infrastructure. Table 7 and Figure 10 indicate that household well-being has been enhanced, with all the respondent's indicating improvements in the living conditions. Table 8 and Figure 11 show that there is an increase in saving capacity of all the participants with investment taking place in housing, business, and banking. High competition (28%) and seasonal income (27%) are some of the economic problems in Table 9 and Figure 12. Last but not the least, Table 10 and Figure 13 display results of overwhelming positive views regarding CBET, 94% of perceiving its impact to be positive or very positive, and 100% of them seeming to support further promotion of the same in Puri.

## Discussion

The results of the current research depict a substantial positive economic contribution of community - based ecotourism (CBET) in the city of Puri especially in the midst of peak tourism season that is November, December, and January. A noteworthy percentage of the respondents claimed that ecotourism is their first source of household earnings where more than 80% of the individuals make above half of their incomes through tourism related measures. This is in line with previous findings which focus on the impact of CBET on creating alternative livelihoods and empowering local economies (O. P. Kumar, 2023; S. Kumar et al., 2023). The same pattern of the income growth was noticed in Bhitarkanika Wildlife Sanctuary where diversified employment opportunities promoted economic stability among locals (Das & Chatterjee, 2020, 2023). The fact that most of the respondents reported significant monthly income increase due to the development of ecotourism still proves the point that CBET can help reduce poverty and financial empowerment. These findings are in agreement with those that observed in rural India, where ecotourism programs organized by local communities

increased household incomes and contributed to economic sustainability(O. P. Kumar, 2023). Moreover, the rate of job creation in families is also quite high, which is a sign of the inclusive character of CBET and repeats the findings in community-based nature tourist projects around Odisha(J. Behera & Deb, 2024; Mohanty et al., 2024). Growth in the number of small business including homestays, food kiosks, transport and souvenirs witnessed in Puri underscores the entrepreneurial possibility of ecotourism. This agrees with the preceding study conducted in Dandeli Wildlife Sanctuary where the ecotourism encouraged local entrepreneurship although the community involvement was restricted(Maruti & Pawar Rohit, 2013).

The connection between tourism and local craft in Puri also created additional employment chances among the artisans, which is in line with the sustainable craft promotion model(Azharunnisa et al., 2024). Community-level positive impacts like better infrastructure, higher local products demand, and better living conditions, which are present in this research are aligned with extended areas of tourism development in Odisha(Panigrahi et al., 2022). The fact that saving ability of all respondents was waked proves the financial security of ecotourism in the long term which supports the holistic economic discussion by(O. P. Kumar, 2023) but such problems as seasonal changes in income, the lack of tourists during off-season, lack of training, and insufficient governmental support are noteworthy. These limitations are reminiscent of the problems found in Chilika Lake and western Odisha, where lack of coordination among the stakeholders and policy demonstrations hampered the entire economic potential of the ecotourism(Pujar & Mishra, 2024; Samal & Dash, 2024; Sethy & Senapati, 2023). Active community involvement, emphasized to the fact that there should be inclusive governance frameworks in Puri(Tiwari et al., 2024). In comparison, the view on CBET in Puri largely promotes advancement about its overwhelmingly positive balance to previous events regarding unequal benefits of tourism identified by (Zhuang et al., 2019) in pilgrimage destinations, which seem to indicate that taking a community approach would have more balanced economic returns. Also, other sustainable tourism ideas like geo-tourism and spiritual tourism could be used to supplement CBET to diversify the income streams in Puri(Mahakul & Panigrahi, 2025; Nair, 2024). Experiences of trans-Himalayan community-based models give further support to the principles of robust local government and capacity building as the key to long-term sustainability(Wani et al., 2025).

Results indicated that ecotourism was the main income provider for many households, with more than 80% of them obtaining over 50% of their incomes from participating in ecotourism. Nearly 70% of the respondents reported an increase in income after ecotourism implementation. Job creation was high, more than 90% reporting that they had found new jobs. Trade development was reflected in the emergence of homestays, food stalls, transport providers and souvenir shops. Better living and higher saving capacity were reported, however, all households continued to face challenges, including seasonal variations of income and lack of training.

## Conclusion

The study concludes that there are considerable improvements in income generation employment, reduction of poverty and enhancing livelihood in the area under consideration especially during peak time from community - based ecotourism. These results validate the

promise of CBET as a environmentally sound model of economic development across Puri, also consistent with prior work done from different sites in India. But difficulties in earning a steady income, poor access to training and lack of government support make it an uncertain solution. Policymakers need to focus on generating capacity building programmes, strengthening infrastructure, providing financial assistance and promote round the year tourism. Increase the use of community participation and stakeholder cooperation to enhance economic development while minimising negative impacts on the environment and promoting equity.

### Limitations and Future Suggestions

This study was conducted in the peak tourism months (November, December and January) and descriptive analysed based on self-reported data that is not sufficiently sensitive to seasonal variations. Future studies will also require off-season observations with larger sample size using advanced statistical techniques for assessing long-term economic, social and environmental repercussions of community-based ecotourism at Puri.

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