

Impact Of Community-Based Ecotourism on Socio-Economic Development: A March Towards Viksit Bharat@2047

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Abstract—Involvement of local people in tourism activities is an essential phenomenon of ECOTOURISM. The research work has been carried by keeping in view the vision of Viksit Bharat 2047 scheme of the Indian government. The study aims to evaluate the impact of environmental education, cultural exchange and infrastructural development on socio-economic development of the local community. The study area is the Latpanchar Forest Village located in Sittong III Gram Panchayat of Darjeeling, West Bengal. The research also aims to evaluate the impact of socio-economic development on regional popularity. 260 people residing in the village and indulged in ecotourism activities were enquired about the ecotourism attributes. Data was collected through schedules by visiting research area. SPSS-AMOS software has been used to conduct Structural Equation Modeling assessment. The research is of exploration nature and thus exploratory factor analysis has been used to convert 18 variables into 5 factors. Results have indicated that cultural exchange programmes and infrastructural development have a positive impact on socio economic development of the local community but environmental education donot have a positive impact on the same. It has also become evident from the study that socio-economic development of local people positively affects the regional popularity of the ecotourism prone area.

Index Terms—Environmental education, cultural exchange, infrastructural development, Socio-economic development, regional popularity and ecotourism.

I. INTRODUCTION

Viksit Bharat 2047 is a remarkable ambitious mission of India dreamed by our Honourable Prime Minister Shri Narendra Damodardas Modi in the year 2023. The mission primarily addresses four aspects, viz.,

economic growth, environmental sustainability, social progress and good governance. This research paper aims to address the role of tourism in this mission. Tourism is a burgeoning sector of India which is estimated to become an economy worth US\$3 Trillion by 2047 (Ministry of Tourism, 2023). Indian government is focusing on developing tourism sector in tune with the prime aspects of Viksit Bharat 2047 mission. Sustainable tourism can help to bring growth in the economy with environmental sustainability. Tourism is a dynamic industry experiencing growth at a very high pace all around the world. It is worth to mention that tourism is, by large, the biggest industry in the globe in terms of generating GDP and employment. Darjeeling in West Bengal holds a special place in the hearts of not only Indians but also many foreigners. The concept of sustainable tourism development is prevailing since many years but to what extent the tourism industry has been able to adapt to sustainable factors is questionable. Including foreigners, Darjeeling receives almost around 4 lakhs of tourists every year. Although the fact seems lucrative for Darjeeling's economic development, the 'crowded' Darjeeling during tourist season compels us to doubt sustainability of the sector. Many tourists are aware about the adverse impacts of mass tourist and they resort to ecotourism. Offbeat and natural regions have prominently become popular among eco-tourists who are also nature lovers at the same time (Heshmati et.al, 2022).

Ecotourism has been identified as an effective component of sustainable environment. Ecotourism ensures balanced growth of the society, economy, local culture, traditions and environment around the world. Protection of natural resources is one of the

most valuable objectives of ecotourism. Inclusion of local community in tourism related activities is yet another objective of ecotourism. Forests, natural lakes, tea gardens, indigenous species, tribes' culture, local values, traditions and beliefs are the aesthetic dimensions of ecotourism in North Bengal. Ecotourism is an innovation in the tourism industry that generates alternative mode of earning for the local people. It encourages stakeholders to protect natural environment and preserve the nature for the generations to come. The offbeat destinations located in the Darjeeling district but far away from the main town have strong potential to enhance socio-economic structure of the local inhabitants (Orams, 1995).

Latpanchar is a tiny village located in the Mahananda Wildlife Sanctuary in the Darjeeling district. Latpanchar is a well-known place to the ecotourists for its special attractions such as birdlife, animal life and views of range of the mighty Himalayas. This amazing hamlet is located at an altitude of 4200 ft in the Kurseong hills. Being an offbeat place, the roads towards Latpanchar are rarely crowded. This place allows tourists to breathe in solemn nature with tranquillity, even amidst peak season of tourism. Despite holding so much serenity, Latpanchar holds very less popularity due to less promotion and less visits from tourists. This research is aimed at exploring different ways of making Latpanchar popular among ecotourists, mainly by focusing upon the lives of the local people. Mahananda wildlife Sanctuary is only about 5 kms away from Latpanchar. The tourists who visit this place are more interested in experiencing the numerous beautiful types of birds present in the sanctuary. There is an astonishing lake in the area called Namthing Lake which is considered by the locals to be taken care of by the birds. The speciality of this lake is that no one has ever seen even a single leaf floating in the lake despite the presence of several trees all around the lake. This is a creation of Nature God! However, the beauty of the lake is at its best during the monsoon. Himalayan Salamander is yet another special attraction of the lake. People from many corners of the county come to see the beauty of this rare species. Ahaldara view point and Orange Orchard are the other ecotourism spots in the area that are cherished by ecotourists (Dooars Info, 2019).

II. LITERARY BACKGROUND AND HYPOTHESIS FORMULATION

Ecotourism has a direct impact on boosting up the local economy in any region through recruitment of local people and thus creation of new jobs. Ecotourism creates jobs such as managers of homestays, cab service providers and drivers, tour guides and catering service providers (Mudasir, Ghousee and Stanikzai, 2020). Ecotourism plays a tremendous important role in the social field through provision of education and creating awareness among local people and tourists. Ecotourism has sustainable qualities that can completely eradicate the negative impacts of mass tourism (Mustofa, 2022). Ecotourism, if not utilised wisely can cause unbalanced socio-economic growth in certain areas. A study conducted in Ladakh, India, revealed that ecotourism has provided unequal distribution of net incomes among neighbourhood villagers. Locals tend to forget their traditional values like farming and indulge in migration to ecotourism prone areas (Radhu, 2023). A study suggested that ecotourism extends social benefits to local people in the form of access to essential resources, thus enhancing their living standards. In terms of economic aspects, the authors have suggested that local communities should collaborate with several organizations, both government and non-government, to ensure that tourists spend more in the local regions (Nsukwini and Bob, 2014). Ecotourism has been identified as a promising source of socio-economic benefits to local people. Enhancement of local economy is occurring due to direct spending of the ecotourists and creation of local jobs. On the other side, social benefit is visible through cultural exchanges between ecotourists and local people (Kumar and Vyas, 2022).

Education on Environmental Protection through Ecotourism and Socio-Economic Development

Ecotourism encompasses adverse impacts on environment by over-exploitation of remote natural areas in the world. Ecotourism had been alerted as 'eco-sell' tourism by Wight (1993) as the industry players are more concerned in reaping economic benefits rather than ethical benefit. To grow economically, local authorities must take initiatives to educate the tourists and local people about environment protection (Jain, 2020).

H1: Education on environmental protection through ecotourism will have positive effect on socio-economic development

Cultural Exchange through Ecotourism and Socio-Economic Development

Ecotourism bears the advantage of generating socio-cultural impacts among the local people due to the interaction that they encounter with the visitors. The interaction brings several changes in values, beliefs, living styles, attitudes, mode of dressing up and many more. Ecotourism has instigated both destructive and constructive results among the stakeholders. Local people and tourists indulge in cultural exchange among themselves during the travel process and stay. Due to the cultural exchange, it has been noticed that there is a clash between the desire of tourists to explore traditional culture and desire of the local village people to adopt modernity like urban people (Bhatta, 2019).

H2: Cultural exchange through ecotourism will have positive effect on socio-economic development

Infrastructural Development due to Ecotourism and Socio-Economic Development

Infrastructural development becomes a primary concern for Governments of any country when it comes to the comfort and ease of tourists for travelling in the naturally protected areas (Sviatokha and Filimonova, 2015). Apart from ease of travel to the tourists, infrastructural development also accelerates sustainable development of ecotourism (Weitowitz, et. al., 2019). Special amenities enhance aesthetics features of ecotourism and thus can bring about socio-economic development for the ecotourism prone zones.

H3: Infrastructural development due to ecotourism will have positive influence on socio-economic development

Socio-Economic Development and Regional Popularity

Ecotourism generates income for local people through creation of jobs and checking on amount of migration to urban areas. Collaboration among local people to serve ecotourists has been initiated by ecotourism. The collaboration improves community bonding and creativity level. Ecotourism, in other words, brings overall community development in the region (Kumar and Vyas, 2022). Many other ecotourists may come to know about the warm hospitality and comfort provided by the host communities in ecotourism prone areas. Through word of mouth and positive reference, the overall popularity of the region may get enhanced,

thus attracting governments' interest for further promotion of the area.

H4: Socio-economic development will positively affect regional popularity of ecotourism prone areas

Socio-Economic Development as the Mediating Variable between Ecotourism Attributes and Regional Popularity

The potentiality of ecotourism as a successful economic booster along with environmental protection is one of its most lucrative features. Concern towards natural environment projects the industry's sustainable development. Ecotourism is identified as an important tool for regional development (Indwar and Muthukumar, 2023). Associated features of ecotourism that the article is currently dealing with, that is, environmental education, cultural exchange and infrastructural development may also lead to the overall popularity of the ecotourism regions. In this regard, the socio-economic development of the local people living in ecotourism regions can act as a mediating variable. With these notions, the following hypotheses have been developed:

H5a: Socio-economic development mediates the relationship between environmental education and regional popularity

H5b: Socio-economic development mediates the relationship between cultural exchange and regional popularity

H5c: Socio-economic development mediates the relationship between infrastructural development and regional popularity

III. METHODOLOGY

Quantitative research design had been framed for the research work with a structured schedule. Sample selection has been done based on area of operations. Small business owners who are affected by ecotourism activities and owners of resorts and homestays were questioned about 26 facts related to their work, lifestyles, local economy and living conditions. Purposive sampling technique has been used in the research work where researchers have chosen the respondents based on criteria set by them. The survey was conducted in the Latpanchar area of Sittong III Gram Panchayat, Darjeeling. Approximately 300 responses could be collected out of which 260 could be processed for analysis due to partial response or random response resulting in vague findings. As per

Cochran's formula for finding sample size for known population (Population of Latpanchar forest village is 725), 252 responses had to be collected. So the sample size is sufficient. The questionnaire was divided into four sections, that is, demographic profile, ecotourism attributes, socio-economic development of local people and regional popularity.

IV. RESEARCH OBJECTIVES

The following are the set of objectives that the present research study aims to achieve:

1. To evaluate the impact of environmental education on socio-economic development of local communities in ecotourism prone areas.
2. To analyse the effect of cultural exchange on socio-economic development of local communities in ecotourism prone areas.
3. To assess the impact of infrastructural development on socio-economic development of local communities in ecotourism prone areas.

Table 1: Respondents' Profile (Sample size, n = 260)

Details	Type	Frequency	Percentage
Gender	Male	160	61.5%
	Female	100	38.5%
Age	Below 20	14	5.4%
	21-40	110	42.3%
	41-60	132	50.8%
	Above 60	4	1.5%
Ecotourism Spots	Ahaldara	49	18.8%
	Namthing lake	54	20.8%
	Mahananda Wildlife Sactuary	90	34.6%
	Orange Orchard	67	25.8%
Monthly Earning (in ₹)	Below 10000	55	21.2%
	10000-20000	78	30%
	20000-30000	86	33%
	30000 and above	41	15.8%

Partial Least Square-Structural Equation Model (PLS-SEM) has been used for the analysis of data after conducting exploratory factor analysis. Out of the 26 variables, 19 variables have been successfully loaded into 5 factors. Since the research is of exploratory nature, thus PLS-SEM has been deemed to be the fittest statistical method to be applied (Hair et. al, 2022). The factors are identified as Environmental

4. To evaluate the effect of socio-economic development of local people of ecotourism region on the overall regional popularity.

5. To measure the indirect impact of ecotourism attributes on regional popularity through socio-economic development of the local people.

V. DATA ANALYSIS

The variables defined in the study are mostly self-generated as no previous studies could be found that has tested all the variables. Thus, reliability test and sampling adequacy test had to be performed. Estimated value of Kaiser-Meyer-Olkin test for sample adequacy is 0.895 which is good. Bartlett's Test of Sphericity is significant (.000) at 1% level of significance. Reliability measure, that is, value of Cronbach's alpha (0.856) is also relevant and good for 18 items.

The table below shows respondents' profile residing nearby to four ecotourism spots of Sittong:

Education (EE), Cultural Exchange (CE), Infrastructural Development (ID), Socio-Economic Development (SED) and Regional Popularity (RP). A correlation matrix has been depicted below to represent the degree of correlation between the identified factors which should be less than 0.90 (Tehseen et. al., 2017).

	EE	CE	ID	SED	RP
EE	1				
CE	0.534	1			
ID	0.435	0.756	1		
SED	0.653	0.767	0.467	1	
IR	0.557	0.564	0.594	0.783	1

The above data depicts that the correlation among the constructs is acceptable and significant at 1% level of significance.

Measurement Model Assessment

SPSS-AMOS software has been used for the data analysis. The stated hypotheses have been tested with the help of structural equation modeling. For assessment of reliability and validity of the data, Cronbach's Alpha, Composite Reliability (CR), Convergent Validity (AVE) and Discriminant Validity have been used. Cronbach's Alpha values for the

Table 3: Measurement Model Assessment

Component	Variables	Factor Loading	Cronbach's Alpha	CR	AVE
Environmental Education (EE)	EE ₁	0.822	0.774	0.786	0.612
	EE ₂	0.865			
	EE ₃	0.839			
	EE ₄	0.656			
Cultural Exchange (CE)	CE ₁	0.814	0.849	0.869	0.761
	CE ₂	0.896			
	CE ₃	0.747			
Infrastructural Development (ID)	ID ₁	0.877	0.762	0.876	0.640
	ID ₂	0.897			
	ID ₃	0.759			
Socio-Economic Development (SED)	SED ₁	0.885	0.939	0.949	0.765
	SED ₂	0.810			
	SED ₃	0.901			
	SED ₄	0.889			
	SED ₅	0.854			
	SED ₆	0.803			
Regional Popularity (RP)	RP ₁	0.805	0.755	0.871	0.679
	RP ₂	0.631			
	RP ₃	0.919			

values are more than 0.7 which indicates its reliability (Hair et.al., 2022). The benchmark for loadings is more than 0.60; for CR, the value should be more than or equal to 0.7 while the value of AVE has to be either more or equal to 0.5 (Byrne, 2016). Table 3 depicts that all the achieved values are in the acceptable limit and thus the model is both valid and reliable. Table 4 shows the data for assessment of discriminant validity. Heterotrait-Monotrait (HTMT) has been used for the purpose whose values are less than 0.90, thus marking the model's discriminant validity (Gold et. al., 2001).

Table 4: Heterotrait-Monotrait (HTMT) Measures

Factors	EE	CE	ID	SED	RP
EE					
CE	0.889				
ID	0.768	0.670			
SED	0.700	0.661	0.811		
RP	0.731	0.781	0.609	0.731	

Structural Model Assessment

As per the results of hypothesis testing depicted in the Table 5 below and Figure 1, it can be inferred that environmental education in the ecotourism prone areas does not exert a positive impact on socio-economic development of the local community enquired. Cultural exchange and infrastructural development have been observed to positively affect socio-cultural development of the local community. The socio-economic development also affects the regional

popularity positively. In the indirect relationship assessment, it has been observed that the effect of environmental education and infrastructural development on regional popularity have been successfully mediated by socio-economic development of the local people. However, the impact of cultural exchange on regional popularity could not be significantly mediated by socio-economic development.

Table 5: Structural Model Assessment of Direct Relationships

	Hypotheses	Beta Value	Standard Error	t-Value	P-Value	Decision
H ₁	EE→SED	0.124	0.162	1.041	0.150	Not Supported
H ₂	CE→SED	0.304	0.044	3.542	0.000**	Supported
H ₃	ID→SED	0.334	0.139	3.022	0.000**	Supported
H ₄	SED→RP	0.711	0.039	13.554	0.000**	Supported

** = significant at 1% level of significance

Table 6: Structural Model Assessment of Indirect Relationship

	Hypotheses	Beta Value	Standard Error	t-Value	P-Value	Decision
H _{5a}	EE→SED→RP	0.208	0.065	3.165	0.000**	Supported
H _{5b}	CE→SED→RP	0.101	0.110	1.119	0.223	Not Supported
H _{5c}	ID→SED→RP	0.271	0.073	2.804	0.000**	Supported

** = significant at 1% level of significance and hence supported

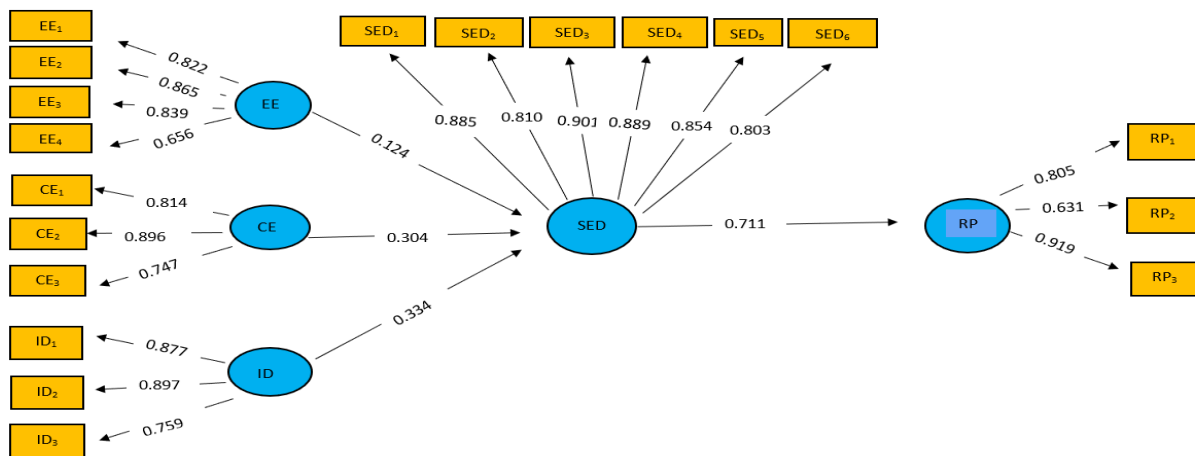


Figure 1: Model Diagram

VI. DISCUSSION, CONCLUSION AND POLICY IMPLICATIONS

From the results of the analysis, it can be observed that environmental education may not positively impact the socio-economic development of the local people. Environmental education plays a significant role in developing positive attitudes among people towards nature and its dwellers. In the long run, environmental education may play major role towards governmental and local stakeholders' green policy making. This education can make local people sensible and adaptive to sustainable habits but does not impose any direct impact on their socio-economic development. On the other hand, cultural exchange seemed to have a positive impact on socio-economic development of locals living in ecotourism prone areas. The exchange of thoughts, beliefs, culture and values provide the chance to explore economic advantages, thus contributing to the national growth scenario. This is evident from the research results that infrastructural development has a direct positive impact on socio-economic development. Infrastructural development has been considered to make daily work and movement of the local people easier. They have remarkably mentioned that infrastructural development provides them with a sense of security and peace. However, they have also mentioned that the government needs to be more concerned about area as it has strong ecotourism potential. Several tourists come every year to visit the rarest beauty of the area but the roads and routes need to be improved to make the journey of the tourists easier. Socio-economic development has a direct positive connection with the regional popularity which means investment in socio-economic factors will lead to better promotion of the region. The state government and local authorities should invest more on the cultural exchange programmes and infrastructural development of the area. The initiatives would make the region more popular and attract tourists from all over the world. Socio-economic development is a strong mediator in the relationship between environmental education and regional popularity and between infrastructural development and regional popularity. Socio-economic development is a mandatory concern of the local authorities and state government. The research work shows a strong guideline to the concerned stakeholders that socio-economic development of the local people

can develop significant regional popularity. Road conditions in some areas are not good at present. It is restraining the tourist from visiting remote areas surrounding Latpanchar. If immediate actions are not taken, then the beautiful Latpanchar may lose its charm.

REFERENCES

- [1] Bhatta, K.D. (2019). Exploring Socio-cultural Impacts of Ecotourism in the Annapurna Conservation Area, Nepal. JOETP, Volume 1, Number 1.
- [2] Byrne, B. M. (2016). Structural equation modeling with AMOS: Basic concepts, applications, and programming. New York: Routledge
- [3] Cochran, W. G. (1963). Sampling Techniques, 2nd Ed., New York: John Wiley and Sons, Inc.
- [4] Dooars Info. 2019. Latpanchar. General Information about Latpanchar. <https://dooars.info/travel-guide/latpanchar/>
- [5] Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management*, 18(1), 185-214. <https://doi.org/10.1080/07421222.2001.11045669>
- [6] Hair, J. F., Hult, G. T. M., Ringle, M. C. & Sarstedt, M. (2022). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (3rd ed.). Sage, Thousand Oaks, CA.
- [7] Heshmati, M., Gheitury, M., & Shadfar, S. (2022). Factors affecting possibility of ecotourism development and sustaining natural resources using SWOT approach in west Iran. *International Journal of Geoheritage and Parks*, 10(2), 173-183. <https://doi.org/10.1016/j.ijgeop.2022.03.004>
- [8] Indwar, T. and Muthukumar, P.K. 2023. Role of Ecotourism in Sustainable Development: An Overview. *Journal of Pharmaceutical Negative Results*, Volume 14, Regular Issur 02.
- [9] Inskeep, E. 1991. Tourism planning: An integrated and sustainable development approach. New York: Van Nostrand Reinhold.
- [10] Jain, K. 2020. Environmental And Socio-Economic Impacts of Ecotourism: A Review. *International Journal of Innovative Research and Advanced Studies (IJIRAS)* Volume 7 Issue 6.

- [11] Kumar, S. and Vyas, N. 2022. Socio-Economic Empowerment of Local Communities Through Ecotourism: A Review Analysis. EPRA International Journal of Socio-Economic and Environmental Outlook (SEEO). Volume 9, Issue 3.
- [12] Ministry of Tourism. 2023. Ministry of Tourism Organizes National Conference on Adventure Tourism: “Viksit Bharat@2047: Making India a Global Adventure Tourism Hub”. Launches ‘Adventure Tourism India Website’ and ‘Best Adventure Tourism Destination Competition 2024’.
<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1988326>
- [13] Mudasir, N., Ghausee, S., & Stanikzai, H. U. R. 2020. A review of ecotourism and its economic, environmental and social impact. J. Emerg. Technol. Innov. Res., 7(8), 1739-1743.
- [14] Mustofa, M. A. 2022. The role of ecotourism in the social and economic field. Nusantara Science and Technology Proceedings, 65-73.
- [15] Nsukwini, S., & Bob, U. 2016. The socio-economic impacts of ecotourism in rural areas: A case study of Nompondo and the Hluhluwe-iMfolozi Park (HiP). African Journal of Hospitality, Tourism and Leisure, 5(3), 1-15.
- [16] Orams, M. B. 1995. Towards a more desirable form of ecotourism. Tourism management, 16(1), 3-8. [https://doi.org/10.1016/0261-5177\(94\)00001-Q](https://doi.org/10.1016/0261-5177(94)00001-Q)
- [17] Radhu, S. 2023. A Study on The Socio-Economic Impacts of Eco Tourism in Ladakh, India. International Journal for Multidisciplinary Research (IJFMR). Volume 5, Issue 5.
- [18] Sviatokha, N. Y. and Filimonova, I. Y. 2015 Development of ecological tourism in protected natural areas of the Orenburg region Vestn. Orenbg. State Univ. 10(185) pp 420–423
- [19] Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. Journal of Management Sciences, 4(2), 146-175. doi: 10.20547/jms.2014.1704202.
- [20] Weitowitz D C, Panter, C, Hoskin, R and Liley, D. 2019. Parking provision at nature conservation sites and its implications for visitor use Landsc. Urban Plan. 190 103597. DOI: 10.1016/J.LANDURBPLAN.2019.103597
- [21] Wight, P. 1993. Ecotourism: ethics or eco-sell? Journal of Travel Research, 31(3), 3-9.