



Ecotourism And Community Development: A Socio-Environmental Survey At Chatakpur, Darjeeling District.

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ABSTRACT

Ecotourism, also known as sustainable tourism, is a form of sustainable travel that aims to support and uplift the surrounding environment rather than exhausting its resources and putting pressure on it.

India's topography allows a concoction of terrain and unique flora and fauna associated with it across pan-India; we have the Himalayan Region, the forest belt in North-east India, Andaman and Nicobar Islands et al. These luscious spots are filled with greenery, resources and local/tribal communities which depend on these for their day to day livelihood. Thenmala based in Kerala is the first-ever planned ecotourism destination built for attracting Eco-tourists and nature lovers.

Currently, there are about 80 national parks and 441 sanctuaries in India, which works towards the preservation of wildlife resources in India. There are also a multitude of Botanical and Zoological Gardens in India, that work towards the enhancement of the Ecosystem in a sustainable way. The India topography ecosystem is an abundant source of flora and fauna, having numerous rare and endangered species spread across the country.

According to a research by University of Utah, "Growth in the Travel and Tourism Industry continues to outpace that of the global economy annually, leading by a 4.6% margin in 2018. 2 Travel and tourism are human-resource intensive which creates new jobs and accounts for 10.4% of global GDP. " The annual growth rate for the tourism industry in India is predicted to be 8.8% between 2011 and 2021 by the World Travel and Tourism Council.

Tourist inflow in any area required additional infrastructure be it water treatment plants, sanitation facilities or lodging space. More often than not local communities are not able to sustainably offer these conditions

which puts a lot of pressure on the environment. Vulnerable areas are prone to large scale environmental degradation. Local communities can also be harmed by an influx of tourists as the money influx is rarely directed towards them. Garbage disposal becomes an ordeal to handle.

Ecotourism space is gaining momentum in India. It lies in tandem to the vision of sustainability your country is trying to harness, owing to the conservation initiatives it fosters. Eco-tourism is non-extractive and non-consumptive in nature. Steadfastly supported in the Indian ecosystem to preserve wildlife and an animal's natural habitat, it also helps local indigenous communities to gain some revenue in this symbiotic relationship. According to numerous research, revenue garnered via ecotourism ventures have the potential to improve and streamline long-term economic prospects of India.

From a socio-cultural standpoint, eco-tourism helps in building awareness around political and social issues in developing countries. Both local population and visitors, get more knowledge about the surrounding environmental wealth i.e, it creates an ecological conscience. With this subtle economic incentivisation, the idea of deriving a mutually beneficial relationship with the local communities becomes less of an uphill task. On-ground research based on conversations with community stakeholders, it has been found that communities are keen to leverage the region's rich natural capital value through mindful tourism – but lack the investments and infrastructure to do so in a way that is ecologically viable. With over 10.2 million tourists entering the region annually, the potential for driving sustainable growth in the region is immense.

Developing community-owned tourism enterprises would lock-in the value generated through these activities, circulating it through local economies by establishing a strong support ecosystem – organic agroforestry for produce, skilling in the hospitality sector for employment, handicrafts for memorabilia etc.

Mindful natural tourism also has the potential to help conserve threatened species. Income from national parks and other protected areas, for example, have been instrumental in restoring the Hoolock-Gibbon species across the Eastern Himalayas. Investments in mindful natural tourism could provide similar support for endangered Asian Elephant species, particularly in districts with high human-elephant conflict such as Sonitpur and Udalguri in Assam.

On-ground research based on conversations with community stakeholders, it has been found that communities are keen to leverage the region's rich natural capital value through mindful tourism – but lack the investments and infrastructure to do so in a way that is ecologically viable. With over 10.2 million tourists entering the region annually, the potential for driving sustainable growth in the region is immense.

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This brings us to the now, and in the future for some time to come. While the idioms may have changed, the seemingly rising consciousness of the need to be safe, to be healthy, to breathe fresh air and be engulfed in all things natural in the open environs will be the new narrative for leisure and luxury tourism. Specifically for India, upwardly mobile domestic tourists will now begin discovering their own country – the diversity,

the natural bounty, the lesser-known traditions, the lesser experienced cuisines and the potpourri of cultures and communities. In sum, the focus will shift to the environmental, ecological, and socio-cultural aspects of non-urban destinations and getaways and the storytelling will shift from glamorous international attractions to the experiences in the heart of India.

While group travel, MICE, destination weddings will see a decline in the short term, the key to drive custom would be on new experiences driven by the paramount need for personal health and safety. The industry will have to reorient its marketing and sales strategies in line with this requirement – assurances on physical distancing, housekeeping protocols, sanitization of premises and staff, quality of air, and the health benefits that the natural “rural and remote world” provides.

For instance, diverse traditional concepts like Shinrin Yoku or Jungle Bathing in Japan to Doyni Polo in the Himalayas and other forms of traditional practices invoking the blessings of Mother Nature for health, peace and social harmony would possibly emerge as front runners and rework tariffs for self-preservation on the basis of zero-based budgeting.

This paradigm shift will have a much-needed multiplier effect on the bottom of the pyramid rural and semi-urban population, many of whom who have never experienced the benefits of modern industrialization, and whose lives continue to revolve around subsistence living in remote logistically challenged environments – but in the midst of our natural inheritance.

The challenge is maintaining a balance between growing the sector, driving incomes for communities and preventing damage to the environment as well as preventing cultural assimilation pressures.

Bhutan’s success in turning tourism into a key industry, while preserving the integrity of its natural wealth and cultures offers solutions: strict guidelines for tourism to keep it low impact, careful regulation of travel and tour operators, quotas to manage entry and daily tariffs.

Investments must be targeted at developing local capabilities and in strengthening community ownership of enterprises, whether through skilling of communities in the hospitality sector, through the cultivation and development of community-owned homestays and curated biocultural experiences or through sourcing of products from local markets and communities – reducing overall footprint and impact of hospitality.

With passion and by placing community first, by respecting the environment, by promoting a biophilic culture among the team and visitors and by identifying consumer need gaps, even dilapidated bungalows on a tea estate can be turned around to offer among the top 10 nature and experiential destinations. The resilience of tourism depends on its ability to balance people, planet and prosperity: the ecotourism opportunity is the best opportunity to do this.

In my dissertation paper based on Chatakpur in Darjeeling about Ecotourism and community development-a socio environmental survey, we can say that forest cover in hills is essential to maintain environmental, economic and ecological balances. North Bengal accounts for 3,086 sq km of the 11,876 sq km area of classified forests in the state, and for nearly 5,000 sq km of all land under tree cover. Upper Chatakpur is one of the emerging ecotourism spots of north Bengal, located at an altitude of 7887 feet in Darjeeling district. It is a 180 years old ethnic village with 19 to 20 houses and a population of about 90 to 100, and at an altitude of 7887 ft. It is about 8 km. from Sonada (26° 57' N, 88° 16' E), 22 km. from Darjeeling (26° 2' N, 88° 15' E) and 72 km. from Siliguri (26° 42' N, 88° 25' E). Upper Chatakpur Village situated within Senchal Wildlife Sanctuary, Darjeeling. The sanctuary with an area of 38.88 sq. km has an elevation of 1500-2600 m. The survey work was done by random sampling method via personal interviews with a set of questionnaire by visiting upper Chatakpur village. All the primary data were gathered through field survey and direct contact with common people and authorized centers of the region. Surveys on homestay accommodation, and their facilities, education, culture, health, waste management, transport, biodiversity, human animal conflict were done in this area. Medicinal plant diversity was studied in the village area. Information regarding the transport system

was collected from the local transport office and syndicate. Health and education information was collected from the local primary school and the local sub health centre. Information on sustainable agricultural practices and waste management policies is collected through surveys in the village houses and agricultural fields. Biodiversity of Senchal Wildlife Sanctuary was documented by visiting the forest areas. Pictorial documentation was done in every phase of study. In spite of getting so much attention in the recent time, the village is not adequately developed. There is an urgent need for implementing sustainable management systems in the areas for the betterment of the socio-environmental structures. Some of the possible management strategies have been suggested for maintaining the social, environmental, economic and ecological balance of the region. Worship of nature has played an indomitable role in our country since ages. Many people have forgone the luxuries of city life and settled down in a remote area close to nature earth and worshipped it. Such places are rare but exist within our reach not too far from where we live. Chatakpur is one such of small ecofriendly village nested within Senchal Wildlife Sanctuary in Darjeeling district in West Bengal.

CHAPTER-1

INTRODUCTION

Ecotourism, which is also known as ecological tourism, is the responsible travel to fragile, pristine and usually protected areas that strives to be low impact and often small scale. 'Eco' is derived from the Greek word "oikos" which literally means the habitat and is an abbreviation of the term "ecology" which is the scientific study of the relation of living organisms to each other and their surroundings. Therefore, in this view, ecotourism essentially means ecological tourism; where ecological has both the environmental and social connotations.

Even though many travelers in pursuit of nature and culture already existed in the past like Claus-Dieter (Nick) Hetzer, an academic and adventurer from Forum International in Berkeley CA who coined the term "ecotourism" in 1965 and ran the first eco-tours in the Yucatan during the early 1970s (Source-The Encyclopedia of Ecotourism), it was Hector Ceballos-Lascurain, commonly known as the father of ecotourism, who popularized the term in 1983. The reason for that was for the sake of being at one with Mother Nature, sometimes preferably alone (Dowling R. and Page S., 2002)

A) DEFINITION OF ECO TOURISM:

Ecotourism has been defined and redefined as many times as there have been summits, conferences or even when articles have been written upon the topic. Since most definitions have been broad, ecotourism is not so much a word but a philosophy and a commitment which evolved from environmental consciousness of the 1960s (Page S. and Dowling R., 2002) and since then, there have been various streams of thoughts regarding ecotourism. These are dispersed across a wide array of definitions. Sometimes, it is easier to explain what ecotourism is not rather than to explain what it really is.

Ceballos-Lascurain captures the essence of ecotourism as "environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy, study and appreciate nature (and any accompanying cultural features – both past and present), that promotes conservation, has low negative visitor impact, and provides for beneficially active socio-economic involvement of local populations" (Ceballos-Lascurain, 1996). This definition was officially adopted by IUCN in 1996 and it emphasizes on the importance of consuming the tourism product responsibly. Also according to this definition, ecotourism should be seen as a component of sustainable tourism which should embrace all types of tourism, including city and beach tourism. As it is known that the natural environment consists both of the natural resources as

well as the local community, this definition recommends the respect of traditions, beliefs, values and cultures of these people as well as their environment. The concern of both

the ecology and their people are emphasized upon, hence the ecological worldview has to be observed.

The International Ecotourism Society (TIES) is an American-based ecotourism association. The definition provided by this association about ecotourism is more comprehensive and states “purposeful travel to natural areas to understand culture and natural history of the environment, taking care not to alter the integrity of the ecosystem, producing economic opportunities that make the conservation of the natural resources beneficial to the local people” (Lindberg and Hawkins, 1993). Similar to that of Ceballos-Lascurain, this definition also emphasizes heavily on the ecosystem and the local community. However, here it also encloses the economic opportunities that exist. This means that the amount of money obtained from the visitors of ecotourism sites is envisaged to sustain, preserve and maintain the existing resources and assets. Furthermore, local people are supposed to gain business opportunities to enhance their livelihood. It should be noted that it is very important to maintain the attractiveness of the ecotourism destination for future visitors to come and this normally cannot be done freely. Therefore, the mention of economic opportunities in the above definition is essential to explain that the survival of any ecotourism destination site lies in its proper maintenance as well as the harmonious maintenance of its people.

All the definitions advanced above provide no specific mention on ‘animals’, which also form an important part of the ecosystem. Definitely, ‘natural areas’ comprise of not only green scenery but also of the fauna. In certain regions of African countries, hunting is also classified as an ecotourism activity and this contradicts the very essence of this phenomenon, which is about appreciating and participating without disturbing the ecosystem. Therefore, phrases like “without endangering or threatening the livelihood of animals” should have been incorporated in these definitions as animals form an integral part of nature together with the flora.

B) EVOLUTION OF ECOTOURISM CONCEPT:

The development of new forms of tourism has evolved in response to a more sensitive international climate which was the growing awareness of environmental and conservation damage caused by tourism. This has emerged in conjunction with the Rio Summit and the triple bottom line concept of environmental, economic and social sustainability has been established. Green tourism, adventure tourism, nature tourism, community-based tourism, heritage tourism are all labels that were generally encapsulated in the term ‘ecotourism’.

The term ecotourism was first used by Hector Ceballos-Lascurain in 1983, and was used to describe nature-based travel to relatively undisturbed areas with an emphasis on education. The concept, had however, developed to a scientifically based approach to the planning, management and development of sustainable tourism products and activities.

According to Boo E. (1990), ecotourism can assist in spreading economic activity and growth and provide an opportunity for diversification of the economy.

C) IMPORTANCE OF ECOTOURISM:

Ecotourism is becoming even more popular across the world, but it has a significant practical value in developing countries where the needs of impoverished communities may conflict directly with the need to capitalize on the growing tourism industry. It can also be noticed that many areas worldwide have been designated as tourism hotspots by developers without even giving a thought to the impact that this decision will have on the local communities. These communities may depend on these respective areas for food and shelter, but their concerns are buried beneath the potential for financial revenue.

Thus, ecotourism is a means to counter to this problem. It aims to create viable and sustainable tourism opportunities, and in that way limits the impact that all these activities will have on the environment. It also helps in improving the lives of the local people living in these areas. The ecotourism concept consists of core principles which include the minimization of industrial impact on the environment, building environmental and cultural awareness, empowering local communities, raising awareness of the political, environmental and social issues of the country concerned and finally to ensure that the experience is positive for all parties including the visitors and the hosts.

The aim is to achieve responsible and sustainable tourism practices to the benefit of all and detriment of none. Knowledge is one of the most important factors in the success of any ecotourism venture. Those proposing the project must gain intimate knowledge of the area, the fauna, the flora and the communities living there. They must understand how these different factors may impact on each other and how a small change in anyone of them will affect the rest. They must understand the culture of managing people's relationship with the environment, and how they view concepts such as hunting, farming and gathering materials for personal use.

It is vital to include the local communities in the project, not merely as grateful beneficiaries of charity, but as empowered and informed team members. This is because their input is to be valued, as chances are that they understand the area and complex ecosystems better than anyone else involved in the project.

The ultimate goal is to create a sustainable resource that protects both the people and the nature involved. Twenty-four years ago, in 1987, the World Commission on Environment and Development stated that sustained development implied, "meeting the needs of the present without compromising the ability of future generations to meet their own needs." This sentiment is just as applicable now as it was then.

D) BENEFITS OF ECOTOURISM:

Ecotourism is that alternative type of tourism which aims at minimizing the negative impacts of the traditional mass tourism while maximizing the benefits for the host destination and stakeholders. As an environmentally friendly tourism, it is a viable way of creating economic and social benefits at local and national levels while concentrating upon environmental conservation and protection. The benefits of ecotourism vary and differ from regions to regions and also in relation to the nature of the attractions.

1. ECONOMIC BENEFITS ON COMMUNITY:

According to Hvenegaard and Dearden (1998), economic benefits of ecotourism occur in various ways and may generate higher economic returns than other resource activities. Moreover, ecotourism diversifies the local economy mainly in rural areas where the economic activities are declining with time. Also, many opportunities for employment and income are generated by ecotourism activities to the local people paying attention particularly to the disadvantaged and remote rural communities. Consequently, it generates foreign exchange, enables the host community to cope with and enjoy the rising standards of living and on the overall, ecotourism contributes to the economic prosperity of a destination. Furthermore, as income is

being transferred to remote and economically-disadvantaged regions of a destination through eco-tourists' visits and expenses, ecotourism is considered as an effective vehicle. Moreover, ecotourism benefits other domestic industries such as those which are involved in accommodation, transport and food services. It contributes to a great extent to the development of markets involved in the creation of handicrafts, artwork for souvenirs, and many other local products. Thus, ecotourism provides business opportunities in various sectors for the local community.

2. REVENUE GENERATION FOR CONSERVATION:

Ecotourism generates revenues that can be reinvested for conservation and protection of ecotourism sites at destination. It contributes to the conservation and the effective management of the natural undisturbed areas, in particular the ecotourism sites, through mechanisms such as entry fees at sites, charitable institutions and non-governmental institutions. It is vital source of revenue and helps setting up natural protected areas such as national parks and nature reserves. Ecotourism has a unique potential of preserving and maintaining an area in its natural undisturbed state, thus preventing the exploitation of the resources it encloses. As the eco-tourists are willing to pay a fee for experiencing the natural environment and indulging in these activities, a large percentage of the revenue is used for the protection and maintenance of the natural sites at destination. A study by Laarman and Gregersen (1996) suggested that a range of categories of fees may be levied. These categories of fees and charges in nature-based tourism are general entrance fees, fees for use, concession fees, royalties and profit shares, licences and permits, taxes and voluntary donations.

Ecotourism offers the opportunity to generate revenues for the protection and conservation of the ecosystem, biological diversity and for research efforts.

3. EMPOWERMENT TO THE LOCAL COMMUNITY:

According to Hall (2002), "ecotourism with its small-scale development, provides opportunities for local empowerment, encourages the use of local knowledge and labour, promotes local ownership, perpetuates local identity and strengthens economic equity". It definitely has got a beneficial effect on the local communities as they are being empowered. In other words, ecotourism enables the participation and the integration of the local people in the planning process and running of the businesses. It can, in addition, be noted that nowadays more and more students are willing to pursue higher studies in tourism and earn a better standard of living. Thus, ecotourism related activities allow them to acquire more knowledge about the future development taking place in that field in their communities and hence allowing them to participate in the planning process of these businesses as they will be integrating their ideas about the development.

E) COMMUNITY DEVELOPMENT:

Ecotourism is a form of tourism that should be both environmentally responsible and potentially beneficial to the local people. In fact, the involvement of the local community in tourism projects has become an important issue in development studies. While many ecotourism projects have been developed in or near protected areas such as national parks, protected forests, and nature reserves, these areas usually exclude the local population who may depend on the natural resources in those areas. This approach creates a conflict between local population and other parties involved in the projects. While nearby residents are the most straightforwardly concerned and affected by the founding of parks and protected areas, they also stand to take advantage the most by their conservation. By bringing residents into the business of ecotourism, not only can local people meet their economic requirements, but they can also preserve and improve the 'sense of place' that is decisive for guaranteeing continuous conservation.

In the past, inadequate consideration to qualitative socio-economic impacts had been a key reason why many tourism development plans were not implemented (Baud Bovy M, 1982). There has now been a move away from the narrow concern with physical or promotional planning facilitating the growth of tourism, to a broader more balanced approach recognizing the needs and views of not only tourists and developers but also the wider community, Dowling R (1991, 1997). Thus, the participation of residents, especially tourism students, in ecotourism planning is fundamental as they will have a degree of empowerment in the ecotourism development process. They will also contribute to the success of the ecotourism projects by sharing their knowledge about the local areas where the developments are to be made. Moreover, by participating in conservation programs and by providing human resources to the different ecotourism developments, they will show a deep interest in ecotourism activities and will also share the positive economic benefits of the projects. Hence, students who want to make a career in the field of tourism will benefit from the projects through employment opportunities giving rise to improved social and economic conditions and furthermore having continuous access to the local resources of their area.

Moreover, an increase in the participation of more youngsters from the local community in the ecotourism developments will lead to a simultaneous increase in the chances of success of these ecotourism developments. Though youth participation itself can cost time and money in the short run, the process will result in activities that are based upon issues facing youth and upon their understanding of problems and will be therefore more relevant to the needs of their generation. Their participation can lead to better targeting of benefits to youth, the group that can best identify the impact of specific activities. It can also help to secure the sustainability of activities as youth, as primary stakeholders, will be more invested in their momentum. Hence, participation of local community, especially youngsters, in ecotourism activities is important and beneficial for all the stakeholders of the ecotourism development therefore leading to the latter's success.

F) SUSTAINABLE ECOTOURISM:

Sustainable tourism is tourism that minimizes costs and maximizes the benefits of tourism for natural environments and local communities, and can be carried out indefinitely without harming the resources on which it depends. Also, conventional tourism often does not benefit the local community when tourists' revenue leaks to the outside operators. Thus, as a result, tourism can destroy the very resources on which it depends. In contrast, sustainable tourism is deliberately planned to benefit the local residents, respect local culture, conserve natural resources, direct more of the profits to the local community, and last but not least, educate both tourists and local residents about the importance of conservation. Sustainable tourism embraces all segments of the industry with guidelines and criteria that seek to reduce environmental impacts, particularly the use of non-renewable resources, using measurable benchmarks, and to improve tourism's contribution to sustainable development and environmental conservation.

According to World Conservation Union (1996), sustainable tourism is environmentally responsible travel and visitation to natural areas, in order to enjoy and appreciate nature and any accompanying cultural features, both past and present, in a way that promotes conservation, has a low visitor impact and provides for beneficially active socio-economic involvement of local peoples. Moreover, according to Hunter (1997) and Hardy and Beeton (2001), sustainable tourism can be seen as a way to manage tourism and tourism relationships in order to avoid compromising the natural and cultural resources.

On behalf of my dissertation topic specifically in north Bengal forest cover in hills is essential to maintain environmental, economic and ecological balances. North Bengal accounts for 3,086 sq km of the 11,876 sq km area of classified forests in the state, and for nearly 5,000 sq km of all land under tree cover. The most forested areas are located in Darjeeling and Jalpaiguri, which have 2,994 sq km of classified forests and 4,614 sq km of forested land under all forms of ownership.

Upper Chatakpur has now become an emerging ecotourism destination for people living on the coast of West Bengal. Upper Chatakpur is one of India's secret, small remote unexplored hill rich in biodiversity and indigenous cultures. It is a small village located in the eastern part of the Himalayan Range, in the north of West Bengal at 7887 ft. altitude. It is a 180 years old ethnic village. It is about 20 km. from Darjeeling and 72 km. from Siliguri. On the northern side, it is surrounded by the Mt. Kanchenjunga and on the southern side the undulating green valley and the meandering river gorge of Rolly Khola resides. Weather in summer is pleasant, average temperature is around 12-25 degree. In winter average temperature is 2- 12 degree and snow fall is common here. The Locals belong to either "Rai Community" or "Sherpa Community". The terrace cultivation of organic crops and the shrubs and medicinal herbs acquired from the forest, form the means of livelihood of the locals. The place offers majestic views of Mt. Kanchenjunga, lush greenery, forest trails and wooden cottages and in short, is an ideal destination for those seeking peace and tranquility in the Himalayas. In terms of its location and view, Chatakpur is comparable to Tiger Hill, the sunrise point of Darjeeling. Although there is no overnight accommodation at Tiger Hill, Chatakpur has some tourist accommodation available, leading to its increasing popularity.

Upper Chatakpur Village situated Within Senchal Wildlife Sanctuary, Darjeeling. The sanctuary with an area of 38.88 sq. km has an elevation of 1500-2600 m. Surrounded by high mountains Senchal receives a very heavy amount of precipitation. Also the Sanctuary is crisscrossed by number of streams and *Jhoras*. Such a water rich situation has made this Sanctuary the water supply source for Darjeeling Town. The Senchal Lake is the main reservoir of this supply.

CHAPTER-2

SURVEY OF LITERATURE

In contemporary tourism industry 'Ecotourism' is a common term, used in public domain knowing or unknowing of its objectives and aspects. Still, there is no specific definition of it (Murugan, 2006). It has several meaning and concepts. There are exceptional market values of ecotourism which perhaps continue in future. It is usually considered as a sensible tourism practice.

The world Travel and Tourism Environment Research Centre in its 1993 World Travel and Environment Review defined ecotourism as "tourism with a specific motive of enjoying wildlife or underdeveloped natural areas" (Victor and Rebecca, 1993). The travel industry defines ecotourism as "purposeful travel that creates an understanding of cultural and natural history while safeguarding the integrity of the ecosystem and producing economic benefits that encourage conservation." (Bandy, 1996). The International Tourism Society defined Ecotourism as "a form of tourism involving visiting fragile, pristine, and relatively undisturbed natural areas, intended as a low-impact and often small scale alternative to standard commercial (mass) tourism." (Walpole *et al.* 2001) The purpose of ecotourism involves education of the travellers, to provide funds for ecological conservation, to directly benefit the economic development and empowerment of local communities. (Bassam and Rahman, 2016). Ecotourism programme includes the negative aspects of conventional tourism on the environment and enhances the cultural integrity of local people (Sing, 2015). However, it plays an important role in community empowerment in the host area and surroundings. In this context it may be defined as "a form of tourism that is responsible for the preservation of the natural area, provides economic benefits and maintains the cultural integrity of local communities (Deru and Nike, 2016).

Environment sustainability is very important for community empowerment in rural areas. At present context a new termed has been coined; 'Responsible Ecotourism' (Chiu *et al.* 2013). If ecotourism is practised responsibly it could be beneficial for both guest and host. So, the local communities could utilise the purity of their environment for livelihood. Considering these issues, Govt. of West Bengal passed West Bengal Tourism Policy in 2016 which encourages homestay facilities in different natural areas to enhance community development. Govt. of West Bengal is promoting different virgin tourist spots and circuits in the

picturesque Himalayan tract of Darjeeling district as ecotourism destinations (West Bengal Tourism Policy, 2016 and 2019). Local communities are also promoting their areas for homestay facilities with the wrapper of ecotourism. In this context, Chatakpur is a perfect example of this scenario. The present studies deal with the role of ecotourism in community development and sustainable livelihood of Sillery Gaon village emphasising on its prospects and problems.

As a subset of 'sustainable development', ecotourism has been defined by the International Ecotourism Society as 'responsible travel to natural areas that conserves the environment, sustains the well-being of local people and involves interpretation and education' (TIES, 2015). Further, the significant aims of ecotourism practice include environmental conservation, cultural preservation, community participation, economic benefits, and empowerment of vulnerable groups (Cobbinah, 2015). Ecotourism is hard to plausibly criticise given that it is often championed as the panacea to the downfalls of mass consumption tourism (Duffy, 2015, cited in Voumard, 2019). However, the ambiguous national policy, (Poyyamoli, 2018) lack of evidence of social empowerment (Das and Chatterjee, 2015) and minimal effort into environmental conservation (Banerji and Datta, 2015) are amid a few of the criticisms which have been exemplified by recent research of case studies of ecotourism in India.

Policy implications: Undoubtedly, the policy surrounding ecotourism is akin to its implications. Poyyamoli (2018) evaluates the shortcomings of the National Ecotourism Policy for India, 1998, distinguishing between the reality and rhetoric it presents and enforces. A significant gap in the policy is the very definition of ecotourism itself which fails to include: the equitable sharing of income via active community participation and the conservation of heritage and culture, both of which are fundamental to effective ecotourism practice (Cobbinah, 2015). Thus, the definition is 'erroneous and misleading' (ibid., p.51). Further, the ambiguity of the policy is reiterated through its 'operational guidelines' (ibid., p.53) which do not provide any quantifiable indicators to assess the impacts of ecotourism approaches across India. Finally, the official policy document itself is inaccessible online to researchers and critics, thus limiting the advice that can be given to ameliorate the policy.

Environmental implications: Arguably, environmental sustainability and conservation are paramount in the activities of ecotourism (Honey, 2008, cited in, Cobbinah, 2015), thus although ecotourism promotes socio-economic benefits, environmental ones are of utmost importance. While researching small scale 'ecotourism' initiatives in Silerigaon, an eastern Himalayan village within Darjeeling, as seen in Figure 2, Banerji and Datta (2015) described an 'umbilical cord' between the focus of environmental conservation and the expansion of ecotourism. Although the research found that both locals and tourists perceived an increase in forest cover over recent years, it was also notable that 59% of respondents noticed a decline in non-polluted water over the last decade. Further, 71.43% of local stakeholders noticed that the number of wildlife in Silerigaon had decreased and attributed this to increased human intervention. Banerji and Datta (2015) suggested that environmental conservation as a result of tourism capital currently lacks 'adequate vigour' (ibid., p.47) in the area, questioning whether or not these initiatives can be deemed as 'ecotourism' at all.

Research Gaps:: Despite the recent research into the issues surrounding the practice of ecotourism in India, there are inevitably existing research gaps which hinder solutions to the negative socio-economic, political and environmental implications of ecotourism, as previously implied. As a more comprehensive evaluation of recent research on the topic of ecotourism in India, Puri *et al.* (2019) outline several gaps in research. The paper posits that a foundation of ecotourism is biodiversity conservation. Thus, further research needs to investigate the effectiveness of conservation goals via environment impact assessment studies. Equally, it is imperative to monitor changing land-use and resource consumption patterns as a result of ecotourism initiatives to ensure that ecotourism doesn't become an 'extractive industry' (ibid., p.136). Additionally, Puri *et al.* (ibid.) contend that research into the social and ecological 'carrying capacity' (ibid., p.137) of the proposed ecotourism site, in order to prevent tourism hindering the balance between conservation and development, which is of pressing urgency. Consequently, these research gaps offer guidance into future action that needs to take place in terms of improving ecotourism practices in India.

CHAPTER-3

AIMS AND OBJECTIVES

The present studies deals with the following objectives:

1. To study the present tourism recourses and accommodation facilities of Chatakpur.
2. To study the role of ecotourism in community development
3. To study the prospect and problems ecotourism at Chatakpur
4. Development of a special tourism zone in the project area through a multiple stakeholder mechanism.
5. Setting up of various tourist facilities like tent resorts, ethnic cottages, treetop huts, nature interpretation-cum-eco parks, watchtowers and adventure sports centers at strategic locations inside the tourism zone.
6. Identifying community level stakeholders at each site and develop managerial capabilities of such stakeholders so that mechanisms of decentralized community level management can be evolved.
7. Generating and increasing income levels of community members through revenue sharing and creation of employment opportunities.
8. Promoting indigenous culture including traditional handicrafts within the tourism zone and establishing necessary marketing mechanisms.
9. Starting various tourism activities at each site and facility and designing such activities in a way so that they do not harm the environment.
10. Marketing the tourism zone at home and abroad as a conservation programme and making the project commercially viable.
11. To protect and conserve the forests and other natural resources within the project area through the community level stakeholders as well as creating environmental awareness among tourists using facilities within the area of chatakpur.
12. To keep an watch on impact on local economics, social and cultural awareness, educational awareness and opportunities, conservation of forest area within Chatakpur, Darjeeling.

CHAPTER-4

METHODOLOGY OF THE PROJECT

1. The study of my dissertation is done by onsite inspection by visiting upper Chatakpur village and the primary data were gathered through field survey and direct contact with common people and authorized centers of the region. Information on agricultural activities is collected from the local villagers. Medicinal plant diversity was studied in the village area and information was gathered from the local forest department centre. Information regarding the transport system was collected from the local transport office and syndicate. Religious and social festival information was collected from the local people. Information on environmental activities were collected from local people in Chatakpur.

2. The Survey is conducted through personal interviews among local people in Chatakpur via randomly collected samples. The survey method is Random sampling.

Random Sampling is a method of choosing a sample of observations from a population to make assumptions about the population. It is also called probability sampling. The counterpart of this sampling is Non-probability sampling or Non-random sampling. The primary types of this sampling are simple random sampling, stratified sampling, cluster sampling, and multistage sampling. In the sampling methods, samples which are not arbitrary are typically called convenience samples.

3. The present dissertation paper deliberated as an intensive case study that involves the collection of both primary and secondary data. The field observation and investigations were done in winter season. During the field visits, the physical observation was made on community activities of Chatakpur village. Most of the local people who engaged in ecotourism business and three homestays were surveyed through random sampling with a standard set of questionnaire. Tourists, transport workers were also interviewed to understand various issues related to ecotourism at Chatakpur. Secondary data were collected from the register of the homestays. Collected data were compiled and analyzed through specific statistical methods. For the preparation of maps, Google Earth and Google map is used.

CHAPTER-5

BRIEF DESCRIPTION OF STUDY AREA WITH LOCATION MAP

At an altitude of 7887 feet this small Himalayan village called Chatakpur accommodates around 90-100 villagers. Consisting of 18-20 houses and flourishing under the supervision of forest department this small village located at a distance of 18 kms from Jorbanglow, 7 km from Sonada on Siliguri-Darjeeling road will offer you a quiet and memorable stay to be remembered for years. The terrace cultivation of organic crops and the shrubs and medicinal herbs acquired from the forest, form the means of livelihood of the locals. The place offers majestic views of Mt. Kanchenjunga, lush greenery, forest trails and wooden cottages and in short, Chatakpur is an ideal destination for those seeking peace and tranquility in the Himalayas. A paradise for bird watchers, Chatakpur offers a magnificent calm holiday with the warmth of peace of nature.

Chatakpur Village situated Within Senchal Wildlife Sanctuary, Darjeeling. The place has now transformed itself to a tourist destination where visitors make a beeline for the lush greenery, wooden cottages, forest trails, trekking routes, and overall, a getaway from the hustle and bustle of city life. The Senchal Wildlife Sanctuary, with an area of 38.88 sq. km has an elevation of 1500-2600 m. Surrounded by high mountains Senchal receives a very heavy amount of precipitation. Also the Sanctuary is crisscrossed by number of streams and Jhoras.

During the switch from a timber smuggling den to a tourist haven, the forest department electrified the village and brought drinking water to the hamlet inhabited by the 90-100 villagers living. Arrangement for sanitation was also made in each household.

Senchal Wildlife Sanctuary (SWS)::

Senchal Wildlife Sanctuary (26°59'50.05"N 88°15'49.73"E) (38.97 km²) was established in 1915 and is situated at a distance of 11 km from Darjeeling town. The area of the sanctuary is approximately 38.97 km². The area was declared a wildlife sanctuary vide notification No. 5380-F, dated 24th June, 1976. It is one of

the five important Protected Areas of Darjeeling district. The two famous lakes of Senchal supply portable water to Darjeeling city.

The temperature during the cold season varies from 1.7 degree C and 8.4 degree C and during the hottest period, it varies between 14.4 degree C and 18.9 degree C. Frost is very common from December till March in areas above 2000m, in high ridges, snowfall can be experienced.

There are 19 major settlements within as well as in areas adjoining the forest, with Ghoom-Jore Bungalow being the largest among them. The Sanctuary has 19 blocks under two ranges. The Sanctuary also contains the catchment area for the water supply of the city of Darjeeling. Many roads and public thoroughfares penetrate the Sanctuary and significantly influence the sanctity of the Sanctuary.

Floral Diversity at Senchal Wildlife Sanctuary::

Altitudinally, the sanctuary ranges between 1500 -2600 m. and broadly houses sub-tropical and temperate oak forests. Approximately 380-400 flowering plants can be found in Senchal Wildlife Sanctuary. The Sanctuary is home to various species of Rhododendron, Michelia, Oak, Pine and Birch. A large number of Hydrangeas, Orchids, Daphne and Mahonia can also be found. The background vegetation is temperate broad-leaved forest with dominant species such as, Rhododendron arboreum, Rhododendron grande, Castanopsis hystrix, Ilex sikkimensis, Magnolia campbellii, Alcimandra cathcartii, Exbucklandia populnea, and Prunus cerasoides. Climbers and scramblers include Rubus paniculatus, Senecio diversifolius, Rubia manjith, Codonopsis viridis, and Edgaria darjeelingensis. The undershrubs and herbs are dominated by Aconogonum molle, Cautleya lutea, Globba hookeri, Artemisia vulgaris, Urtica dioica, and Gerardiana heterophylla. The major vegetation type is moist temperate forest, which supports many large mammals. The secondary grassland on Tiger Hill is home to innumerable sun-loving herbaceous plants. Being an area with very high humidity, almost all trees, including planted conifers, are covered with thick epiphytic vegetation, including Begonia gemipara, Agapetes serpens, Acer hookerii, Pilea ternifolia, Chamabainia cuspidata, and Hymenodictyon flaccidum. The sanctuary is also home to numerous medicinal plants such as Swertia chirayita, S. pedicillata, Panax pseudoginseng, Hypericum uralaum, and Valleriana hardwickii.

Faunal diversity in senchal wildlife sanctuary:

Wild pigs and barking deer are spread over Senchal wildlife sanctuary. Serow and goral occupy the untouched steep ridges and valleys while black bear belonging to Himalayas descend from higher altitudes and take rest during winter and autumn seasons. Leopard cat, jungle cat and leopard are seen in lower elevations of the forest. Apart from this Ant eater, flying squirrel, Indian civet, Assamese macaque and common Rhesus are also spotted here. The region of this sanctuary is very rich in bird life. Sunbirds, Babblers, Thrushes, Pigeons, Green, Imperial Pigeons, Hornbills, Fowl, Red jungle, Emerald Cuckoos, yellow necked wood pecker etc are spotted here.

Accommodation:: Forest Department had made two cottage with four double bedded room and all modern facilities with warm hospitality's from the villagers will impress you along with magnificent Kunchandzonga (The third highest peak in world) . Home stay is available in selected houses in Chatakpur. Besides the four cottages, Chatakpur, has homestay facilities in a few houses. The forest department has also introduced organic farming and tourists can handpick vegetables from the field for cooking.

Birds in Chatakpur:: Blue Magpie, Rufous Sibia, Black Redstart, Verditer Flycatcher, Himalayan Bulbul, Pipit, Long tail Shrike, Warbler, Prinia, Blue Fronted Redstart, Water Redstart are the major species one can see in the area. If lucky enough, one can also get a glimpse of the famous Panda.

Places to see in Chatakpur::

Chatakpur offers a number of popular trek routes that lead to the top of the Tiger Hill. During this trek, you might even have a glimpse of the 'Chumbalumba' or Mount Everest. On your visit to the forest, make sure to be guided by a trained forest guard as the forest is the home to the Great Himalayan Black Bear family, Leopards, Barking Deer and Antelopes.

Nearby attractions in Chatakpur:: You can visit the Tiger Hill or other places that are situated nearby such as Jorebunglow, Ghoom and Sonada. Darjeeling is the nearest popular tourist destination of Chatakpur. You can enjoy a number of small treks to Tiger Hill, Rimbi village, Sixteen village, Labda. Most of the trekking trails run through the wild life sanctuary and you would be accompanied by our expert guide.

Things to do in Chatakpur:

Tourists can climb rock faces or avail the trekking routes both downhill and uphill that lead to various destinations. They can also climb the watchtower to view the sunrise or take a panoramic view of Sandakphu. You can also spend time at the Kali Pokhri (Pond). Bird lovers can spend their time watching birds and tourists can even enjoy the breathtaking view of Mt. Kanchenjunga from nearby or enjoy the folk dances performed by local people. Pick your vegetables from garden fresh organic orchards, feed and even milk the cattle. You can also enjoy the company of story tellers. A generation still exists to share the experience of myth, culture and traditional values.

Best time to visit in Chatakpur:

Chatakpur can be visited throughout the year but for those planning to visit the forest are advised to avoid the rainy season.

Chatakpur is located at a distance of around 16 kilometres from Jorebunglow that lies on Siliguri-Darjeeling Road and 7 kilometres from Sonada. You need to go through the Hill Cart Road and enter the jungle trail, in order to reach Chatakpur.

Air Route : The nearest airport is Bagdogra. It is 80 km away and connects with Delhi, Guwahati and Kolkata.

Rail Route: Ghoom is the nearest station connected by Indian Heritage Toy Train with New Jalpaiguri and Siliguri Junction station which are nearest broad gauge railway station and is 87 km away. Road NH 55 passes along the Western side of the Sanctuary. The sanctuary is 9 km away from Darjeeling. Chatakpur Eco village is 17 km from Ghoom, Jorebunglow and 7 km from Sonada.



Figure: map of India



Figure: map of West Bengal



of Darjeeling district



Figure: Map

Figure: Location map of Chatakpur village

CHAPTER-6

RESULTS AND DISCUSSIONS

Profile of the interviewees:

During the survey, a conscious effort was given for maintaining the balance between male and female respondents from various age groups for more impartial representation. Among the total respondents ($N = 50$), 52% ($n = 26$) were male and 48% ($n = 24$) female. The age of the respondents ranges from 16 to 65 years.

Their average age was 34.73 years. Among the total ($N = 50$) respondents, 86% ($n = 43$) were literate and rest 14% ($n = 7$) were illiterate.

1. Home stays and their accommodation capacity:

Chatakpur is a one of youngest ecotourism spot of Darjeeling District. In spite of this the villagers has developed significant infrastructures. Presently, most of households ($n = 19$) have homestay facilities. During the field study, 5 such homestays were surveyed. There are 27 rooms and 54 beds available among the 5 surveyed homestays. There are averagely 5.4 rooms and 10.8 beds/ homestay. Humro Home homestay of Upper Chatakpur and Dhan Maya Niwas of lower Chatakpur both provide maximum accommodation with 25.92% ($n = 7$) rooms and 25.92% ($n = 14$) of beds among the surveyed home stays. The second best is Prema Homestay with 22.3% ($n = 6$) no of rooms and 22.3% ($n = 12$) no of beds available.

SL NO	NAME OF THE HOMESTAY IN CHATAKPUR	TOTAL NUMBER OF ROOMS	TOTAL NUMBER OF BEDS	CHARGES PER DAY (FOODING+LODGING)	CONTACT NUMBER
1.	Humro Home homestay	7	14	1300	7908676763/6296227040
2.	Prema Homestay	6	12	1300	8101893469/8900312186
3.	Sunrise Homestay	3	6	1300	8116969563/7047800613
4.	Kulung Homestay	4	8	1300	8900312451/7029315796
5.	Dhanmaya Niwas(Lower Chatkpur)	7	14	1200	7076097524/8967936721

2. Local people attitude towards Ecotourism:

82% ($n = 41$) of the villagers admitted that their lifestyle has improved and informed that their social interaction and exposures increased after the successful implementation of ecotourism. The villagers' attitude towards ecotourism had also been studied and found that the majority of them have a positive approach to it.

GENDER WITH DEMOGRAPHIC VARIABLE	TOTAL NUMBER OF RESPONDENTS	POSITIVE ATTITUDE TOWARDS ECOTOURISM	NEGATIVE ATTITUDE TOWARDS ECOTOURISM	NEUTRAL ATTITUDE TOWARDS ECOTOURISM
MALE	26	21	3	2
FEMALE	24	20	2	2
TOTAL WITH %	50 (100%)	41 (82%)	5 (10%)	4 (8%)
AGE>30 YEARS	33	28	3	2
AGE <30 YEARS	17	12	2	3
TOTAL WITH %	50 (100%)	40 (80%)	5 (10%)	5 (10%)

3. Women Empowerment:

Among the total ($N = 5$) homestays most of them ($n = 3$) are under the proprietorship of the female. It is an encouraging picture of women empowerment in such a remote village. Female participation rate in this sector is higher than the male. Among the total ($N = 50$) engaged persons in this hospitality business, 54.28% are female. There is a positive correlation between total family members and female members engaged in homestays. It indicates female are more associated with this occupation. It was noticed that females are mostly engaged in six different types of work. Even females calculate daily expense, expenditure and maintaining the accounts. It indicates women are in favourable conditions to take care, promote and operate family businesses.

TYPE OF WORK	TOTAL NUMBER OF RESPONDATES DURING INTERVIEW	NAME OF THE HOMESTAY	NUMBER OF EMPOWERED WOMEN AT EACH HOMESTAY	CONTRIBUTION OF HOMESTAY TOWARDS WOMEN EMPOWERMENT
1. Meal preparation	24	Humro Home Homestay	4	26.67%
2. Reception				
		Prema Homestay	3	20%
3. Catering Services		Sunrise Homestay	2	13.4%
4. Accounts		Kulung Homestay	2	13.4%
5. House keeping		Dhan Maya Niwas	4	26.67%
6. Tour guide				

4. AGRICULTURE AND LIVESTOCK

In the hill areas of upper Chatakpur, terrace cultivation or step cultivation is practiced. It is method of growing crops on sides of hills or mountains by planting on graduated terraces built into the slope. Though labour-intensive, the method has been employed effectively to maximize arable land area in variable terrains and to reduce soil erosion and water loss. In some place, local green houses are made for cultivation. Cow fencing was observed in the agricultural fields.

In upper Chatakpur, the common cultivable edible plants are potato, garlic, ginger, cauliflower, cabbage, beans, radish, carrot, coriander, green peas, spinach, Fenugreek leaves, squash, leaf mustard etc. The people of upper Chatakpur usually practiced organic farming, cowdung is used as manure. No pesticide and fertilizer is added to the fields as there is no pest attack in the agricultural areas. Most of the houses in upper Chatakpur have cultivable lands adjacent to the houses and farming is done there. Agricultural production is one of the main economic sources of the people in upper Chatakpur. They used to sell the foods in the markets after production. Honey production is also an important source of earning. The inhabitants used to make artificial wooden structures in which bees take shelter and store honey. They periodically collect the honey and supply it to market.

The common livestock at upper Chatakpur are local breeds of cows. Local poultry farms are found in many houses. Meat, eggs and milk are the main livestock products which are the important sources.

5. EDUCATION, CULTURE AND HEALTH

There is only one primary school in upper Chatakpur, Chatakpur forest Primary school, which was established in 1958. The classes are up to forth standard. Only two teachers are in that school, while the number of students is only four. The school syllabus includes English, Nepali language, environmental studies, arithmetic, geography, science, general knowledge and drawing. For higher studies, people of upper Chatakpur usually go to the high schools of Sonada (8 km. far from upper Chatakpur) and the schools and colleges of Darjeeling (22 km. far from upper Chatakpur).

Interestingly, there is no specific medicine shop in upper Chatakpur. There are two small stationary shops in the area, where basic medicines are available. People used to go to Sonada Primary Health Centre and Darjeeling District Hospital for treatment purpose. In Sonada Health Centre, two doctors are available with nurses. No operation facilities are available in Sonada, people have to visit the district hospital for operation and emergency cases.

In upper Chatakpur, local food products are completely based on agricultural products and livestock products. Delicacies are Rice, Tibetan - chicken and pork steamed momo, Thuppa, Gunruk Soup, Chimping Chuttney and a green Chilly Chuttney made of "Dalle"-which is famous for its aroma. Local drinks are Guras, Roxy, Channg, Thomba.

In Chatakpur, the main festivals are *Dasara*, *Diwali* and *Losar*. *Losar* is the Buddhist festival ("*Losar*" in Tibetan language means New Year), which is celebrated for 15 days, however, the main celebration occurs in the first three days.

6. TRANSPORT AND CONNECTIVITY

In public transports, there is only one private car in upper Chatakpur which connects the area with Sonada and Darjeeling. Every morning, the car carries passengers going to Sonada on sharing basis. However, tourist can visit upper Chatakpur by hiring car from Siliguri, New Jalpaiguri, Darjeeling, Sonada and other places of North Bengal and Sikkim. Upper Chatakpur is connected with places of Bengal and Sikkim like Siliguri, New Jalpaiguri, Gorumara forest, Lataguri forest, Murti (dooars area), Hollong, Bagdogra, Darjeeling, Malbazar, Odlabari, Tinchuley, Gangtok, Pelling, Mirik, Ravangla, Gorubathan, Kalimpong, Jorethang, Pedong, Rangpoo, Kersiong etc. Car is the only mode of transport, especially in case of sightseeing purpose.

From upper Chatakpur, short Trekking are arranged such as 6 km trekking to Mongpo, 12 km trekking to Tiger Hill, and 8 km trekking to Rambhi village. Nearby places are Rambhi village, Sonada, Darjeeling, Sukhiapokhri, Lepchajagat.

7. MAN ANIMAL CONFLICTS:

Human-Wildlife Conflict (HWC) occurs when wildlife requirements overlap with those of human populations, creating costs both to residents and wild animals. Man-animal conflict has been in existence for as long as humans have existed and wild animals and people have shared the same landscapes and resources. Direct contact with wildlife occurs in both urban and rural areas, but it is generally more common inside and around Protected Areas. With increasing population and pressure on forest areas, human-wildlife interaction and resultant conflict is also increasing. Sikkim and Darjeeling, being a part of a global biodiversity hotspot has diverse fauna which live in close proximity to human beings. Sikkim and Darjeeling have a high concentration of Protected Areas. Majority of conservation efforts are focused in these protected areas with a predominant paradigm of conservation in islands with little attention to corridor connectivity and integrity. Communities living in and around Protected Areas are not included as primary stakeholders. In many instances, these communities are highly marginalized and living in difficult circumstances.

In upper Chatakpur, the man animal conflict is mainly centered on the attacks of bears and wild boars in the agricultural fields. One of the main reasons for conflict between bears and humans in Senchal wildlife sanctuary is because of locals venturing into the sanctuary to collect fodder for their livestock. Pig fencing was observed which is specially made for protecting the crops from wild pigs. Goat is generally not managed as livestock, as there is risk of leopard attacks on the goats. Wild bears rarely attack the local inhabitants. However, no local report was found about the attack of leopard on human population.

CHAPTER-7

CONCLUSION

Chatakpur is a new addition to the ecotourism map of West Bengal. Now it is one of the favourite tourist destinations. Here growth of ecotourism has been phenomenal during the last decades. The local economy has been boosted with the influx of tourists. Majority of the villagers are directly engaged with this occupation. Villagers are transforming their traditional occupation (lumber jacking and plantation) towards ecotourism and allied professions. At present benefit of ecotourism directly or indirectly has reached in every family. Income and porches capacity both have increased. Previously, the villagers used to migrate seasonally to other parts of Darjeeling district and even in outsides. Now they generate jobs for others. A few numbers of Bengali workers from plains are working in the homestays. Villagers are also haring labours for construction, maintenances and plantation. Now women are more empowered as they are the main driving force of this hospitality business. They have become entrepreneurs and can take decisions within their families and communities. Ecotourism is still a community-based activity at Chatakpur, which involves local people and their culture. The villagers have made collective effort to promote sustainable eco-tourism in their communities for better livelihood. There are decisions to be made with the concern of its members regarding the tariff, maintenance of the main road, garbage disposable, general rules and regulations for the guests etc. Villagers attitudes towards the environment and wildlife have significantly improved. They have realized that purity of nature is the key factors to promote their village in ecotourism arena. So, all the

villagers are very conscious about the environment, health and hygiene. In this regard they take some collective measures; for example arrangement of garbage bins, segregation of solid and degradable waste, continuous monitoring on cleanses activities etc. Villagers have acknowledged that after the initiation of ecotourism the forest has become denser and beautiful. There are some issues which hamper the eco-tourism practice in Chatakpur.

- ❖ Majority of the villagers complained about the long road that connects the Chatakpur with Senchal Wildlife Sanctuary forest. This entire road is very rugged, has no asphalt cover, full of boulders and sharp bends. The villagers mentioned it as the main obstacle of tourism.
- ❖ Most of the villagers complained about poor coverage of mobile phone network. Only few pockets of the village are capable for optimum mobile signals. 4G network is not available. 3G service also fluctuates; only 2G connections are in working condition. So, the online booking, website, WiFi are very rare in Chatakpur. Networking is a big issue in Chatakpur.
- ❖ During winter season, it rains a lot here and on this year 2021-22, there has been mighty snowfall (5 times this season during Dec, Jan and Feb). During massive snowfall, public life becomes awful and very problematic for the tourists to wander about in Chatakpur. Mass income also decreases during that time as people avoid heavy snowfall time.
- ❖ Many of villagers are not satisfied with the power supply, they complained about low voltage and most of villagers complained about non-availability of amusement facilities
- ❖ Majority of the tourists are not concerned about the concept of ecotourism. In the name of ecotourism, they are practising mass tourism. Tourists often demand urban facilities from the ecotourism units. This attitude of the tourists is not admissible. Hence the villagers are indulging them only to promote their business.

Ecotourism is an effective tool for sustainable development in rural areas of Darjeeling Himalaya. It meets the needs of the tourists and hosts together, protecting the natural environment. It plays a significant role in community development and women empowerment at Chatakpur through sustainable livelihood. Since the last decade, the villagers have developing ecotourism facilities which transformed their traditional agrarian economy. Nowadays, Chatakpur is one of best ecotourism destination of offbeat places in Darjeeling. Except for monsoon all round the year tourists are visiting here. Due to the influx of tourist, stress may come on the environment and wildlife. It may accelerate deforestation, soil erosion, ecological imbalance, instability of slopes etc. So, few initiatives may be taken for the improvement the tourism facilities as well as the environment.

CHAPTER-8

SUGGESTIONS

Chatakpur have become the emerging tourist spot of West Bengal for pleasure trips, biological and geographical excursions and medical research works. In spite of getting so much attention in the recent time, the areas are not adequately developed. There is an urgent need for implementing sustainable management systems in the areas for the betterment of the socio-environmental structures. Some of the implementable management systems are as follows:

1. The ecotourism spots of Chatakpur are least advertised or given adequate publicity. Lack of systematic organization is another constraint of ecotourism in the study area. These issues should be addressed for the effective planning of sustainable ecotourism.
2. For reducing the water crisis in Chatakpur area, micro scale rainwater harvesting structures should be installed in the houses. Filtering systems should be provided to the local inhabitants so that they can use the rainwater for drinking purpose after purifying it.

3. Adequate health services should be provided to the local inhabitants of Chatakpur. Local Sub Health centers with doctors, nurses and basic medical facilities should be established in these areas.
4. Precaution should be taken for reducing the incidents of biopiracy, as these regions are very rich in medicinal plant resources. Government should take the initiatives for promoting and giving economic support to build up private nurseries where several varieties of important plant species can be preserved.
5. Local training centers should be established for teaching the local people about the importance of natural resources of Chatakpur. The initiatives of the local people can effectively protect the natural assets of those areas.
6. Portfolio of tourism products should be developed by utilizing its unique ecological assets. As these areas are the attraction for tourists, development of handicrafts made from the forest bioresources could be beneficial for the economic development of the local communities.
7. West Bengal is the cultural capital of India. It has constantly produced thoughts, ideas and events which have brought forth freshness and rejuvenation in the society both in India and the world. The specific components of Cultural Tourism which can be implemented in these areas include Fairs and Festivals Tourism, Arts and Crafts Tourism and Village Tourism.
8. Tourism carrying capacity is defined as the maximum number of people that may visit the tourist destination without causing destruction of the physical, economic and socio cultural environment and an unacceptable decrease in the quality of visitors' satisfaction. The carrying capacity assessment and sustainability of tourism in the circuits identified is an important component of the ecotourism study as it will form the basis for resource allocation and future development. The carrying capacity assessment should be done for Chatakpur, based on the number of tourists and their activities.
9. There is lack of gross knowledge among villagers on the advantages of afforestation in the Hill areas. Specific training and awareness efforts from the Forest Department have to be undertaken to educate people on the drawbacks of deforestation and the long term effects it has on climate. The plant varieties should be increased and more modern methods of conservation should be implemented associated with gene banks and extensive databases. Ecological restoration should be done by restoring the damaged, degraded and areas destructed by landslides. Focus should be given on areas critically important to floral and faunal habitat, water catchments and areas important with social and cultural values.
10. Soil conservation is a set of management strategies for prevention of soil being eroded from the Earth's surface. Due to many anthropogenic activities, the land of Darjeeling is prone to landslide every year. WWF-India already initiated the protection of areas which are ecologically significance to the conservation of flora and fauna of the region through a project called SERVE. Vegetative control measure of soil conservations should be adopted to protect further damage of land at and around the protected areas of Senchal Wildlife Sanctuary. Promotion and implementation of vermin composting techniques in this area can maintain the soil structure, agricultural productivity and waste reduction.
11. Rhododendron is one of the significant species of Darjeeling hills. It plays an important role in the ecosystem of theses region. But in recent years, the species is threatened due to deforestation and loss of habitat. Rhododendron conservation by educating people and by raising saplings could manage and restore these species in Senchal Wildlife Sanctuary.
12. Organic farming is one of the several approaches found to meet the objectives of sustainable agriculture. Organic farming is a production system that sustains the health of soils, ecosystem and the people. Organic farming works in harmony with the nature rather than against it. It relies on ecological processes adapted to local conditions, rather than the use of inputs with adverse effects in the long run. Encouraging and supporting the farmers towards Organic farming in Chatakpur area should be done by government initiatives.
13. The effects of climate change are more severe in the Himalayas compared to the other regions. The annual and seasonal temperature trends in the Kanchenjunga landscape indicate an increase at the rate 0.01 – 0.015 per C/year, with higher altitudes experiencing greater warming . Likewise, among the administrative units, Darjeeling was the most vulnerable compared to Sikkim, eastern Nepal and western Bhutan. Extensive studies on the effects of climate change on Chatakpur should be done, as this zone represents one of the richest biodiversity zones of India.

14. Like any other protected area in India, the forests of Chatakpur suffer from illegal cattle grazing, firewood collection, encroachment on the fringes and poaching. However, due to inaccessibility and difficult terrain, the biotic pressures are still not very acute. More intense survey works and management practices should be done for mitigating the anthropogenic threats.

15. Separate waste collection and disposal system should be operated by the government for safeguarding the sensitive ecosystems of the areas. Effective management design should be done for plastic wastes generated in these areas.

16. The vehicles used in the areas should be monitored regularly so that the vehicular pollution could be checked in the areas. Installation of the modern devices in the vehicles for pollution control should be done and routine checking system should be implemented.

17. To reduce the pressure on the forest and the drudgery to which women are subjected due to use of smoke producing "*chullas*", an alternative fuel policy should be evolved and implemented. Large scale installation of solar panels in these areas would be beneficial. Biogas is a cheap, pollution free alternative energy source. It can also reduce the annual emission of CO₂ from households. One biogas plant can save approximately 2 tons of fuel wood, 0.8 tons of agricultural wastes and 50 litres of kerosene per household per person. Implementation of biogas plant in Chatakpur area can reduce the pressure on fuel wood.

18. Proper land use pattern should be done, keeping the socio-economic and ecological parameters in view.



CHAPTER-9

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CHAPTER-10

PHOTO GALLERY



Figure: Primary school at Chatakpur



Figure: Radish flower



Figure: Step cultivation method of agriculture at Chatakpur



Figure: Kali Pokhri (pond) at Chatakpur inside Sanchal Wildlife Sanctuary



Figure: Rhododendron flower



Figure: Senchal wildlife forest Pine tree



Figure: Inside Senchal Wildlife Sanctuary



Figure: fresh Cabbage growing in the land of Chatakpur



Figure:

The road towards Sunrise Homestay and Sunrise view point pictured in morning.



Figure: Sunrise view from View point (At the topmost point of Chatakpur)