



Sustainable Eco-Tourism at Mudumalai Tiger Reserve

Carlton R.* and A. Daisy Caroline Mary

Department of Environmental Sciences, Bishop Heber College, Tiruchirappalli, India
carltonjune@gmail.com

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Abstract

The present study focuses on Tourism and management practices at Mudumalai Tiger Reserve (MTR) an important and popular wildlife attraction located at one of the hotspots of biodiversity, the Western Ghats. The study focuses on the current practices at the reserve and identifies the strength, weakness and opportunities in the area. It analyses in the aspects of information to visitors, wildlife experiences, facilities and waste management. Suggestions on sustainable tourism strategies which can result in the better development and management of the Reserve area have been made. The study emphasises the importance of collaboration between Reserve managers and corporate, researchers and public thereby maximise the benefits of research, corporate responsibility and public participation and contribute to conservation and boost the economy.

Keywords: Sustainable tourism, Mudumalai Tiger Reserve, Eco-tourism.

Introduction

As the wildlife tourism industry grows, so have concerns about threats to wildlife populations and their habitats; a wide range of negative impacts of wildlife tourism can and do occur. Alternatively, wildlife tourism can also contribute positively to conservation and economy. For conservation to be successful in the long term, it must be promoted both inside and outside protected areas, and must be integrated with the realities of modern economies and meeting people's needs. Well-managed nature-based tourism generates revenue for conservation of natural habitats and wildlife and the economy as a whole. This paper catalogues the tourism and management practices at Mudumalai Tiger Reserve (MTR) an important and popular wildlife attraction located at one of the hotspots of biodiversity, the Western Ghats. It exemplifies the current practices and attempts to sketch out a plan for a sustainable tourism. The study emphasises the importance of collaboration between Reserve managers and corporate, researchers and public thereby maximise the benefits of research, corporate responsibility and public participation and contribute to conservation and boost the economy.

Objectives of the Study: i. Analyze the current tourism practices in the Mudumalai Tiger Reserve ii. Identify the weaknesses, strength and opportunities in ecotourism practices iii. Specify Sustainable tourism strategies.

Importance of the Research: The Mudumalai National Park and Wildlife Sanctuary is as an important wildlife habitat due to its significant position as a Wildlife corridor between several other protected areas that are a part of the Nilgiri Biosphere Reserve. In April 2007, the Tamil Nadu state government declared Mudumalai to be a tiger reserve, under section in view

of the good tiger population and in an effort to conserve the country's dwindling tiger populations. Mudumalai Tiger Reserve is a popular and important eco-tourism destination in Tamil Nadu and considered a hotspot of wildlife tourism. The purpose of Mudumalai Tiger Reserve (MTR) like any other Protected Area is to protect and preserve the flora and fauna present in the area with the help of local people in the area as well as through promotion of eco-tourism. In spite of the important status of MTR, studies here are limited to floral composition and faunal aspects rather than management or habitat aspects¹⁻³.

The present study would enable to recognize and implement sustainable eco-tourism practices. Sustainable tourism positively effect by way of financial contributions, non-financial contributions, socio-economic incentives and education⁴. Thereby accomplish the purpose of the Reserve.

Methodology

A draft plan of management for a Reserve should focus on management possibilities in the visitor facilities, visitor activities including springs, river, walking tracks, falls, camps, waste management, forest management and visitor information and interpretation center. Biological survey including flora and fauna and harmony with the local communities is another feature of management⁵.

Accordingly the research focus these elements concerned with wildlife tourism at Mudumalai Tiger Reserve and have been divided into the following themes and analysed. i. Visitor information and interpretation center, ii. Tourism activities, iii. The Wildlife Experience, iv. Visitors Facilities v. Other Considerations.

Results and Discussion

Visitor information and interpretation center: Visitors are often left at lurch about what to do and where to go. Prior information about the schedule of activities that are taking place at the camp could be made public at venue, on line and through distribution of pamphlets on visitor's arrival. Information counter should be opened at the Reserve and sign boards and park map need to be displayed. Visitors expect interpretation to be a part of their wildlife experiences and good quality interpretation is a major contributor to satisfaction. Effective interpretation has positive association with attitudes towards wildlife conservation⁶ and reduces littering, animal feeding and harassment behaviour⁷. It is therefore imperative that information centers are informative and educative.

There are two interpretive centers; the one near the tourism office gives a lay out of the history of the Reserve and is eye opener of the floristic and faunal components. The interactive play that depicts the sound of animals should be maintained well enough for the visitors to utilize them. The other new interpretive centre located in the elephant camp site is equally informative about the various ecosystems and offer insight into certain group of animals.

These two centers though equipped with infrastructure they are devoid of inputs from the wildlife/reserve experts. A briefing about the reserve, its flora and fauna and highlights and a brief note on their behavior and how to observe wildlife in the reserve would enable the new visitors get aware as well as behave well mannered. This could be augmented with a slide show and distribution of pamphlet. This scientific and friendly welcome would cater to the awareness and cooperation by the visitors and take care of their disappointment even if they do not see much wildlife. These types of informative beginning are well practiced by private resorts in the neighbouring state Karnataka like Bandipur Tiger Reserve and Nagarhole Tiger Reserve. These can be taken as model for implementation. The expertise can be outsourced from the research scholars, wildlife experts, naturalists, interns or even volunteers after a period of training.

Since some of the implements are to be technically handled and specimens are highly valued monitoring becomes imperative. The centers need to be opened at regular times whether visitors are present or not; as visitors returning back without visiting the center do occur frequently after seeing it closed. The tribal communities can be trained for the purpose. This would also ensure the opening of the center at times necessary.

Tourism Activities: Vehicle Safari: The vehicle safari is the most common activity in the reserve. One issue is that often visitors get into argument with tour drivers for not maintaining silence during drives and while even watching wildlife. This is because of unawareness and not knowing how to observe and spot wildlife and basically not knowing the importance of the wildlife. Factors contributing to satisfaction with a wildlife experience included how much the visitor felt they learnt about

wildlife⁸. Hence it is important not only to avoid visitors-hosts conflict but to improve visitors' satisfaction. These could be realized by improvising and implementing certain changes by providing information wildlife watching tips on their arrival.

Secondly the visitors could not be accommodated at times not because of over crowd but fewer crowds than needed for a vehicle. Only large vehicles (16-32 seats) are available for safaris. Unless the vehicle becomes nearly full the safari will not be conducted for economic reasons. This is disgusting for the visitors and ends up in total dissatisfaction not only about the visit but nature and conservation itself which is supposed to be an objective of wildlife tourism. However the officials are generous enough to conduct the safari when the visitors pay the extra fair for some of the empty seats.

Safari Period: The extent of safari depending on the financial status, purpose and interest could be extended as 1-hour safari, 3-hours safari, full day safari or night safari.

Quota System: The interested special groups including research scholars, study groups, photographers, and wildlife interested persons may be allowed further interior into the core zone including tree top stay, watch tower stay, night stay and night watch as being executed in Periyar Tiger Reserve or Waynad Wildlife Sanctuary. This would also alleviate overcrowding.

Vehicle Type: The smaller type of vehicles like jeep with modified seats and open cover (like the ones in Bandipur Tiger Reserve and Kaziranga National Park) should be introduced to cater smaller groups and facilitate focussed study or photography.

Elephant ride: The elephant ride is one of the most sought after experience most of the visitors would want to have. But the availability of these rides is a matter of luck or wish of the organizers. The purchase of tickets was once a nightmare as one had to purchase them from Ooty Forest Office which is 35km from this place. Now at least they are available in Teppakadu itself. If a large group of visitors had tried for it, then they will be denied. (So as to give others also a chance, the organizers would say). It is not on a first come first served basis. The availability of the number of elephants too is varied from one to four every day depending on the availability of the concerned mahout. There are no fixed duty days as such for specific elephants. As a result if the mahout turns up with the elephant only rides are available and only after which tickets will be issued. Till then the visitor is left with uncertainty not even able to go for a vehicle safari /ride into the forest. If the mahout does not turn up and vehicle ride time is over, then the visitors who come go only with hard feelings and crying children who were lured to go for an elephant ride. That leads to dejection and distaste to nature and conservation.

There are difficulties with elephants doing this task daily. This could be solved by allotting duty days for different elephants on

different days. Likewise venture on the elephant should have different mode and time length.

Being able to touch/handle wildlife is one of the features for visitors' expectation⁸. Accordingly visitors may just be allowed to sit on top of it and take a photo on payment.

Period of ride: A short ride for less than fifteen minutes for lesser amount helping the underprivileged; and the other slot could be for more than 15 minutes even venturing into the forest for observing wildlife. Venturing into the forest for about 45 minutes is being done in Anamalai Tiger Reserve.

The elephant safari, the elephant camp and vehicle safari are done almost at the same time. The timing of elephant safari should be extended or changed so that it does not conflict with the other programs in the reserve like vehicle safari and elephant feeding.

Prior booking facilities and information need to be displayed and advertised at vantage points. Online booking facilities for the safaris should be introduced so as to plan the day well in advance as most of the tourists come from far off places and includes foreign tourists as well.

Elephant Camp: The elephant camp at Theppakkadu has many elephants and offers the visitors an opportunity to see the feeding of elephants. In most of the managed parks one of the important activities is feeding of animals. This can also be introduced here by keeping the necessary food stock as banana, sugarcane, maize etc. and allow visitors feed the elephants on payment. Even feeding of the prepared elephants' food can also be done as once done in Anamalai Tiger reserve. The religious connection of the elephants can be utilized for the purpose as elephants are revered.

Many visitors are not aware that they have purchase a ticket for entry into the camp. Many of them had to return back to the main ticket counter to procure one. Had they displayed on the boards at vantage points and informed at information centre, this inconvenience could be avoided. Information on payment activities would enable the visitors plan their activities for the day based on their budget and time. Otherwise decentralizing the ticket issuing spots – issuing at the entrance of the camp would also solve the issue.

Further bathing the elephants on payment could be thought of. This in a way instills love and conservation attitude in them. These types of activities generate revenue.

The elephant camp in Konni, on the banks of the Achencoil River in Kerala houses a paper-making unit that produces file boards using elephant dung, and the products are on sale at the department store at the camp. Likewise another sustainable practice a biogas plant educates and satisfies the demanding visitors⁹. Possibilities of such programs could be explored

further and executed as they aid in running the camp and even the Reserve in a sustainable way; further it helps in uplift of the tribal community.

Other suggested sustainable activities: One of the objectives of tourism is to enjoy and experience the wilderness / nature and relax. This aspect is never fulfilled as there are only pre-programmed activities and to enjoy on their own is not possible. Even basic enjoyments like to lie down on the grass, splash in streams are also not allowed. Creation of a protective recreational area to experience and enjoy nature and spend leisurely and relax and rejuvenate will meet the objective. The elephant camp is closed most of the time except during the feeding time. This area can be utilized with necessary modifications for recreation purposes.

Another strange restriction is prohibition of photography. While most of the visitors come only to photograph the wilderness and wildlife such a prohibition is highly offensive. Many visitors have even paid fines for taking photos even from the vehicle. Authorities should take into consideration of permitting the visitors to exercise their right as there is no legal prohibition of such activity. I once experienced the bitter moment of being threatened by an authority that he would confiscate my camera. Instead of taking good memories visitors take back bitter memories; this doesn't stop with this; it ends up in aversion to wildlife, conservation, the reserve and the country itself. Alternatively visitors should be encouraged to observe and photograph wildlife from the vehicle without hindering the wildlife and the traffic; and to mention this is mostly followed by the well behaved visitors. Other complementing activities like white water rafting, boating, trekking, canopy walkways and hanging bridges are other options the Reserve managers should plan of. At times especially during holidays and peak season the crowd is beyond manageable. By further widening the opportunities and giving more choices the crowds can efficiently be managed.

The Wildlife Experience: Information: Opportunities to see wildlife are very important to international and domestic tourists and wildlife is amongst many factors in travel decisions. Visitor satisfaction in wildlife tourism is influenced by various features including characteristics of the species such as rarity, size, symbolic characteristics, endangered status, variety of species that are seen or encountered and the comfort, beauty and scenery of the setting. Added education and interpretation, and the level and quality of services and facilities also influence visitor satisfaction. To achieve maximal visitor satisfaction and better behaviour preparation of visitors at arrival is recommended. They need to be explained of accurate expectations, describe the likely conditions, and explain any rules and guidelines for minimal impact behaviours⁶.

Habitat management: Wildlife viewing opportunities should be enhanced by various means. The main challenge in MTR with regard to wildlife tourism is that the viewing is hindered by

indiscriminate growth of the invasive species *Lantana camara*, *Chromolaena odorata* which covers about 75% of undergrowth layer and has already invaded the upper canopy too up to 20m. This lower stratum should have been otherwise covered by grass not more than a meter usually. This could be inferred that the viewing opportunities decrease by 75%. Until a research comes out with a solution on scientific eradication of the species, manual removal is the only option. Manually removing them with only few staff in the forest department is a herculean task. This can be accomplished with voluntary participation from various sectors like public and the student community. Manpower can be tapped from various clubs like nature club, green corps, eco club, NSS, NCC (3 wings), ExNora etc. Internship programs, In-plant training programs, block placements etc. can be utilized for the purpose. Funds can be trapped from corporate, industries, industrialists and forest department for the purpose. This is high time the corporate realize the social responsibility and fulfil their role in conservation by framing Memorandum of Understanding with educational institutions and forest departments.

The other issue in viewing wildlife is that the animals go further inside in search of water, food or other resources. The enthusiasm of wildlife tourists for their target species is a greater challenge. This is efficiently handled by establishing salt licks and water holes. However more number of such facilities and good maintenance and managing the habitat for specific animals will maximise the viewing opportunities.

Networking: Better networking among the various safari vehicles would enhance the opportunities for viewing. This is possible with better maintenance of the vehicles as well as the roads. This type of management is practiced by private tour operators in Nagarhole Tiger Reserve and Bandipur Tiger Reserve.

Skilled Guides: Desired wildlife encounters with knowledgeable guides or staff present resulted in higher visitor satisfaction⁸. This makes important that vehicle safari should be lead by experts who are able to communicate well in local as well as English to cater to local as well as global tourists. Further they should be able to explain (through collar mike) the floristic components and faunal components while driving through the forest; The animal behaviour, problems and conservation strategies can also be shared with the visitors because visitors expect interpretation to be a part of their wildlife experiences and good quality interpretation is a major contributor to satisfaction. Effective interpretation with regard to wildlife viewing results in more positive attitudes towards wildlife conservation⁶. Such good guidance would avoid conflict between visitors and forest officials even if they do not significantly see any wildlife of their choice. Often the desire for greater proximity is driven by the thirst for a close up photograph and is enabled by professional Guides. In this context sustainable tourism needs better training and salaries for guides¹⁰. Using the tribes for such purposes should be avoided

and they may be given other opportunities involving simpler jobs.

Visitors' Facilities: Lodging and Restaurants: There are few guest houses and dormitories at Teppakaadu maintained by the Forest department. However there is only one restaurant (which at present does not cater) and a small canteen which does not meet the needs of the visitors satisfactorily. This adds to the visitor's dissatisfaction. The tribes and their traditional cooking knowledge can be utilized to improve the condition. Establishing and maintaining better accommodations and canteens is more than essential.

Waste Management: The waste generated from tourism must be managed by segregating as biodegradable and non-biodegradable wastes. But the wastes collected in the sanctuary are not segregated and it is just dumped outside the sanctuary. Likewise usage of plastics should be banned completely with regular and strict monitoring.

Sanitation: Improper maintenance of toilets adds to the woe of the visitors. Authorities should ensure running water, proper lighting and proper and regular cleaning.

Special Needs: There is no special facility like ramps, wheel chairs or rest rooms for physically challenged persons. Special corridors to all facilities should be created to facilitate them.

Eco shop: Taking souvenirs back home from the places they visited is a common practice of tourists. Though there is an eco-shop, availability of varieties and quality of souvenirs, at times the shop itself is a matter of concern. Introducing good quality eco tour products and forest products and make them available at all times is also an economic incentive. Books on the Reserve, flora and fauna should be made available.

Alleviating and managing crowds: Crowding can significantly affect wildlife and the habitat. This can be alleviated by increasing the opportunities thereby dispersing the crowd, rationing permits, hiking fee and setting quotas¹¹.

Special considerations: i. Students should be given concession on fee to encourage and attract more visitors and thereby create awareness and interest in them. ii. Students' potential can be tapped for the sustenance of the forest in many ways. Internship, service learning and research by students in the reserve should be introduced. These would provide an opportunity for them to learn and serve in the forest as well as can contribute to the scientific data to the reserve. iii. They may also be involved in various activities of the management including wildlife census, forest clearance, controlled burning, de-weeding and patrolling. These would sensitize and instigate interest in students and benefit the students and also alleviate the forest conservation efforts. iv. Biological surveys are done usually with the involvement of volunteers of various sectors but mostly from local level or known persons. Such surveys can be publicized

through various media especially websites well in advance through proper planning to involve experts and wide range of participants.

Major Findings a Suggestion: Visitor information and interpretation centers: i. Online booking facilities need to be initiated. ii. Visitors Information counter should be opened at the Reserve and sign boards and park map need to be displayed. iii. The interpretation centers in the Reserve need to have support staffs to brief the visitors who visit the center and it should be kept open at all times.

Tourism Activities and Wildlife Experience: i. Tourist attractions like elephant ride and vehicle safari can be customized to different vehicle types and timings according to the interest and need of the visitors like 1-hour safari, 3-hours safari, full day safari or night safari. ii. The safari vehicles should have skilled guides who can interpret to the tourist about the animals they see during the visit. iii. There should be coordination between safari drivers so that if any one of the vehicle spots any important animal it can be informed to other vehicles. iv. The invasive species like *Lantana camara*, *Chromolaena odorata* should be removed regularly on mass scale with the help of APW watchers, volunteers, Eco clubs etc. so that maximum wildlife sighting can occur. v. The elephant camp needs to be kept open all through the day with increased opportunities inside. vi. A recreation area should be established to enable the visitors relax, experience and enjoy the wilderness. vii. Some complementing activities like feeding/ bathing the elephants by visitors, white water rafting, boating, trekking, canopy walkways and hanging bridges should be initiated.

Visitors' facilities: i. More restaurants and refreshment centers need to be established so that visitors need not go out of the sanctuary. ii. Waste management, sanitation facilities, the needs of people with special needs should be improved with better infrastructure and maintenance. iii. Eco shops should be revamped with T-shirts & other souvenirs with the name of the Tiger Reserve, flora or fauna. Books on the Reserve, flora and fauna should be made available. iv. Fee concession for students should be introduced. v. Internship programs, voluntary services, biological surveys should be introduced involving all stakeholders including the Tiger Reserve managers, researchers, corporate, students and the public.

Conclusion

There are major negative impacts of wildlife tourism as - causing behavioural changes, habitat alteration and causing injury or killing¹². Illegal hunting, logging, flood, forest fires, pollution, plastics and rubbish usages are some of the threats in Wilderness area¹³. However researches assert that controlled tourism would benefit economically as well as preserve natural resources and it can create awareness among local people and the tourists. Following participatory approach and integration of various stakeholders into Reserve activities would enhance the

benefits¹⁴. Collaborative and cooperative conservation efforts of the wildlife and habitat by various stakeholders – the Tiger Reserve managers, researchers, corporate, students and the public is the essential strategic approach. Further without giving an opportunity to visit, feel and experience the wilderness conservation cannot happen. As conservation needs the cooperation from every sector a well-planned tourism would steer to better ecological, economical and social Sustainability.

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