



Possibilities to establish ecotourism for the conservation of biodiversity in Viratra Mata Oran, Barmer

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Abstract

Ecotourism comes with a guaranteed promise to promote visits to natural areas, to make a good contribution towards biodiversity conservation, and to benefit local communities. The word ecotourism is a modern form of tourism in which through education, undertaking, learning about the natural resources, we can protect and preserve nature. This paper summarizes a case study on Viratra Mata Oran, Barmer whether there is possibility to establish ecotourism and to what will be success rate of the same. The study uses a random sampling method to gather the data for a careful group interview and observations to evaluate the possibilities of ecotourism in Viratra mata Oran, Barmer. Conclusions have been drawn by properly analysing the data and expressing it into soft sheet format. Along with that images are also provided to support the conclusion drawn.

Keywords: ecotourism, biodiversity, conservation, communities

Introduction

Ecotourism is an economically, socially and environmentally sustainable activity that reliably and genuinely connects visitors with natural and cultural landscapes resulting in valuable exchanges among these landscapes, the community, and the visitor. Tourism that involves traveling to relatively unobstructed natural areas with the specified object of studying and enjoying the scenery and its flora and fauna, as well as any existing cultural traits found in these areas may be called Ecotourism. (Ahmed, 2013) ^[1]

Ecotourism is an enlightening natural travel experience that contributes to the conservation of ecosystem while representing the integrity of the host community (Seace *et al.*, 1992) ^[2]

Ruschmann (1992) stated that ecotourism involves education and explanation of natural environment and to manage it in an ecologically sustainable way ^[3].

Ecotourism can boost any areas efficiency. It may harm the biodiversity if it is not properly controlled. The local people of Thar region developed some methods through which the biodiversity can be conserved. These methods include the making of Sacred (Oran) and Pasteur land (Gaucher). (Parihar, 2016) ^[4]. Without local community participation, as major stakeholder, it is impossible to sustain tourism. (Ahn *et al.* 2002) ^[5]

Most tourism in natural areas today is not ecotourism and is not, therefore, supportable. Ecotourism is well-known by its emphasis on conservation, education, traveler concern and active community contribution. Specifically, ecotourism possesses the following characteristics:

- Reliable, low-impact visitor behaviour
- Understanding towards, and appreciation of, local cultures and biodiversity
- Provision for local conservation efforts
- Sustainable profits to local communities
- Local participation in policymaking

- Educational modules for both the traveller and local communities

Viratra Mata Oran

The Viratra Mata Oran, Dhok village has 1859 hectares area and located between altitude 234m, latitude 25° 27' to 48.2N and longitude 71° 01' to 34.4E. It is situated near the India and Pakistan border. It is also considered as the second largest Oran in Rajasthan after the Bhadariya Rai Oran in Jaisalmer district of Rajasthan. The area is covered by sand dunes and hills. The mountains close by are made up of igneous rocks in nature.

An Oran is a land devoted to god and no authority is responsible for its maintenance. According to the Hindu mythology Oran is itself protected by god. There is a prohibition to cut trees and kill animals in Oran. (Parihar, 1997) ^[6]

The region's main tourist attraction is its Goddess temple situated in the inner region of the oran. Most of the devotee come here to worship goddess Viratra. Goddess Viratra is also known as Vankal Mata. Devotees from all over the world come here in the month of October and November. Local people worship goddess for their village prosperity and growth. They truly believe in the gift given by goddess to conserve biodiversity so they themselves protect the Oran from being vandalized.

The sand dunes as well as hills have enormous floral and faunal diversity. This region is actually making a transition zone between the sand dunes and hills. Both mountain and sand dune biodiversity flourish here.

The climate of this region is considered to be very hot and arid with maximum temperatures ranges in between 45°C to 52°C in May/June and in winter it drops minimum around 0°C in December/January. This region receives 90% of its total rainfall (average 277 mm) during the monsoon in July-September. ("District profile Barmer") ^[7]

Research Methodology

The following study is highly experimental in nature, so it's based on primary data collection method with personal travel experience, along with the data is also been collected from previous published sources like Newspapers, journals, magazines. Data has been provided by methods like:

- 1. Field Survey:** Random field survey and visual observation at Viratra Mata Oran (sacred land) Barmer.
- 2. Interview:** The field survey was conducted by making a questionnaire to obtain the information from local communities and authorities about the flora and fauna there.
- 3. Literature Survey:** Offline and online literature of books and journals have been consulted.
- 4. Animal Sampling:** Random sampling method was used for terrestrial fauna. Avian fauna was also watched by ocular methods using binoculars and their dropping feather and nests. Vehicle-based transect method and roadside counts are also have been used.
- 5. Photography:** Photographs of their activities in the study area has also been taken. Identification of Faunal, as well as floral diversity, was also observed.
- 6. Questionnaires Format:** Simple questionnaire format was developed for local communities to describe the biodiversity there.

Observations and Result

During random surveys and interview it was noted that the

biodiversity of this region is so rich but during recent years there is a degradation of biodiversity has been seen, some of the possible reasons are (i) the authorities are not taking care of this region. (ii) Local peoples are not aware about the degradation of natural resources (iii) Tourists do not know the importance of biodiversity conservation. Day by day the vegetation and the faunal diversity is going on a downfall. There is a scarcity of water too in this region. By implementing ecotourism in this region, it will generate revenues through which the local communities will be able to conserve the floral, faunal and the water bodies of this region. Different sites were visited during the survey and found that the Oran is so big in its size and ecotourism can be easily establish with the help of local communities. There is a presence of both sand dunes and mountains. Vegetation is present on sand dunes and different types of faunal diversity also live here. Mountains are of igneous type and are a good habitat for vultures. Avian diversity is so rich. There is a problem of water availability but it can be solved through making reservoir.

The role of local communities to conserve this area is so fruitful because they devote to the local goddess Viratra mata and they have faith in the proceedings given by the goddess to protect the flora and fauna of this region.

Albino *Gazelle* is also sighted in this region which is a good indicator of diverse biodiversity here (Kumar. K *et al.* 2016)^[8]. Different species of vultures can also be seen here.

Table 1: Mammalian faunal sightings of the study area using random sampling and ocular methods

S. No	Zoological name	English name	Local name	Availability
1.	<i>Gazella gazelle</i>	Chinkara	Hirania	Common
2.	<i>Bandicoota bengalensis</i>	Mole	Undra	Common
3.	<i>Vulpus vulpus pusilla</i>	Desert fox	Dholi pooch loki	Common
4.	<i>Vulpus bengalensis</i>	Indian fox	Kali pooch loki	Rare
5.	<i>Herpestes edwardsii</i>	Mongoose	Nevela	Rare
6.	<i>Pteropus giganteus</i>	Fruit bat	Chamcher	Old open well
7.	<i>Felis silvestris lybica</i>	Desert cat	Rohimana	Rare
8.	<i>Hemiechinus calloris</i>	Indian long-eared hedgehog	Heli	Common
9.	<i>Hystrix indica</i>	Indian crested porcupine	Seha	Rare
10.	<i>Funambulus pennantii</i>	Five-striped	Tilori	Common
11.	<i>Meriones hurrianae</i>	Indian desert gerbil	Kol	Common
12.	<i>Tatera indica</i>	Indian gerbil	Chuchunder	Common
13.	<i>Boselaphus tragocamelus</i>	Nilgai	Rojara	Good
14.	<i>Lepus nigricollis</i>	Indian hare	Sashia	Common

Table 2: Avian faunal sightings in the field area

S. No	Zoological name	English name	Local name	Availability
1	<i>Francolinus pondicerianus</i>	Grey-francolin	Teetar	Common
2	<i>Pavo cristatus</i>	Peacock	Mor	Common
3	<i>Gyps bengalensis</i>	White rumped vulture	Gidh	Common
4	<i>Gyps indicus</i>	Indian vulture	Gidh	Common
5	<i>Pterocles exustus</i>	Chestnut-bellied sand grouse	Patebari	Rare
6	<i>Streptopelia deaecto</i>	Indian ring dove	Dholi holi (Kamedi)	Common
7	<i>Streptopelia tranquebarica</i>	Red turtle dove	Rati Holi (Kamedi)	Rare
8	<i>Lanius excubitor</i>	Grey shrike	Shakun chidi	Common
9	<i>Pycnonotus leucotis</i>	White-eared bulbul	Pinsa	Common
10	<i>Pycnonotus cafer</i>	Red vented bulbul	Lal pinsa	Common
11	<i>Turdoides caudatus</i>	Common babbler	Laly	Common

Table 3: Floral sightings in the field area

S. No	Botanical Name	Local Name	Availability
1	<i>Prosopis cineraria</i>	Khejri	Common
2	<i>Ziziphus nummularia</i>	Ber	Common
3	<i>Acacia nilotica</i>	Babool	Common
4	<i>Salvadora persica</i>	Jhaal	Common
5	<i>Ticomella undulata</i>	Rohida	Common
6	<i>Lasiurus scindicos</i>	Sewan ghash	Common
7	<i>Capparis decidua</i>	Ker	Common
8	<i>Acacia Senegal</i>	Kumat	Common
9	<i>Commiphora wightii</i>	Guggal	Common
10	<i>Euphorbia caducifolia</i>	Thor	Common



Fig 1: Entry Gate to Viratra Mata Temple



Fig 2: Water body of Oran



Fig 3: Hills at Oran

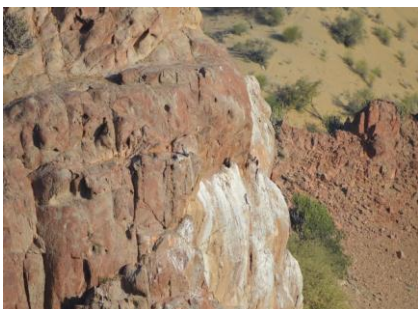


Fig 4: Vultures roosting site



Fig 5: Desert Fox



Fig 6: A view of sand dunes and hills together

Conclusion

After visiting the whole area following points were concluded:

1. Authority participation in the conservation point of view is minimal.
2. There is a scarcity of water in the region. Water is available only in the rainy season.
3. Local people participation is not up to mark. Proper education and guidance can lead to local people effectiveness about biodiversity conservation.
4. The area of Oran is not properly marked. There is a doubt about the area of Oran and the Forest department. The region should be properly marked so that there will be no confusion and tourist can easily explore the Oran land.

Along with the implementation of the approved measures and ways for the protection of natural resources, we need more thorough presentation in the public, so that systematic, educational and tourist standards that characterize them are more accessible to visitors with different needs and benefits.

Suggestions

It is necessary to witness the development plans of the region relating to the safety of natural resources, and in accordance with the need of traveller. We should enable the creation and development of a number of resorts, recreation centres, visitors centres, eco camping, hiking and cycling trails, encourage rural tourism progress, but also pay devotion to the active participation of local communities in care procedures and management of existing natural resources. The educational, scientific and tourist values of protected areas must be more accessible to visitors, but in a proper way, because you should always put the importance on biodiversity conservation.

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Declaration

The photographs used in the paper are the original work of the authors and are not copied from any other sources.

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