

A Survey on the Level of Awareness on the Major Wildlife Conservation Projects and the Potential Benefits of Ecotourism in Wokha District, Nagaland

Tsonchumi Odyuo¹, Nyanbeni Patton², Lanusunep Pongen³

¹Researcher, Northeast Development Agency (NEDA), India

²Master of Science in Forestry, Mizoram University, India

³Master of Science in Environmental Science, Bangalore University, India

Abstract: Nagaland's major sites for ecotourism are the exquisite landscapes comprising valleys, waterfalls, virgin forests, mountains, rich biodiversity of flora and fauna, and a variety of cultures and customs which highlights the State's potential for ecotourism. The people of Wokha district in Nagaland mostly make their livelihood through farming, hunting, and gathering and selling of NTFP collected in and around the forest. A survey was conducted to understand the awareness of people in the district on the conservation projects (focused on fauna), and the opportunities for ecotourism in the district. The survey focussed on two migratory birds - Falcon *amurensis* and *Manouria emys*. The survey concluded that 62% of respondents came to know about Falcon *amurensis* through media which shows the importance of digital media in creating awareness and education. A few questions in the survey were focussed on understanding the awareness of people on the ongoing project for the conservation of *Manouria emys* which is also known as Asian Giant Tortoise. According to the survey, 29.8% of respondents were aware about the ongoing project whereas 50.9% of respondents did not know or hear about the conservation program which reflects possible risk of conservation efforts. Hunting is still a significant cause for the decline and endangerment of fauna in Wokha district where the state departments need to focus on educating locals on the importance and significance of wildlife conservation, and the opportunities that arise from the following pursuits. The survey also found that 84.2% of respondents believed that ecotourism in the district can be a driving force for economic growth and development in the district. Currently, tourism or ecotourism is meagre due to the lack of adequate infrastructure, facilities, and government processes that results in untapped potential for ecotourism in Wokha district, Nagaland.

Keywords: Ecotourism, wildlife, conservation, community, awareness

1. Introduction

Ecotourism can be understood as acknowledging the cultural heritage, scenic views, its bio-diversities and discovering unattended landscape (Ceballos-Lascurain 1991). Nagaland, a state in the North East region of India with land of hills and valleys suffused in natural beauty and riches of biodiversity. Forest covers 85.4% of the total geographical area of the state (Bhupathy et al. 2012). Major sites for ecotourism in the state are the exquisite picturesque landscapes, valleys, waterfalls, virgin forest, bio diversities of flora and fauna, mountains, cultures and customs (Aref and Gill 2009). The state comprises 17 tribes owning their own distinctive heritage and traditional attributes allowing enormous opportunities and immense possibility for ecotourism and its sustainability. Whilst linking the occupation of these rural people to ecotourism, the state could strive for one of the fastest growing industries. In the form of marketing, ecotourism can contribute to the conservation of environment and nature meanwhile, the local communities are benefitted too, and the environment can act as the product (Stark, 2002). Ecotourism can be a

factor to protect the natural habitats and people can gain knowledge through education (Ceballos-Lascurain's, 1987).

Wokha (Land of Plenty) is home to the Lotha tribe of Nagaland with a total geographical area of 1628 Sq. Km (GoN2001), accounting for 9.82% of the geographical area of the State. Wokha is one of the districts of the state located in the mid-western part of Nagaland and situated at a latitude of 26° '8' North and a longitude of 94° '18' East (figure 1). The income of the people of Wokha district is mainly through farming, hunting, gathering and selling Non-Timber Forest Products (NTFP). Eco tourism is gaining popularity in areas of Mount Tiyi, Doyang river etc. involving wildlife such as the *Falcon amurensis* (Amur Falcon) and *Manouria emys* (Giant Asian Tortoise).

The objectives of this study are as follows:

- 1) To understand the awareness of locals on conservation of fauna (*Manouria emys*, *Falcon amurensis*) in Wokha district, Nagaland
- 2) To develop awareness on the importance of wildlife conservation and the potential of ecotourism in Wokha district, Nagaland.

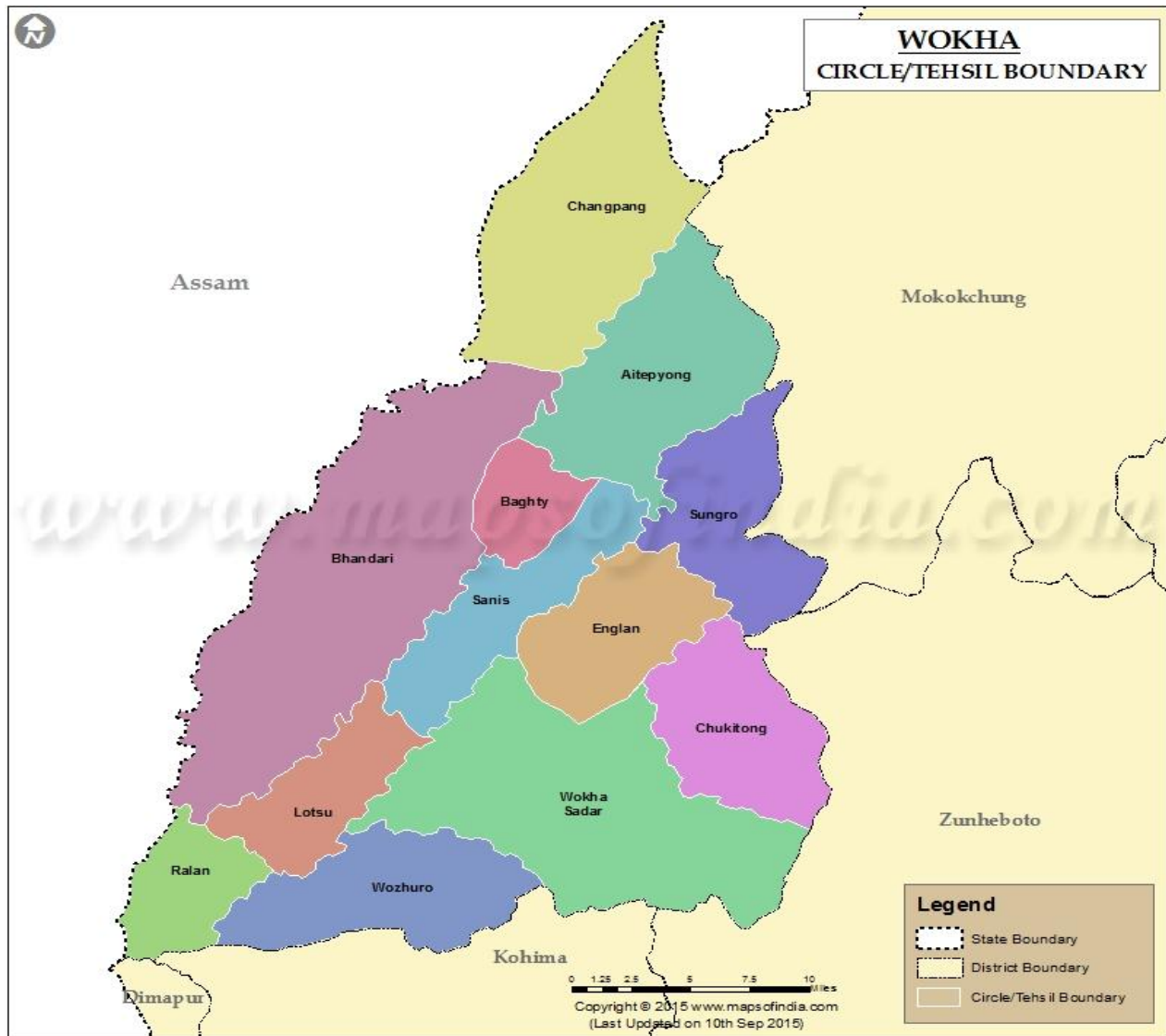


Figure 1: Map of study area

2. Materials and methods

A questionnaire was prepared taking into account the demographics, conservation programmes, awareness, prospect and understanding of eco-tourism opportunities, and willingness of the public to participate in conservation efforts. A set of 14 questions were finalised, taking the most relevant and important questions that would reflect the attitude and knowledge of the respondents on the subject of interest.

Data was collected using Google Forms followed by a phone call to gain a more holistic understanding of the person. The survey was conducted between 1st July 2022 and 8th August 2022 where a total of 57 locals from Wokha district participated in the survey. The questions were also framed, keeping in mind the sentiments of the respondents given the history of dependence on natural resources such as plants and animals for their sustenance.

The design of the survey consisted of questions assessing knowledge pertaining to the local communities on:

1) Role of ecotourism in the district, and

2) Understanding and awareness of wildlife projects and its importance in their respective regions.

Respondents were asked on how they could help in conservation and protection of wildlife in the region, and also on the prospect of ecotourism in bringing economic growth while maintaining conservation efforts in the area. They were also asked whether the older generation had knowledge and understanding of the importance of wildlife - flora and fauna. Respondents were inquired about their knowledge on the ongoing wildlife projects in their area along with their involvement in protecting wildlife. They were also questioned whether the government is rendering any effort in conservation and protection of wildlife in the region.

3. Results and Discussions

Study sample showed a higher male (54%) than female (45%) sex ratio in the survey (figure 1). The demographics of residents yielded a wide range in age between 16 to 50 years.

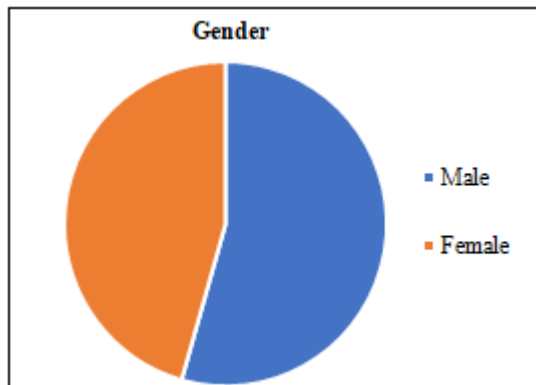


Figure 1: Demographic sex ratio participated in the survey

Differences of opinions were observed between the older generation who firmly believe in hunting tradition and the new generation who are gaining knowledge about evolving policies regarding the importance of biodiversity; 33% respondents believed that the older generation does not understand the importance of wildlife whereas 30% believed that they do understand the importance of wildlife in the ecosystem, and 37% are not sure of their answers.

Wildlife based ecotourism within the district are as follows:

1) Amur Falcon (*Falcon amurensis*)

The migratory bird from Siberia makes its stopover in mind-boggling numbers from Northeast Asia due to the presence of Doyang reservoir near Pangti village in Wokha district. Nagaland has been declared as the Amur Falcon capital of the world. In this survey people were questioned on how they came to know about the Amur Falcon; 62% responded that became aware about the migratory bird through media such as television, whatsapp, and other forms of social media, whereas 19% learnt about the program through self-observation, and the rest 19% came to know through research journals. The respondents were asked if they knew why there was increasing awareness and conservation programs for Amur Falcon in Pangti village. Majority attributed the conservation efforts and interest in wildlife to increasing public concerns about illegal hunting, which poses serious threat to the migratory bird species. The increase of tourists in the region to witness the migratory bird was also recognised, thereby strengthening conservation measures which also leads to economic benefits for the locals through ecotourism (fig.2).

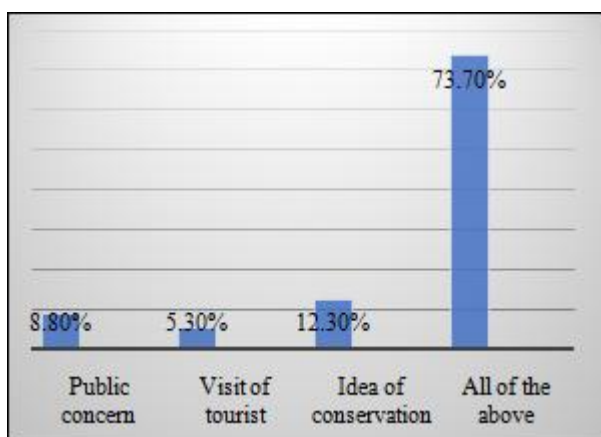


Figure 2: Reasons for the protection and introduction of awareness program of Amur Falcon

2) Giant Asian Tortoise (*Manouria emys*)

Manouria emysis considered to be the largest terrestrial tortoise species found in mainland Asia. This endangered species is found in the forest of Wokha district. Traditional hunting for the consumption of turtles by the local community seems to be a major threat for this critically endangered species (Bhupathy et al. 2013). *Manouria emys* is being held captive in Nagaland Zoological Park, which aims to breed and increase the hatching success through artificial incubation facilities. The hatchings are to be released in their natural habitat with transmitters tagged on them to monitor their movement in the Community Conserved Areas. Respondents were asked if they knew about the Asian Giant Tortoise project that is currently active in the district and surprisingly only 29.8% knew about the on-going project whereas 50.9% did not know about the on-going project, 1.8% were not sure of it and 17.5% heard a little bit about the on-going project. According to the survey, 43.9% believed that the critically endangered species can be restored back through the project.

“Hunting for consumption”, is the major drawback for the decline in wildlife but in the course of time the locals believed that ecotourism in the state can bring changes and development, as 84.2% of the respondents believed ecotourism can be a driving factor for the economic growth in the district. The respondents were also asked if wildlife could be a driving factor for sustainable conservation through ecotourism in the Wokha district; 77.2% believed it can be a driving factor for sustainable conservation through ecotourism whereas 1.8% do not believed that wildlife could be a driving factor for ecotourism in the district and the rest were unsure of their responses. Respondents were also asked about any wildlife projects in the district that they know about, however, the responses were null.

As the state is undergoing tremendous development, it is time to make advances in sustainable tourism. Upon asking the rural community in the district about the employment and development in recent years through ecotourism in their district, 36.8% respondent agrees to the changes in increase of employment and development in the region whereas 17.5% still thinks there is no development in the region and the rest are unsure of it.

The Government of Nagaland is actively working in the field of wildlife conservation to safeguard the flora and fauna in the state. The survey was made to see the citizen’s views about the state government participation to conserve wildlife in the district and 42% said that the state government is endorsing the wildlife in the district (fig. 3). Regarding the state forest department’s role in protecting the wildlife within the district; 38.6% responded that the department are playing a vital role in protecting and conserving the wildlife of Wokha district whereas 36.8% are not sure whether the department are providing any support to wildlife protection district. 10.5% mentioned that the department does not play any role in protecting the wild flora and fauna and 14% are still confused whether the department has any role in the protection and conservation of wildlife.

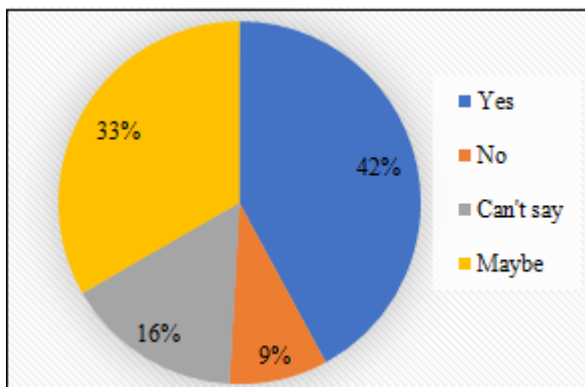


Figure 3: Responses showing the state government participation to conserve the wildlife

At the end of the questionnaire, the locals were asked to give opinions or suggestions about ways to conserve and protect the wildlife of Wokha district. Their responses are summarized below:

- Increasing number of awareness campaigns and programs should be organised for the rural community, to help them understand the importance and values of wild flora and fauna in their region
- The younger generation should be educated on the importance of wildlife and biodiversity conservation
- Communities should reduce deforestation and avoid Jhum cultivation in the boundaries of forest areas which can be harmful to the living creatures in the forest
- New and more projects to conserve the divergent forest and its ecosystem are needed in the region
- Involvement of Local community in wildlife conservation and protection project is essential so that they stop hunting and exploiting the wildlife ecosystem
- More number of ecotourism projects should be initiated in the district
- Ban on using weapons and avoid harmful chemicals in or around the forest
- Protecting the natural habitat and wildlife sanctuaries with implementation of proper guidelines and strict enforcement of legislation
- Declaring the bio-diversity rich areas as reserved area or community protected area
- Importance should be given on saving the endangered species and wildlife of the State

4. Conclusion

Wokha being surrounded by dense forest and wildlife biodiversity, ecotourism has an enormous prospect for socio-economic development so a proper tourism management is essential in the district. Mass awareness programs are also required as most of the locals are not aware of the projects being held in their own area or locality.

The concept of ecotourism has taken a drastic change in the mindset of the locals with the coming of the Amur Falcon in the district as they realised that hunting of wild animals and birds are not the only way of livelihood but protecting and conserving can lead to a way to enhance the village economy. Today, in Wokha district the mascot of tourism comes from Amur Falcon, as many tourists witness the migratory bird starting from the month of October. During

this time the unemployed local hunters become employed as tour guides; a watch tower and a rest house is built to observe and acknowledge the beauty of the migratory bird; designated camping spots are provided to observe the birds and many small resorts and homestays have opened up in the surrounding villages which leads to economic and sustainable development. With the effort and a positive support from the village communities there is a zero-mortality rate of the migratory birds. This has led to increasing number of tourists, wildlife enthusiasts and even researchers visiting the area which helps the people generate sustainable livelihood. However, the area still lacks of developmental infrastructure like poor road conditions, inadequate transport infrastructures, electrification challenges, no proper internet services etc. which has resulted in an economy with huge untapped potential. Locals in the village also fear that the new developmental and conservation projects in the district would hamper their freedom to hunt and gather produce from the forest grounds which has been a cultural significance for the people of Nagaland. Ecotourism is the answer to both conserving wildlife biodiversity as well as bringing development within the district.

References

- [1] Aref F and Gill SS. Rural Tourism Development through Rural Co-operatives. *Nature and Science*. 2009;7(10): 68–73.
- [2] Bhupathy S, Nakro V, Azeez PA. Strengthening community conservation efforts in Nagaland: A programme to impart technical support on biodiversity conservation and livelihood options. Final Report Submitted to Sir Dorabji Tata Trust, Mumbai. 2012
- [3] Bhupathy S, Ramesh Kumar S, Thirumalainathan P, Paramanandham J and Chang Lemba. Wildlife exploitation: a market survey in Nagaland, North-eastern India. *Tropical Conservation Science*. 2013; 6(2):241-253.
- [4] Ceballos-Lascurain, Hector. 'Tourism, Eco-tourism and Protected Areas', in Kusler, (ed.), *Eco-tourism and Resource Conservation*. 1991;1:24–30.
- [5] Ceballos-Lascurain H. The future of ecotourism. *Mexico Journal* (January). 1987; 13–14.
- [6] Government of Nagaland. 'Statistical Handbook of Nagaland', Directorate of Economics and Statistics, Kohima, Nagaland.2001
- [7] Stark JC. Ethics and ecotourism: connections and conflicts. *Philosophy & Geography*. 2002; 5(1): 101-113.