

**TOURISM AND NATURAL RESOURCE MANAGEMENT**  
**IN**  
**NETRAVALI**

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This is to certify that the dissertation report "**Tourism And Natural Resource Management In Netravali**" is a bonafide work carried out by **Mr. Saiesh Laximan Velip** under my supervision in partial fulfilment of the requirements for the award of the degree of Master Of Arts in Economics in the Discipline at the Goa Business School, Goa University.



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### DECLARATION BY STUDENT

I hereby declare that the data presented in this Dissertation report entitled, "Tourism And Natural Resource Management In Netravali" is based on the results of investigations carried out by me in the Economics program at the Goa Business School, Goa University under the supervision of Dr. Pranab Mukhopadhyay and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities will be not be responsible for the correctness of observations / experimental or other findings given the dissertation.

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## **PREFACE**

I begin with my research on Tourism and Natural Resource Management in Netravali. This concept includes research and design of a sustainable tourism plan in the phase of the growing number of visitors in Netravali village. I will be exploring whether the tourism activities in Netravali village have any impact on the natural environment of the village, to understand the trend of tourist visitors, how tourists are travelling to the village, and reasons for travelling. The study will also examine how the natural resources managers are managing the village. This study will help me to know whether tourism activities in Netravali need to be regulated or not.

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**ABSTRACT**

*Goa has a rich biodiversity, historical, and cultural heritage sites and beautiful nature which attracts tourists from worldwide and preferred Goa as one of the famous tourist destinations. The Netravali Wildlife Sanctuary is the second largest wildlife sanctuary in Goa after Bhagawan Mahaveer Wildlife Sanctuary Mollem. With diverse flora and fauna located in the south Goa, Western Ghats in Sanguem Taluka.*

*The study investigates the impact of tourism activities on the Natural environment of Netravali village, the study focus was to understand the trend and the mode of transportation used by the visitors, so also to understand the question of why and how tourists are coming to Netravali village. The primary and secondary methods of data collection were used, and simple descriptive analysis methods were used to analyse the data. The findings of the study show that there is some impact of tourism activities on Netravali village in the phase of growing visitors number and there is a need to sustainably manage tourism activities to protect the natural environment. The study concludes that the visitors have good experience with their visit to Netravali village and will revisit Netravali, key suggestions to improve the accommodation facilities, restroom, transportation, good navigation facilities, feasible modes of ticket payments, and online portal to keep updates about Netravali village.*

## **CHAPTER 1: INTRODUCTION**

The state of Goa is small, covering 3,702 sq.km. It is ecologically rich with biodiversity and contributes much to the Western Ghats with diverse flora and fauna. (Government Of Goa | Official Portal, n.d.) The small village of Netravali (Netorli) is located in Sanguem taluka about a 2-hour drive from Panaji via the towns of Margao and Quepem in south Goa. (gomantaktimes.com, 2022) Netravali is a peaceful village that has been known as an Adarsh Gram. This village is a beautiful and perfect destination for travellers, especially those who want to enjoy the outdoors and explore nature, waterfalls, rivers, mountains, and wildlife Netravali Wildlife Sanctuary is the best destination to visit.

The Netravali Wildlife Sanctuary is located in the Sanguem taluka southern region of Goa which is an important section of the Western Ghats, as announced in 1999 covering an area of 211.05 square kilometers. (www.forest.goa.gov.in, n.d.) "Forest mostly of moist deciduous vegetation with interspersed evergreen and semi-evergreen habitats. Netravali Wildlife Sanctuary is a paradise for birders, environmentalists and students wanting to learn more about the major and microfauna. Also an attraction among trekkers who are interested in trekking peaks like Sidaha dongor, Pali dongor, Ravna dongor, Avalli dongor using hiking trails".

(The Goa Foundation, n.d.) The State of Goa has several Protected Areas, declared as wildlife sanctuaries under the Wildlife Protection Act, of 1972. The following is the list of wildlife sanctuaries:

1. Bhagwan Mahaveer Wildlife Sanctuary (240 square kilometers).
2. Cotigao Wildlife Sanctuary (85.65 square kilometers).
3. Netravali Wildlife Sanctuary. (211.05square klilometers).
4. Mhadei Wildlife Sanctuary (208.5 square kilometers).
5. Bondla Zoo (7.98 square kilometers).

## 6. Dr Salim Ali Wildlife Sanctuary (1.8 square kilometers)

The Department of Forests was instrumental in preserving the natural world and animals following the Act of Animal Protection in 1972. The Netravali Wildlife Sanctuary is protected and preserved by the forest department acting as a guardian against unlawful activities including poaching, hunting, and tree-cutting. The Netravali Wildlife Sanctuary is a favoured destination for nature enthusiasts and wildlife tourists, offering an ideal location for a short and adventurous break that is also relaxing. Netravali Wildlife Sanctuary is divided into 11 beats. In each beat, there are 4 guards and 2-4 trackers are working day and night to protect the sanctuary. Many villages are coming under the sanctuary including Sanguem, Uguem, Netravali, Nune, Mangal, Savri, Tudav, Verlem, Salgini, etc.

Netravali is famous for its beautiful nature, mountains, temples, farms, agriculture, bubbling lake, and waterfalls like Savri, Mainapi, and Pali. It is also renowned for its strawberry farm in Verlem village. Savri and Mainapi are major attractive waterfalls of Netravali. ([www.forest.goa.gov.in](http://www.forest.goa.gov.in), n.d.) These perennial waterfalls can be visited throughout the year and the Pali waterfall is a seasonal one that blooms in the rainy seasons and retains water up to February.

Rivers of Netravali is one of the major contributors to the reservoir of Salaulim Dam in Sanguem and one of the Zuari River's main tributaries originates within the sanctuary. Netravali Wildlife Sanctuary shares its boundaries with Kali Tiger Reserve, Cotigao Wildlife Sanctuary, and Bhagwan Mahaveer Sanctuary.

The Netravali Wildlife Sanctuary is the second-largest wildlife sanctuary in Goa, Netravali has been one of the most attractive villages among tourists and visitors travelling through the world to visit Netravali village, Netravali receives more than 500 visitors in a day, especially during the monsoon season when the number of visitors crosses thousands,

which leads to the destruction of the natural environment, so there is a need to manage tourism potential to avoid accidents and to keep the environment protected. This study provides a detailed analysis of the reason for tourist visitors to Netravali, how they travel to the village, and to development of a tourism plan that helps to manage the tourism activities to protect natural resources. this study will provide some ideas about the services that tourists receive and will include valuable suggestions from the visitors to improve the visitor experience in the Netravali village.

## 1.1 BACKGROUND

Goa is a state located on the western coast of India. It was before the part of the Union Territory of Goa, Daman, and Diu for 450 years Goa was under Portuguese rule. This influence is still evident in Goa's architecture, culture, cuisine, etc. Goa separated and formed into its separate state in 1987. Goa's geographical area is 3,702 square kilometres in a two-district, such as North Goa and South Goa. (Government Of Goa | Official Portal, n.d.) It encompasses the biodiversity of the Western ghats of India with diverse flora and fauna, it is known for its beautiful beaches and natural environment, culturally it is unique and hence it is very rich in developing infrastructure Considering the fact that there are many historical monuments, the state has become a popular destination for tourists. Goa was freed from Portuguese rule and liberated on 19 December 1961 and the following year it became part of India. (www.censusindia.com, n.d.) Goa has 12 talukas, six of which are in the North Goa district and six in the South Goa. According to the 2011 Census, Goa has 71 towns 334 villages and a total population of 1,458,545. From 2001 to 2011, the population grew by 8.2%, with the North Goa district being more populous than the South Goa one.

(Ministry of Tribal Affairs, 1972)A cornerstone of such efforts in Netravali village and across India is the National Wildlife Protection Act which brings the forest department, local communities and other stakeholders together to undertake different species monitoring, habitat restoration, and public awareness programmes that are directed at wildlife conservation and the sustainability of wild animals. (forest.goa.gov.in, n.d.) The goal of sustainable development is at the very heart of the Act, as it supports ecotourism and encourages neighbourhood-based biodiversity conservation measures, allowing for scientific study in protected areas, such as the Netravali Wildlife Sanctuary. It attempts to preserve the biodiversity of the area over a long duration while enabling tourism and allowing for local participation, finding a balance between conservation and the socioeconomic needs of the people living in these areas. Goa offers a whole range of tourist activities and experiences at a global scale, varying from its historical

importance and heritage to beautiful surroundings and sustainable initiatives. Goa is capable of redefining itself as a global tourist destination if it tackles the problems more proactively, embraces all the activities and sustainably grows. The state also has a varied geography of the Western Ghats, lush backwaters and splendorous and pristine forests, many of which carry opportunities for eco-tourism, adventure sports and nature-based tourism.

([www.goa.gov.in](http://www.goa.gov.in), n.d.) The tourist statistical report from the year 2012 to 2019 portrays an inclining trend. The total number of tourist arrivals as of 2012 in Kerala was 2788029. During 2012, the number of domestic arrivals was 2337499 and foreign tourist arrivals constituted of 450530. By the end of 2019, the number of tourist arrivals increased to 8 073 320. Among them, domestic tourist arrivals stood at 7127287 while foreign tourist arrivals numbered to 937113.

([www.goa.gov.in](http://www.goa.gov.in), n.d) Sanguem lies in South Goa in Goa. It is one of the six talukas in the district comprising, the area is suitable for getting inner peace and even provides one with the opportunity of bird watching, watching wildlife, hiking and more. The village is slowly becoming a common destination for eco-friendly sustainable and experienced tourism. Thus, the village offers a genuine Goan experience that is distinct from the busy beaches and tourist attractions. Though being a great profit source for the tourism market of Goa, the number of challenges that they have to face such as environmental pollution, cultural exploitation, restriction on infrastructure, fluctuating number of visitors, and frequent changes in policy are high that need to be considered and planned carefully.

It has promoted ecotourism and eco-friendly practices as well as community-based tourism and conservation initiatives within its protected areas (for example, the Netravali Wildlife Sanctuary in Netravali and the Cotigao Wildlife Sanctuary in Canacona). These initiatives are an integral part of the future of a sustainable and successful tourism sector that reinstates the traditional habitat, community-based and nature-friendly approaches to tourism.

## **1.2 OBJECTIVES**

1. To examine the trend of tourist visits to Netravali Wildlife Sanctuary over the last 10 years.
2. To understand why and how visitors travel from different regions to Netravali.
3. Evaluate and build a tourism plan that is useful for the future.

## **1.3 RESEARCH QUESTIONS**

1. To evaluate whether tourism activities have any impact on the Netravali village and the environment of Netravali in the phase of growing domestic and foreign visitors to the Netravali Wildlife Sanctuary.
2. Is there a need to manage tourism activity in Netravali village?
3. How does the forest department manage forest resources in Netravali?

#### **1.4 SCOPE OF THE STUDY**

The study area is Netravali Wildlife Sanctuary, Netravali, and the surrounding villages. The study focuses solely on the Netravali Wildlife Sanctuary, and other wildlife sanctuaries are not covered in the research. this study aims to analyse the trend of tourists visiting Netravali village over the last ten years from 2014 to 2024, to analyse the kind of transportation visitors used during their visit to the village, also this study cover the reasons for tourists visiting Netravali village. most of the researchers have studied Netravali village but they lack in-depth analyses of what I am trying to search for, this research gap is discussed [Chapter 1] this study aims to fill the research gap and to find some valuable information insight into it. This study focuses on tourists who have visited the Netravali Wildlife Sanctuary. Based on the nature of this study both primary and secondary methods were used, refer to[Chapter 3]. This study aims to find insight into sustainable tourism management activities and their impact on the Natural environment in the Village.

### **1.5 LIMITATIONS OF THE STUDY**

1. The most important limitation of this study is that it specifically focuses on the Netravali Wildlife Sanctuary, with emphasis on the area within the Netravali village in Sanguem, South Goa, and it does not cover the entire Sanguem taluka.
2. The study material is based on the primary survey and secondary sources of information, primary data is limited to 150 tourist respondents, and the secondary data is limited from November 2014 to January 2024, as provided by the forest department of Netravali.
3. The secondary data is confidential and unpublished, which has several limitations in terms of the accuracy and reliability of the study.
4. A limited study has been conducted on my research topic in Netravali village, which has led to drawbacks in formulating research objectives and research questions.
5. The tourism plan is based on the responses to the visitor's suggestions and recommendations, which may not be accurate, effective, or reliable.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1: LITERATURE REVIEW**

(Kumar, 2023) International visitors have grown many times over the years, thanks to all the new means of communication, social media, and other tools, Countries with high potential for tourism, such as India, hold major opportunities. Therefore, over the years, international tourists have spread across the world, India is a home with vast cultural, historical, and geographical wealth. Having a counterpart in job creation and revenue, tourism activities boost the foreign currency in the country interact, however, they make the most meaningful contributions to skill development and allow millions of people to interact with each other. Therefore, India should consider tourism development as a national mission to include infrastructural improvement, cultural and religious exchange-s and offer services customized to the unique preference-s of foreign visitors, mainly Southeast Asians.

This study examines the factors that help the economy to grow, what are the future possibilities of the tourism industry and ways to enhance tourism activities in India, with a special focus on Southeast Asian countries and other nations. This paper used a qualitative approach, data from multiple industries, academic journals, government reports etc. Furthermore, the data collection methods use secondary research data. International tourists refer to foreign natives who carry tourist visas to enter a country for various reasons, such as a holiday, leisure, recreation for example, such as medical visits, tourist visits, or religious pilgrimage. Tourists can only stay in the host country for up to twelve months, and should only be allowed to stay one night. Tourism has several benefits for

the local economy. People spending money while visiting creates new jobs in various industries.

This has increased the interest of foreign investors in the Indian market. Visiting successive historical sites builds up cultural and civilizational exchange. In terms of promoting social genuine sovereignty, the tourism industry has gained a new potential. It was subsequently anticipated that India would receive ten million international reputable people by the end of 2010. Another significant source of visitors for India can be found in Southeast Asia due to the deep connections to various religions and cultures, as well as its massive population. In this case, India can develop the Buddhist circuit, which celebrates our common religious and cultural history and introduce a visa-on-arrival to attract more visitors from the region. Furthermore, the government needs to maintain close cooperation with businesses to ensure the growth of tourism. In addition, it is necessary to develop one-of-a-kind experiences that would satisfy different visitor segments, including visitors from Southeast Asia.

(Coghlan, 2012) The study's focus was to analyse the relationship between the natural managers of protected areas and the tour operators. This study aims to understand the impact of natural-based tourism on natural resource management. Output measures, meanwhile, measure the number of impressions or experiences tourists have while on a journey. Finally, outcome measures can reflect client satisfaction, ratings, and subsequent recommendations. The paper studies the connection between natural resources management inputs and the outputs of water-based tour operators. Satisfied and recommended are the outcomes measured. In this research, a mixed approach was used. This study uses closed and open-ended questionnaires obtained from visitors to the Great Barrier Reef and other reefs.

Respondents were asked about their previous visits to the GBR and other reefs, their overall satisfaction with their reef excursion on a scale of 1 to 10, as well as their expectations, best and worst experiences, and suggestions via both closed-ended and open-ended surveys. Respondents were given a Likert scale from 1 to 10 to scale their satisfaction and experience, this data was analysed using chi-square and the Person's correlation data analysis method. the results of the analyses show that satisfaction and the experience of the tourist are interconnected, these results were proved using the ETA test. However, natural resource management authorities have correctly identified some important criteria for tourist satisfaction, and policies aimed at improving water quality can benefit both the environment and the visitor experience. Despite ongoing discussions about public policy, investments in tourism in protected areas have only a minor impact on tourist enjoyment. While environmental interpretation, water quality, ecosystem health, and biodiversity are all important factors that need management attention, they do not have a significant impact on tourist pleasure as expected. In protected area tourism, there exists a connection between the management of natural resources, the services offered by water-based tour operators, and the satisfaction of tourists. While it is important to improve water quality for both the environment and the visitor experience, such initiatives have limited effects on overall visitor satisfaction. This indicates that while natural resource management organizations have identified some essential visitor satisfaction needs, some other factors and variables impact tourist experiences that existing policies and investments do not effectively address. A more comprehensive approach to sustainable tourism management is necessary moving forward, one that considers the various and multidimensional aspects that influence tourist pleasure and incorporates them into policy and management plans.

(Dilsaver, 1979)The commonly held notion is that the tourism industry is classified as a major sector in the economy, which helps to increase the growth and development of the

nation. Some economists think that the tourism industry has a low impact on the natural environment but huge economic benefits. However, on the other side of its effect, there are different opinions, especially about the natural environment and population surrounding it.

To understand the significant reasons for the impact of the tourism industry on sustainable development. There are concerns about its impact on the natural environment and social impact, The purpose of the research investigation is to shed light on tourism activities, discuss and clarify the issue of the growth of tourism, and guide better decisions on the progress of tourism development. This study assesses the impact of tourism growth, The study examines the case studies of previous research papers, by doing a primary survey of the tourist and local population of the area through interviews and personal observation. Making people aware of the benefits of economic gain, the environmental effect, and the societal implementation of tourism.

The tourism industry has some environmental impact, although it can promote better sanitation facilities, and preserve the historic and natural environment, it also poses a major environmental threat from excessive tourism:

- Water pollution and air
- Garbage accumulation.
- Deforestation and agriculture cause land degradation.
- Damage to coastal characteristics.

The economic impact of tourism Despite claims of increasing employment opportunities in the tourism sector, there are still "low-wage and menial", fewer than 1 % of native labourers in Bali are unemployed. To mitigate the negative effects of tourism activity, several educational studies and research projects have been conducted. (Dilsaver, 1979) "Several specific proposals have been made, including the design of special, segregated

"tourist spaces" or areas of recreational concentration". The result of unchecked tourism expansion can cause economic and environmental damage, even though it is checked there are some conservation effects on nature.

(Sonawane & Dhar, 2022)The tourism industry is one of the most highly competitive industries in the world and the satisfaction of the visitors is very crucial for the growth and success of the tourism destination. Dehradun is a popular tourist destination, known for its comfortable weather and stunning surroundings which attract several tourists, particularly in the month of summer. So it is essential to provide services to visitors like hotels and accommodations to increase the comfort and satisfaction of tourists to encourage them to visit again this place. This is important to increase tourist satisfaction and comfort which is directly linked to the prosperity and reputation of the Dehradun. the visitors who are more satisfied with the services would like to come again to visit the destination and would refer others to it, so it is important to identify the factors that affect satisfaction. To gather information from visitors to Dehradun, the study employed a hybrid approach combining both probability sampling and non-probability sampling techniques of the survey. The methods used for sampling were:(Sonawane & Dhar, 2022) Simple Random Sampling, Systematic Sampling, stratified samples, and sampling by clusters. "To get information from both primary and secondary sources, explored data collection through Online Questionnaires, Telephone survey method over phone calls, fieldwork and experimentation survey. The survey was conducted for the period of one year from 2010 to 2011 each month." the study found that the Dehradun hospitality sector provides a wide variety of services to visitors which generates income, generates employment and serves as the primary source of revenue for the sector. Dehradun weather attracts tourists, especially during the summer season, which makes this time the busiest time of the year

for visitors in the area. the services provided by the hotels and accommodation are very crucial for Dehradun tourism and economy. because this place relies heavily on the natural environment and tourism sector.

(CARRYING CAPACITY ASSESSMENT.Pdf, n.d.) Agra is a city in India that is famous for its ancient monuments, particularly the world-renowned Taj Mahal. However, the rapid growth of the tourist industry has brought up concerns about management and sustainability. This research study looks at tourism in Agra and how to handle it. To make a plan for sustainable tourism growth. Tourism is incredibly popular these days. But if its growth is uncontrolled, it may end in catastrophic events.

First of all, this can damage the environment and cultural monuments, and harm local communities and economies. If there are too many tourists in Agra, this will lead to social conflicts, economic difficulties, and environmental degradation. All this can be prevented if the city's tourism capacity is known. The research focused on the case of Agra. It gathered data from various sources. This included surveys, observations, and existing records. Extensive field surveys were carried out in Agra in 2017 and 2018 to gather first-hand information from a variety of sources, including residents, hotel employees, government stakeholders, and both domestic and foreign visitors who were interviewed using focused questionnaires. Informal conversations were also had with a variety of stakeholders to draw Field, secondary data from the Uttar Pradesh Tourism Department, and the Indian Ministry of Tourism, in 2001- also in 2018 as well as other papers and publications in the case of Agra, excessive tourism is a potential threat to its natural and cultural resources which in turn affects tourists' experience.

Agra faces difficulties due to many tourists visiting. The local people cannot handle this large number of visitors. There are problems between locals and tourists because of this. People visiting Agra are not happy with safety, cleanliness, environment, hotels, transport, and sanitation services. The city has to provide better facilities and services for tourists to have a great time. Public-private partnership projects can help develop new facilities and infrastructure. This technology also makes it possible for Agra to be turned into a smart tourist destination. This report focuses on sustainable tourism management. Too many tourists have caused issues there. The DPSIR model has looked at Agra's ability to handle visitors. It shows the challenges the city faces. The report identifies areas for improvement. The study shows we need to manage tourism better in Agra. Too many tourists are causing problems. The DPSIR model was used to see how many tourists Agra can handle. It found issues that need fixing to develop tourism safely. A plan including cultural, environmental, and economic parts can help Agra have sustainable tourism.

(Furqan, 2024) The report highlights the need for sustainable tourism management in Agra to address the issues arising from unchecked tourist expansion. Agra's carrying capacity has been evaluated using the DPSIR model, revealing the city's challenges and identifying areas for development." A comprehensive strategy that considers sociocultural, environmental, and economic factors can help Agra achieve sustainable and environmentally friendly tourism while preserving its legacy and enhancing the quality of life for both locals and tourists. Let's talk about eco-friendly travel. "Green tourism" means being a responsible tourist who cares for nature. This includes learning about the rules and getting certified for green tourism activities. After oil and autos, tourism is the third-largest economic activity in the world and is one of the industries with the highest growth (Batta, 2009). Revenue from tourism is vital to the economy of developing nations

because it affects employment, income, and the balance of payments. Many emerging nations pushed hard to use tourism to make money from other nations, branching out their businesses, and making jobs. Social, environmental, and economic impacts of travel all impacted rules, but the economic impact acted most (Sinclair, 1998). This view caused backing for travel to swell chaotically and unplanned in many lands, bringing troubles like- environmental and social breakdown”. Over the past twenty years, interest climbed in links between tourism growth and the environment's state (Erdogan and Tosun, 2009), sparking travel offshoots like green tourism to multiply.

(Spenceley-VISITORMANAGEMENT-2015.Pdf, n.d.) “The Protected areas that the International Union acknowledges for Conservation of Nature are essential sanctuaries for biodiversity and cultural heritage. These locations attract a diverse range of visitors, such as volunteers, researchers, business users, tourists, spiritual and cultural users, and commemorative users”. However, managing visitor usage, especially within protected areas like these poses new challenges for managers regarding how they run them when used for tourism purposes alone or combined with other activities. The different types of visitors and their impacts on management; operator fees; and why partnerships between protected area managers and tourists matter about tourism as a significant visitor use are all featured in this section. Tourism is one of the major users of protected areas however, it has positive effects on biodiversity and negative effects.

This study focuses on highlighting the benefits that can be acquired from the collaboration between protected area managers and tourism agencies, based on primary studies and secondary reports. This has made tourism become a major source of income for both local economies as well as the national economy, which often uses protected areas for its purposes. However, managing this region in terms of tourism becomes more challenging especially when visitors conduct illegal activities. The tourist operators are charged for

using the region by the protected area manager, funds are generated that could be used towards conservation and management projects.

(Sitaresmi et al., 2023) The tourism industry is one of the major contributors to the Indonesian economy, The tourism industry helps to earn foreign currency and in this tourism activity plays a major role. Balikpapan city has its unique nature which attracts tourists from worldwide to site its beautiful protected forest area and natural resources.

The Meranti Protected Forest in Karang Joang Village is one such protected area that can serve as a hub for the development of sustainable tourism. This research investigates how Meranti Forest can be planned and used as a natural tourism destination while prioritizing ecotourism, local knowledge, and conservation principles. The research conducted uses a comprehensive approach that combines comparative analysis, content analysis, and triangulation to examine laws, regulations, and current circumstances. The source of secondary data is from spatial planning documents, policy papers, government publications, law, forest and tourism departments and primary data was collected through observation and interview methods data was analysed using comparative analysis of various sources. The report suggests five key guidelines when using protected forests for tourism. Maintaining the ecological function of a protected area while ensuring environmental sustainability is important. The first principle is to create and educate the community about sustainable firms that can benefit the community and enhance its tourism potential.

(National Strategy for Ecotourism 2022.Pdf, n.d.) The thesis demonstrates the vast variety of ecotourism practices in India, highlighting the significance of sustainable tourism and ethical tourist activities. Necessary to optimize the efficacy of ecotourism as a driver for socially and economically sustainable development is a policy framework that places environmental preservation, community involvement and economic growth at the top. Strengthening the Panchayati Raj system would help institutionalize NRM-related legislations and administrative and financial changes that can be more effectively implemented thereby enhancing community participation.

The study suggests locations for future interventions by Sida taking into account those areas where communities have been highly engaged and poverty has been reduced measurably. However, the fast expansion of tourism affected the environment and society negatively towards challenging long-term development. This research examines the economic benefits of tourism plus its environmental and socio-cultural impacts. It emphasizes on sustainable promotion of tourism development by balancing economic advancement against the protection of nature as well as culture conservation. Despite significant economic gains from tourism, poorly controlled development has destroyed natural resources, pollution, and socio-cultural disruptions. Local governing bodies, known as Panchayati Raj Institutions, play a crucial role in the viability of ecotourism by participating in planning and decision-making procedures. Industry players, including tour operators, lodging providers, and other industry stakeholders, are also critical to the development of sustainable tourist destinations through their business strategies and investments. Non-governmental organizations (NGOs) that promote rural development, sustainable tourism, and community empowerment are important in creating connections within the community. Finally, the active engagement and capacity building of the local community are essential to ensuring inclusive and responsible tourism.

(Sida2187en-Natural-Resource-Management-in-India-2003-2007.Pdf, n.d.) Sweden has made a substantial contribution to India's forestry, water, and land management through its development agency Sida. The organisation recognises the necessity to address the "web of relationships between the poverty of nations and people on the one hand and the destruction of their environment on the other, particularly the destruction of water" and help the local population establish sustainable NRM policies. For example, sustainable NRM(natural resource management) practices can alleviate poverty through enhanced local access to clean water, increased agricultural production, and decent jobs, among other remedies. This research will, therefore, help Sida to develop a national strategy for India by outlining priority sectors, collaboration frameworks, and ideal geographical sites for intervention. Sustainable NRM practices are instrumental in Poverty Alleviation considering their direct impact on local livelihoods and revenue-generating options for communities.

The study employs a holistic methodology that includes meetings and consultations with stakeholders, field trips on certain aspects, and robust monitoring and evaluation of the desk research. A thorough diagnosis of the opportunities for Sida's work performed in Orissa's forestry sector, which can support local livelihoods in terms of NRM, and advanced approaches for integrated water resource management and reinforcement of the Panchayati Raj structure.

(Sustainable\_Tourism\_Environmental\_Protec.Pdf, n.d.) Tourism has emerged as one of the biggest and most rapidly expanding industries worldwide. It has contributed to economic growth, job creation, and foreign exchange profits. Hereafter, tourism is one of the fastest-developing sectors that make a spectacular contribution to foreign exchange

receipts and economic development in all aspects of international life. However, tourism is directly dependent on environmental and social conditions in the world and the country. Therefore, it requires permanent sustainable mechanisms for developing strategic planning.

However, if the growth of tourism is not controlled and sustained, it can result in negative effects such as; depletion of resources, environmental degradation, pollution generation, waste production and disturbance of ecosystems. Additionally, tourism interferes with socio-cultural aspects within places like changes to local customs, lifestyles or values. This may weaken a society's well-being and cultural fusion. Policymakers establish various measures that include government regulations, economic instruments, voluntary sector initiatives and international cooperation to promote sustainable tourism. Other categories of ecotourism are the fastest-growing trend in the tourism industry. While trying to minimize any harmful human practices that hurt nature as well as cultural heritage conservation while at the same time enhancing resident prosperity. However, some critical questions will need to be answered about defining what is meant by "ecotourism" itself. The International Year of Ecotourism provides an opportunity to reflect upon global experiences in ecotourism and the role of sustainable tourism in other dimensions of international sustainability. It explores the economic, environmental, and socio-cultural implications of sustainable tourism and discusses the policy frameworks associated with it. Tourism provides a significant number of job opportunities, especially for unskilled labour, migrants, part-time workers, and women. The tourism industry for economic growth and poverty reduction.

(Joglekar & Singh, n.d.) Tourism is one of the fastest-growing business sectors globally contributing significantly to foreign exchange earnings as well as economic development. Nevertheless, tourism tends to respond differently depending on cross-border ecological and sociological conditions hence necessitating the adoption of sustainable practices.

Based on secondary sources, study materials are made available via tourism department reports, periodicals, tourism ministry, books and journals on tourism. It is worth considering that the tourist sector has been shown in studies to have a significant influence on economic development and social benefits as well as environmental sustainability. The way of living has increased, good job opportunities, better government facilities for the public such as roads and infrastructure, and digital India its helped economic growth. This could promote mobile money and other environmentally friendly technologies that minimize economic leakages in host communities.

(Balasubramanian & Sangha, 2023) India's Western Ghats comprises many protected areas, for instance, Bannerghatta National Park, Nagarhole National Park, Bandipur National Park, Shettihalli Wildlife Sanctuary, Biligiri Rangasamy Temple Wildlife Sanctuary and Nandi Hills. There are various ecosystems as well as Soligas and Kadu Kurumba tribes who live in these regions. These communities provide certain services to the ecosystem that are pivotal in their management and conservation for good. The value of these protected areas for local people and the general public can be established by studying ecosystem services in these regions.

The Western Ghats attract a large number of visitors each year, with Bannerghatta and Bandipur National Parks being among the most popular ones. Visitor numbers are influenced by factors such as transportation and accommodation options. Non-timber

forest products, carbon sequestration, soil preservation, and recreational services provide ecosystem services that are valued at over \$612 million per year. Data was collected from surveys conducted on visitors to the parks near park entrances. The survey contained questions about their socio-economic status, the reason why they visited the park as well as transportation costs involved among others. Additionally, the study examined the. It is very important that indigenous persons continue to manage protected areas sustainably so that ecosystem services can be delivered to the local population and beyond. Thus, the investigation shows that it is vital for the Western Ghats to recognize and appreciate the ecological services of protected areas. The traditional knowledge of indigenous groups provides suggestions on how conservation practices should be done which are significant in terms of preserving biological diversity and human welfare. It is important to incorporate ecosystem services within natural resource management strategies as well as development plans.

(Rajawat, 2021) India has made a name for itself as a travel destination because of its rich historical buildings, cultural landmarks, and breathtaking natural beauty. Earlier in 2013 Mukandra Hills Tiger Reserve became one of three tiger reserves located in Rajasthan. This reserve is situated in south-eastern Rajasthan and has diverse plant and animal species making it an ideal place for sustainable nature tourism. While touring the reserve visitors have something they will not forget in their lives. This can be achieved through promoting environmentally friendly infrastructure development, raising public awareness about biodiversity protection and improving the socioeconomic conditions of neighbouring communities as a way to encourage sustainability in such areas. Notably, the government should appreciate the need to involve local communities in tourism activities and harmonize policies that facilitate the successful and long-term growth of the local tourism industry. Questionnaires were administered to each group (residents, visitors, government

representatives) to gather opinions and expectations on tourism development from them. Moreover, qualitative perspectives could be obtained through conducting face-to-face interviews with key actors like local community members' authorities or stakeholders. Field surveys to determine the richness of plant life and animal species at this reserve. Also, the literature review was carried out using secondary sources from previous researchers while public sources like newspaper articles, reports as well as national-international publications were used. The involvement of local communities in nature tourism. As a result, all participants will benefit from the conservation of biodiversity and the socio-economic development of the area.

(ARIF GULZAR, TANVEER AHMAD KHAN and WASIA HAMID, 2019) With a long history of pilgrimages and tourism, Jammu and Kashmir (J&K) offers a wide variety of travel experiences, such as adventure, historical, leisure, and medical travel. The purpose of this research is to analyze the impacts of tourism on the economy of Kashmir. Additionally, it looks at the barriers that hinder the expansion of tourism in the region.

Most of the data presented in this research are collected from secondary sources, such as; the Directorate of Tourism, the Government of India, the Jammu and Kashmir Tourism Development Corporation and the Ministry of Tourism. J&K has several tourist attractions including Pahalgam-Sonamarg, Gulmarg-Phalagam, Srinagar-Jammu. Several issues have been identified that impede the development of a favourable tourism industry for example; political instability, difficult road access to most places where tourists flock due to lack of proper road network, scarce and limited air services, inadequate human resource capacity building initiative with poor infrastructure and one major challenge is lack adequate facilities meant for promoting tourism activities. To realize these opportunities for sustainable tourism to be promoted action needs to be taken towards solving these highlighted challenges.

## **2.1 RESEARCH GAP**

Many studies have been done on Netravali Village and Netravali Wildlife Sanctuary but no specific study has been conducted on “Tourism and Natural Resource Management” in Netravali. Existing studies focus on describing an overall picture of waterfalls, (Gurav, 2018), rivers, lakes, (gomantaktimes.com, 2022), temples, mountains, farms, agriculture,(Vinayak Devulkar, 2021),(Pereira, 2022), wildlife sanctuaries, (The Goa Foundation, n.d.), fungi,(Dessai, 2012), mining, (Talule & Naik, 2014), (Jorge et al., n.d.), tourist destinations, and natural habitats(Rangnekar & Dharwadkar, 2009). In Particular, I am doing a brief study on Netravali village, how tourism activity will affect nature and different ways we can manage the tourism potential in Netravali for the effective and smooth functioning of the sanctuary.

### **CHAPTER 3: RESEARCH METHODOLOGY**

The research employs primary and secondary data approaches to address the research objectives. Secondary sources, both qualitative and quantitative, were collected from the records of the forest department of Netravali and the Netravali Panchayat. The primary data was collected through the survey, using a questionnaire that was formed using Google Forms. The focus of the study was to get responses, especially from the tourist visitors who had visited the Netravali Wildlife Sanctuary. And gathering secondary information from the forest authority, I have taken permission from both the office of the deputy conservator of forest wildlife and eco-tourism, south Goa and from the range forest officer, Netravali Wildlife Sanctuary, Sanguem-Goa.

To gather the primary information, I have been to Netravali Wildlife Sanctuary's main entrance at the Netravali check post where the tourists have to buy a ticket to get entry into the sanctuary only local villagers are allowed to go inside the sanctuary without any charges. Soon after framing my research question, every day I stood at the entrance for more than 10 days from 9 am to 4.30 pm at the Forest Department gate in Netravali and after approaching more than 3 thousand tourists visitors I completed my acquired sample size of 150 responses from tourists visitors.

The method of primary data collection was based on the random sampling method where tourist respondents were randomly selected. The random selection method involves selecting every member of the population under the study who has an equal and independent chance of being chosen from the sample. This method of selection is effective in reducing bias and making the research findings stronger. The random sampling method helps the research study to be generalised when the population sample is too large. Before starting to gather my primary data I came across an issue in which the Netravali area doesn't have good network connectivity only bsnl network is available which is one of my limitation, to tackle this issue I have created one QR code scanner for my entire Google form so that the tourist can click the picture of QR code and fill out my survey questions after they are in the area of good network connectivity. The Information collected through the survey is based on demographic characteristics of visitors through open-ended and close-ended questions, where respondents were asked to select their age, gender, whether they come from urban & rural areas and the place of residence of visitors, if it was their first visit or not, whether they are tourists or locals, Moreover, the survey inquired

about the visitors' mode of transportation and the reasons for travelling to Netravali, and how the visitors learn about this particular Netravali village.

In the questionnaire, the respondent was provided two Likert scale questions to scale their overall experience in Netravali and to ask whether visitors would prefer to revisit Netravali. The visitors were asked to share their overall experience in the Netravali Wildlife Sanctuary on a Likert scale between 1-5 and also asked to indicate on a 1-3 rating scale whether they would consider visiting Netravali again or not. Through open-ended questions, tourists were asked to suggest amenities they would like to see in Netravali Village as visitors and also asked visitors to provide their valuable feedback/ recommendations that visitors feel natural resource managers should provide to improve the visitor experience in Netravali. The respondents were asked to select from “yes”, “no”, and “not visited” close-ended questions.

The secondary data was gathered from the Forest Department of Netravali, the data month-wise and day-wise log books were kept in the record room of the department which was not in order, it took me more than 5 days to hunt the log books of all the years and required data of the last 10 years and additional information. The logbook was handwritten so I had to convert it into a Google sheet, it took me so many days to type every single day visit data in the sheet. I also gathered garbage collection reports from the village panchayat. To analyse the data, I have used the descriptive method of data analysis in my study. This method of analysis describes and summarises important features of the dataset. The main aim of the descriptive is to explore the patterns, trends or relationships in the dataset and to display the study result in easy easy-to-understand form. To display my data, I have used different types of pie charts, bar graphs, line graphs and tables followed by interpreting every chart, graph and table for a better description. The primary and secondary data were collected to understand the trend of tourists visiting Netravali and to develop a tourism plan to improve the visitor experience in Netravali. The primary survey was conducted to analyse why tourists are coming to Netravali and the reasons for visiting Netravali to understand their opinions, and suggestions to improve the visitor experience.

## **CHAPTER 4: DATA ANALYSES**

### **4.1: INTRODUCTION**

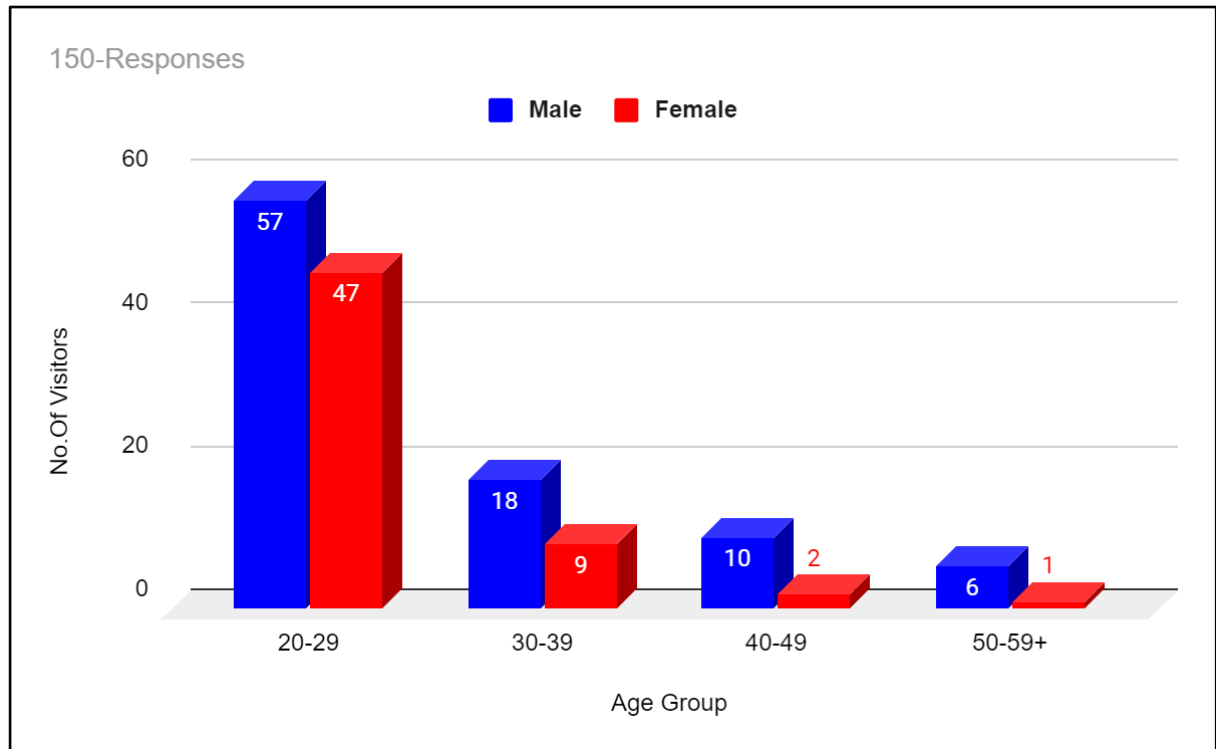
In this chapter on data analysis, I have used the Descriptive method of data interpretation to display my results from primary and secondary sources in an easy-to-read and understanding manner using bar graphs, pie charts, line graphs and tables. The study area of my research is Netravali Wildlife Sanctuary in Netravali, South Goa. To gather the primary source, I have used the questionnaire method which is framed using Google form and circulated to the tourist respondents through a QR code scanner.

The questionnaire includes open-ended and open-ended questions to gather the required information from visitors. The sample size of my primary study is 150 respondents.

The secondary data is gathered from the Forest Department of Netravali and the village panchayat, which include the number of visitors to Netravali in the last 10 years, and the mode of transportation used to reach Netravali, also data related to management activities of the Forest Department of Netravali.

## **4.2: RESULTS**

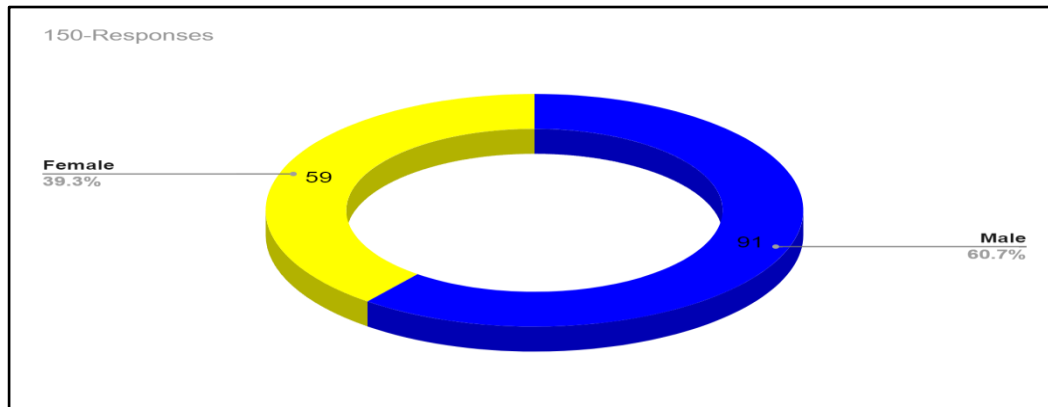
**Figure 4.2.1:** Gender of visitors.



Source: Primary data was collected using a questionnaire.

The above graph represents the gender category of the visitors who visited Netravali village, the blue bars indicate the number of male visitors from the age category of 20 to 59+, and the red bars indicate the female visitors to the village aged group between 20-59 plus. As compared to female visitors, male visitors are quite more than female visitors, especially between the age groups of 20 and 29. It is shown that the highest number of visitors are youngsters who visited the Netravali village, where 57 are male and 47 are female visitors. According to the data as the number of age groups increases the visitors seen in number, especially in female cases, with 18 male and 9 female visitors from the 30-39 age group, 10 male and 2 female visitors from the 40-49 age group and lastly old aged group from 50 to 59 plus only 6 males and 1 female visitor had noticed to Netravali village.

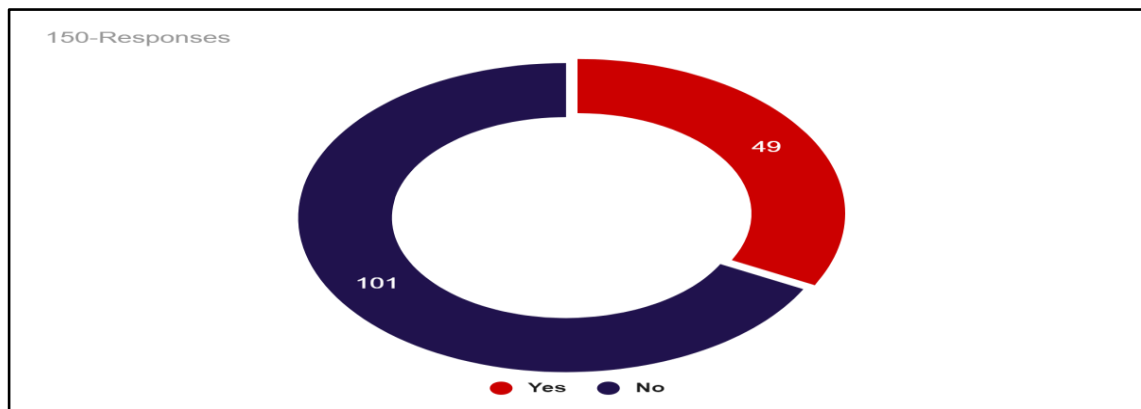
**Figure 4.2.2:** Total number of male and female visitors.



Source: Primary data was collected using a questionnaire.

This pie chart represents the distribution of gender from 150 responses. the blue colour represents the percentage of male visitors, on the other hand, the yellow colour represents the percentage of female visitors. The pie chart shows that the majority of people are male approximately 60.7% of the total sample size which is 91 people and on the other hand females are approximately 39.3% of the total sample size which is 59.

**Figure 4.2.3:** Are you a resident of Goa?



Source: Primary data was collected using a questionnaire.

The above pie chart represents the demographic picture of tourists who have visited Netravali village showing how many visitors are Goan and how many visitors are non-Goan. In the chart blue colour represents that this many visitors are the non-Goan visitors to Netravali and red colour represents Goan visitors who visited this village. Information shows that most of the visitors are from Indian states and foreign countries tourist, the majority of 101 visitors are non-

Goan and only 49 people are Goan. Which indicates that Netravali village attracts visitors from all over the world.

**Table 4.2.1:** Residence places of visitors who visited Netravali villages.

<u>TALUKA</u>	<u>NO.OF TOURISTS</u>	<u>STATE&amp; TERRITORIES</u>	<u>NO.OF TOURISTS</u>	<u>COUNTRY</u>	<u>NO.OF TOURISTS</u>
Canacona	2	Andra Pradesh	1	America	5
Ponda	1	Assam	1	Australia	1
Quepem	11	Bihar	5	Belgium	1
Salcete	18	Delhi	5	Canada	1
Sanguem	10	Gujrat	3	England	4
Satari	1	Jammu & Kashmir	1	Eurasia	1
Tiswadi	5	Jharkhand	1	France	2
		Karnataka	5	Iraq	1
		Kerala	6	Irish	2
		Ladakh	2	Israel	5
		Madhya Pradesh	1	Kenia	1
		Maharashtra	16	Nepal	1
		Pondicherry	1	Poland	1
		Rajasthan	1	Russia	3
		Tamil Nadu	3	Tajakistan	1
		Telangana	8	Ukraine	2
		Tripura	1	United Kingdom	2
		Uttar Pradesh	2	Yugoslavian	1
		Uttarakhand	2		
		West Bengal	2		
<b>Total no:</b>	<b>48</b>		<b>67</b>		<b>35</b>

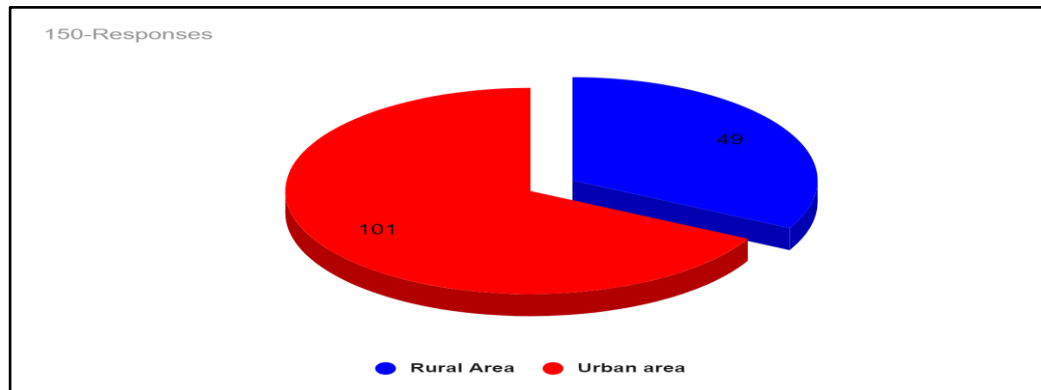
Source: Primary data was collected through a questionnaire from visitors who visited Netravali Wildlife Sanctuary.

The table (**Table 4.2.1**) represents the taluka, state & territory and country tourists visitors to Netravali village, among the all talukas Salcete shows most of the visitors around 18 people followed by Quepem Taluka with -11 visitors, Sanguem- with 10 visitors, Tiswadi with 5 visitors, 2 visitors each from Ponda and Canacona taluka, and lastly 1 visitor is from Sattati taluka. States and territory tourist Maharashtra is shown highest with 16 visitors, Telangana and Kerala were close contenders, with 8 and 6 visitors, respectively. Delhi and Bihar each contributed 5 visitors. Several states, including Karnataka, Gujarat, and Tamil Nadu, had 5 visitors each. Ladakh, Uttar Pradesh, Uttarakhand, and West Bengal each contributed 2 visitors. Only 1 visitor is from some states and territories like Jammu & Kashmir, Andhra Pradesh, Assam, and Madhya Pradesh.

Visitors from other countries, America and Israel both with 5 visitors each top on the list, followed by England and Russia with 4 and 3 visitors, the countries with 2 visitors each are from France, Ukraine, Ireland, and the United Kingdom. Lastly, Australia, Belgium, Canada, Eurasia and Iraq only 1 visitor from these countries.

According to the data, Netravali village attracts many visitors from Salcete Taluka, Maharashtra State, and American a foreign country. According to the information out of 150 respondents majority of 67 visitors are from states and territories visitors are seen in Netravali, On the second number 48 visitors are from Goa itself and lastly, 35 visitors are from another country. This information indicates that Visitors are coming from different regions of the world to visit Netravali Wildlife Sanctuary, which might have some negative effects on the natural environment and wildlife destruction etc, so regular observation is required to maintain the natural environment of village and to encourage eco-friendly activities inside the sanctuary.

**Figure 4.2.4:** Residence region of visitors.

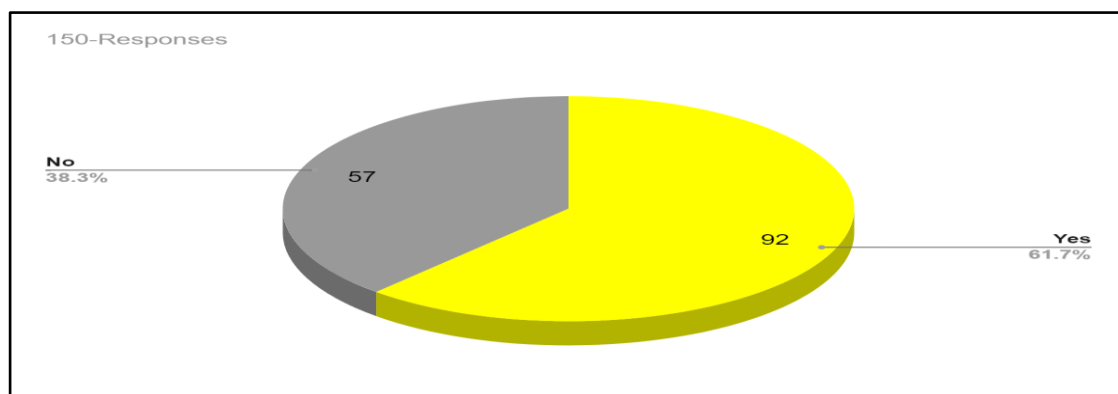


Source: Primary data was collected using a questionnaire.

The residence regions of visitors to Netravali village are depicted in the pie chart above.

According to this, 40% of visitors to Netravali village come from rural regions, while 60% of visitors are from urban areas. According to this, Netravali village is more popular as a travel destination among city people as seen by the fact that it draws more visitors from urban areas than from rural ones.

**Figure 4.2.5:** First-time visitors and re-visitors in Netravali.

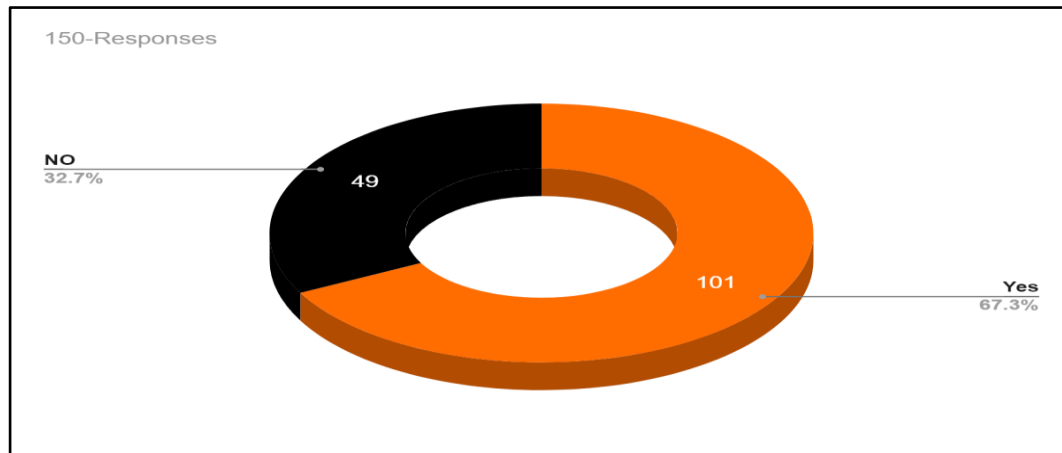


Source: Primary data was collected using a questionnaire.

The above pie chart explains that first-time visitors to Netravali have already been to this village. According to the data, 61.7% of tourists are first-time visiting Netravali and 38.3% of visitors have revisited Netravali which signifies that experience of 57 people who liked the Netravali Nature and came back to visit again. On the other hand, 92 tourists are first-time

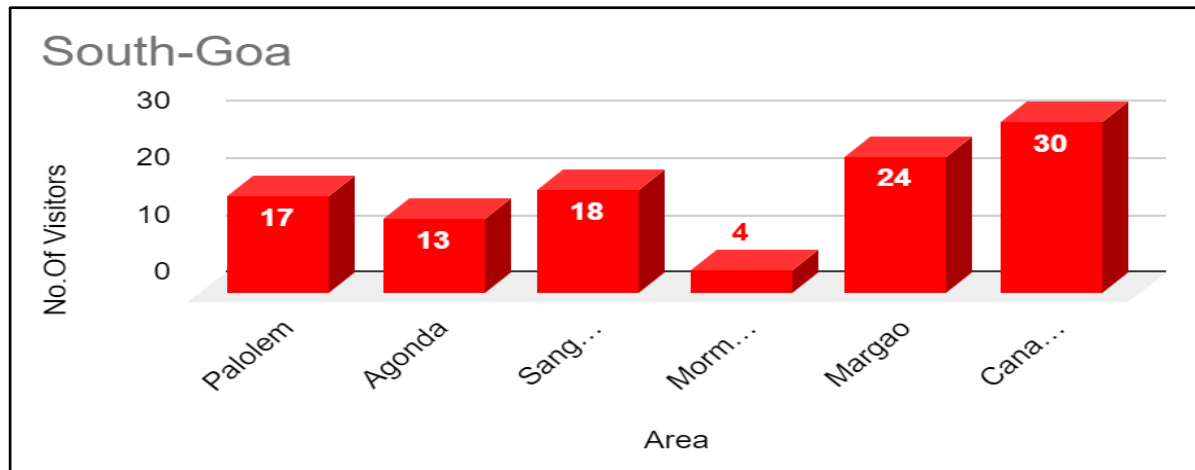
visitors from the world wide shows the popularity of Netravali Wildlife Sanctuary which attracts visitors to experience its beautiful nature.

**Figure 4.2.6:** Are you a tourist?



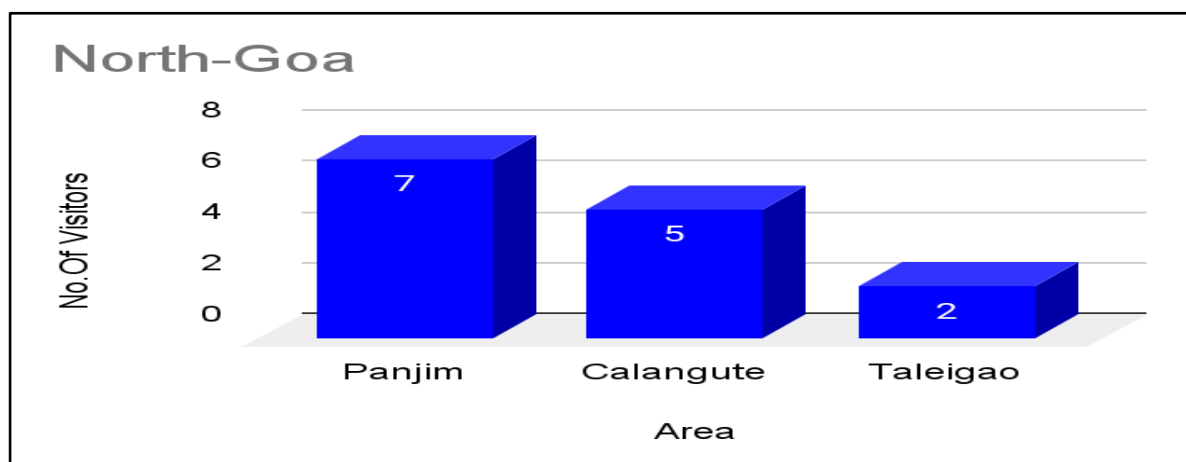
Source: Primary data was collected using a questionnaire.

The percentage of visitors to Netravali village that are tourists is shown in the pie chart, with 67.3% of visitors being tourists and 32.7% not being tourists. This information shows how popular Netravali village is becoming as a travel destination, drawing more tourist visitors than non-tourists .

**Figure 4.2.7:** Visitors travel from South Goa.

Source: Primary data was collected using a questionnaire.

The distribution of visitors to Netravali village from different parts of South Goa and North Goa is shown in the bar chart above. (**Figure 4.7**) The graph demonstrates that with 30 visitors from Canacona at the top of the list, followed by 24 visitors from the Margao area, and 18 visitors from the Sanguem area, Palolem provided 17 visitors to Netravali village, while Agonda and Mormugao provided 13 and 4 visitors to Netravali. According to the information, it has been shown that most of the visitors, both domestic and foreign, travel from the Canacona side to reach Netravali village.

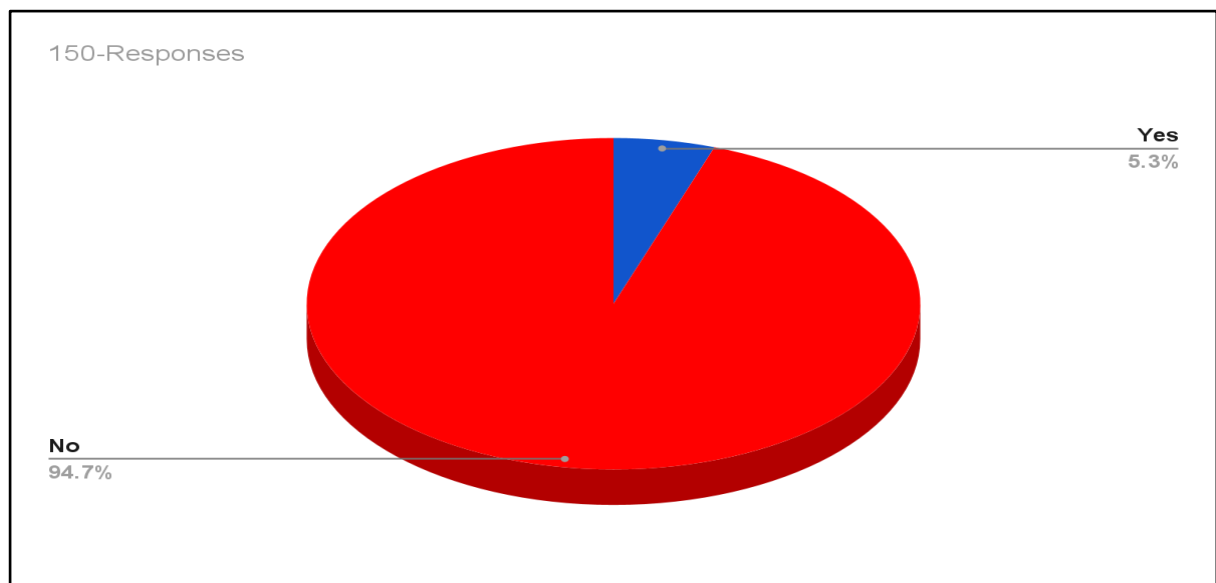
**Figure 4.2.8:** Visitors travel from North Goa.

Source: Primary data was collected using a questionnaire.

The graph (**Figure 4.2.8**) shows that visitors, both Foreign and domestic, travel from North Goa to reach Netravali Wildlife Sanctuary as compared to South Goa. with 7 visitors from the Panjim area, 5 visitors from the Calangute area and lastly 2 visitors from Taleigao.

The bar graph clearly shows the origin of visitors to Netravali Village within North Goa. With 7 tourists, Panjim tops the list, indicating its prominence as a tourism destination. Calangute and Taleigao have 5 and 2 visitors respectively, trailing behind the other locations. This information is crucial to understanding to know the travel pattern of tourist from Goa, it help to guide and develop a tourism programme which is help to enhance the visitor experience in the Netravali.

**Figure 4.2.9:** Tourists who stayed at Netravali.

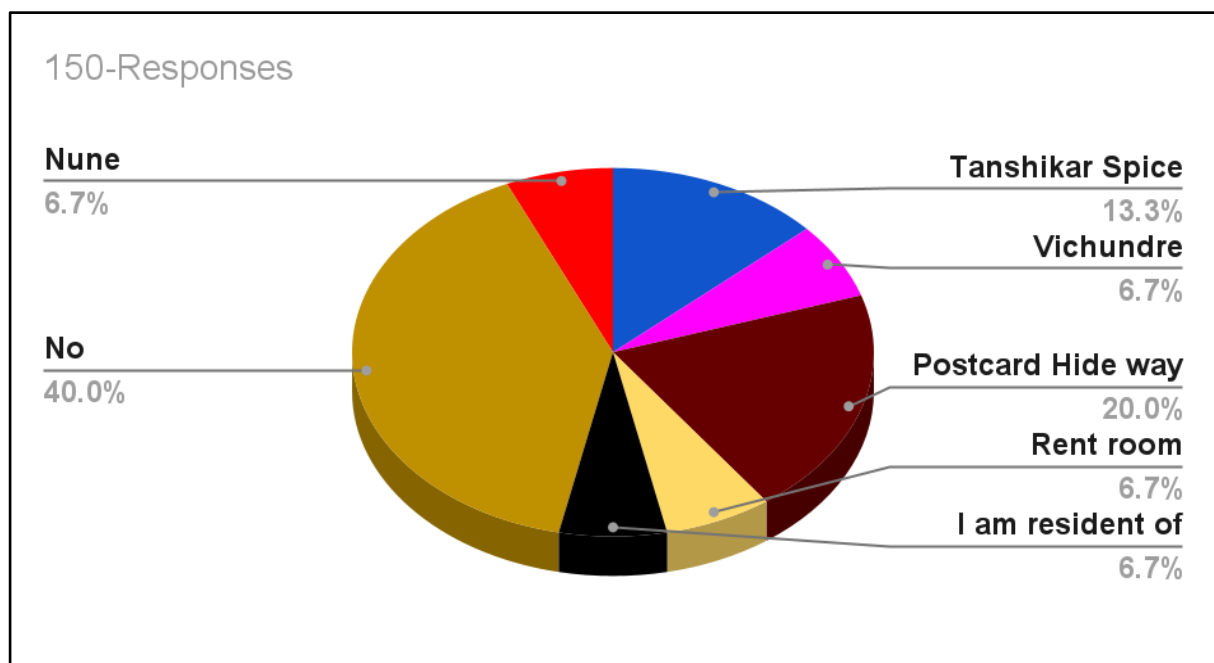


Source: Primary data was collected using a questionnaire.

The staying choices that visitors to Netravali village choose for the day are shown in the bar graph with 142 visitors saying "No" and only 8 saying "Yes," this demonstrates the clear preference of visitors not to spend the night in Netravali. According to this data, most visitors to Netravali village are on day trips, indicating that people primarily see it as a place to spend

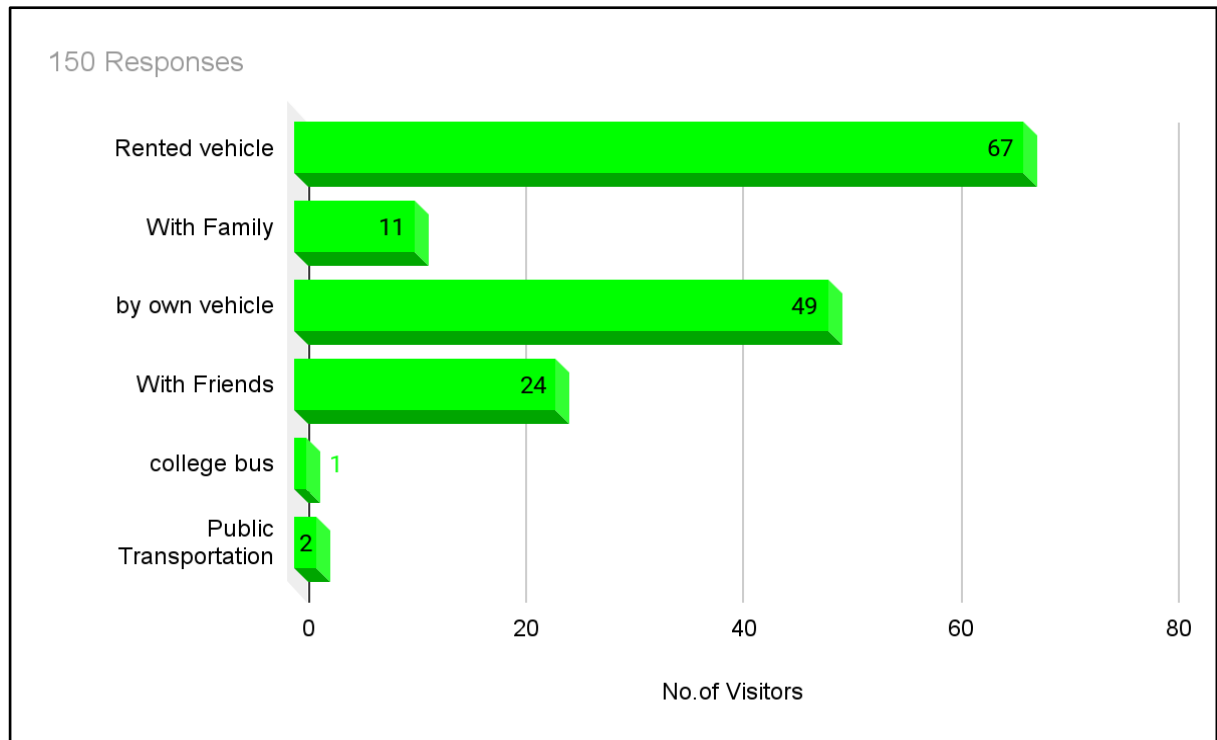
a few hours rather than spending the night. Recognizing this preference is important for organising tourism in the area and can assist in creating facilities and packages that are suitable for day-trippers. As of now in Netravali there are few accommodation options available to tourists mainly such as Postcard Hideaway Resort in Jaquem, Tansikar Spice Farm Cottages in Netravali, and Mangal Farmstay in Mangal village. The chart signifies that there are fewer accommodation facilities available to the visitors, which affects the local economy so there is a need to construct good eco-friendly accommodation facilities in Netravali.

**Figure 4.2.10:** Places where tourists reside during their visit.



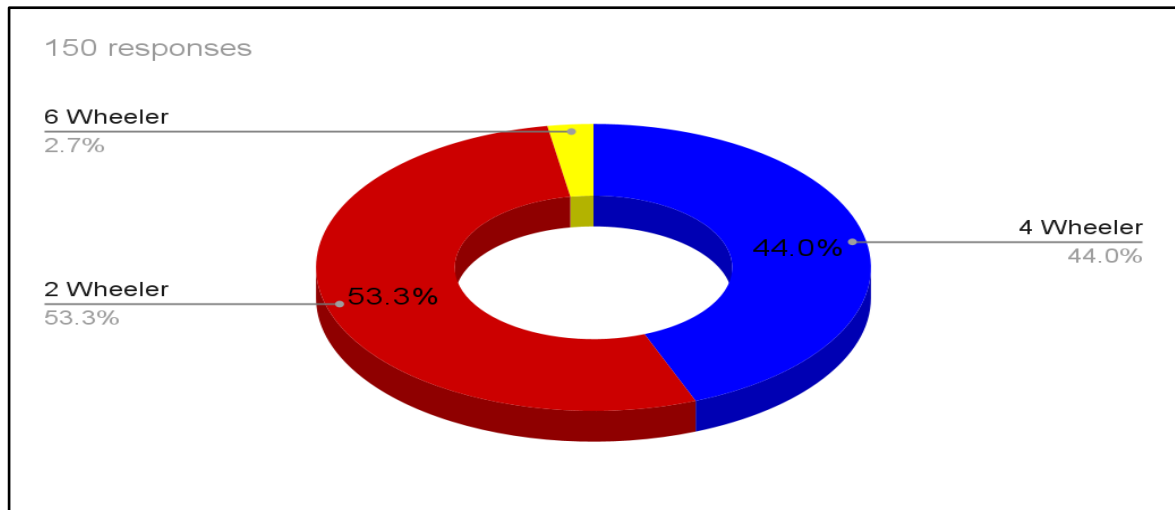
Source: Primary data was collected using a questionnaire.

This bar graph shows the percentage of visitors who choose to stay in Netravali village vs those who do not. The majority- 40.0%, have chosen not to remain overnight. Out of all Postcard Hide Away is the most popular choice (20.0% of visitors). 6.7% of visitors who choose to stay in Tanshikar Spice Farm, Vichundre, Nune, rent a room, and villager. This indicates that the majority of visitors stay only for a short time and then leave for other destinations.

**Figure 4.2.11:** How tourists travel to the village Netravali

Source: Primary data was collected using a questionnaire.

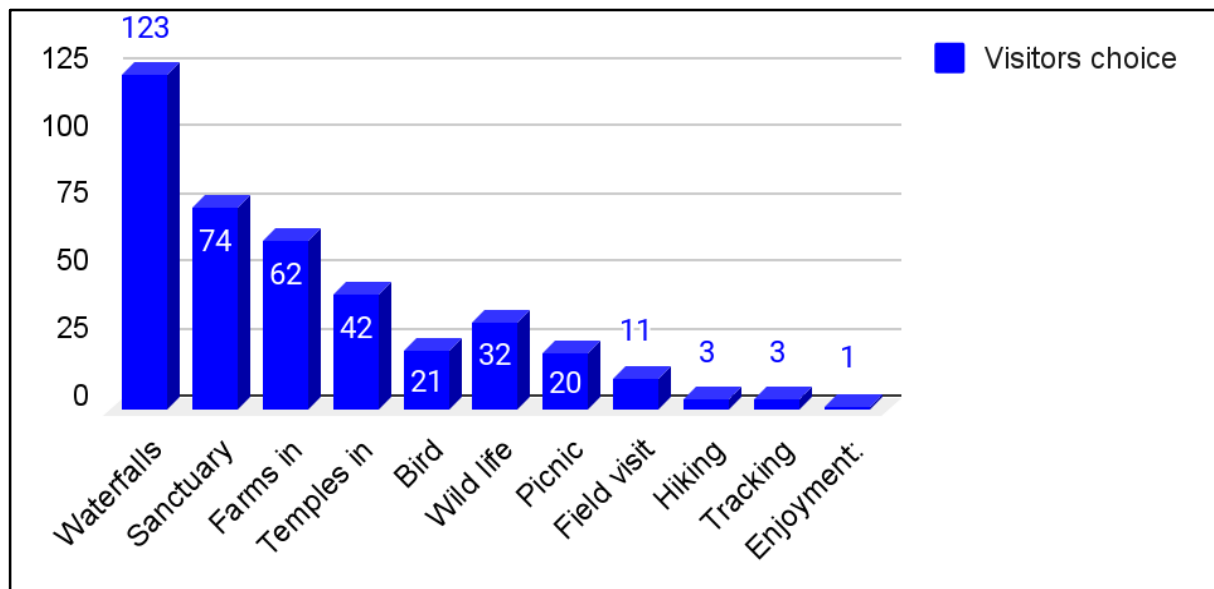
The above bar graph provides a clear summary of the ways that visitors reach Netravali village. The ease and profitability of renting a vehicle were shown by the majority of travellers, who chose to do so in 67 cases. 49 visitors mention the convenience of using their own vehicle in their decision. In addition, 11 visitors decided to travel with their families, while 24 tourists travelled with friends. Only 3 took the college bus or public transportation. The data mentioned above highlights the necessity of enhancing the road and providing sufficient parking facilities for attending to the diverse modes of transport preferences of tourists who visit Netravali village.

**Figure 4.2.12:** Mode of transportation.

Source: Primary data was collected using a questionnaire.

The pie graph depicts common modes of transportation used by the visitors to reach Netravali village. Around 80 (53.3%) of the tourists choose 2-wheelers, such as motorcycles, and scooters used to reach this area. 66 people (44.0%) used 4-wheelers, such as cars and jeeps. This data shows that the popular mode of transportation used by visitors is motorcycles which is the more convenient and efficient mode of transportation especially in mountains and hilly areas. Motorcycle and four-wheelers is the best mode of transportation to explore Nature while travelling. As compared to the other 2 modes of transportation few people used 6 wheeler transport 4(2.7%), According to this information, the increasing number of tourists put pressure on land for parking facilities and other facilities etc.

**Figure 4.2.13:** The reasons for tourists visiting Netravali Village.

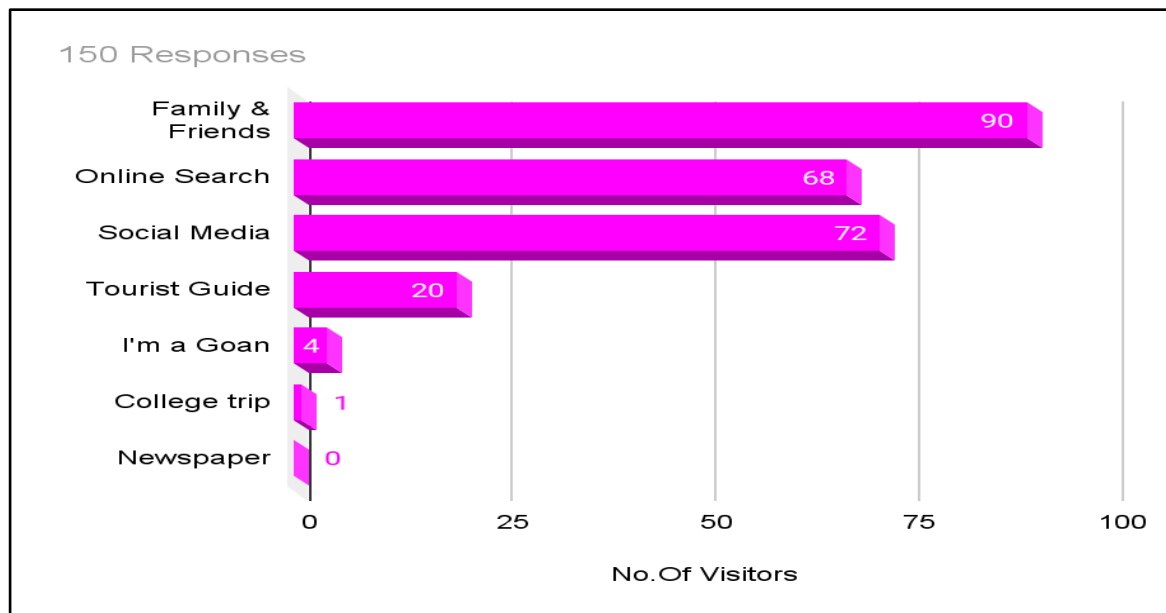


Source: Primary data was collected using a questionnaire.

The above graph depicts the main reasons why tourists are coming to Netravali. A large majority of 123 tourists are attracted to the village to experience its waterfalls and rivers, and to see its beautiful nature, 74 visitors came to Netravali primarily to explore the Netravali Wildlife Sanctuary, to see biodiversity and explore nature, 62 visitors came to see the strawberry and other farms in Netravali, which showcase the village agriculture and farming activities, 42 visitors came to explore the village temples, 21 and 32 visitors engage in bird-watching and wildlife observations, and also 20 visitors came for picnicking. Moreover, few visitors choose other activities like field visits, hiking, tracking, and lastly for enjoyment.

This study found that Netravali provides a diverse range of activities like clean natural and wildlife experiences and many more activities the village offers to visitors, making Netravali a multifaceted tourist destination

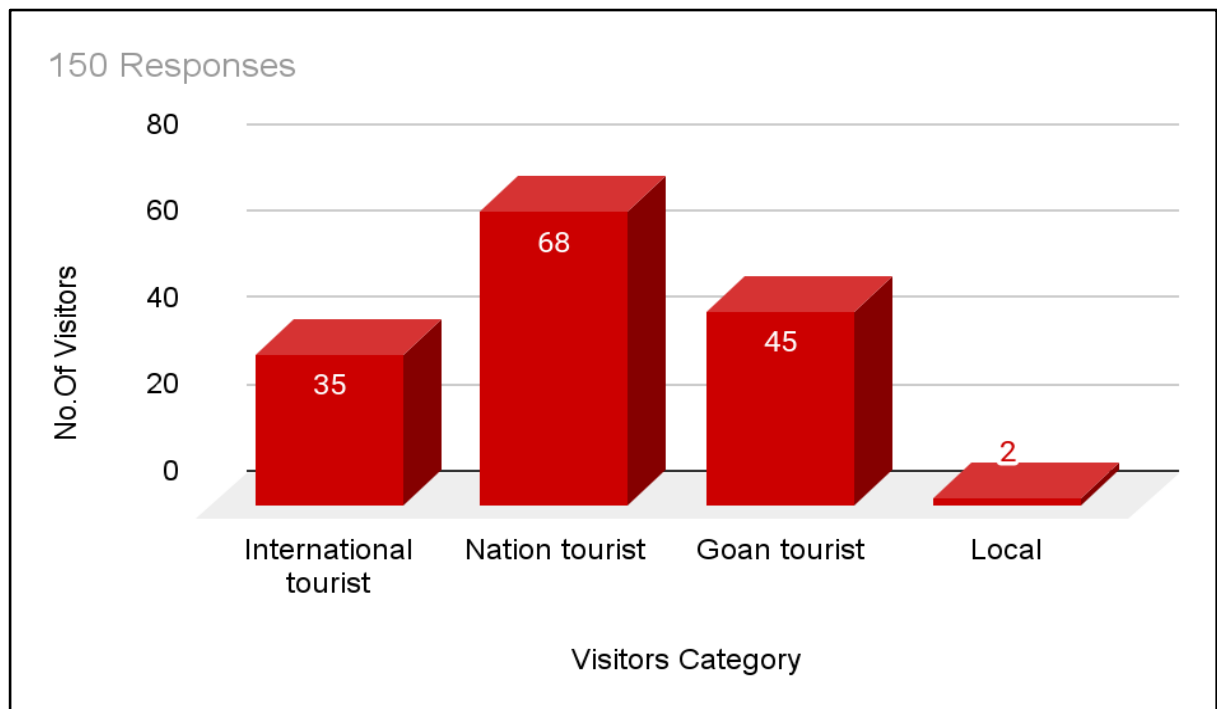
**Figure 4.2.14:** How tourists learn about the Village Netravali.



Source: Primary data was collected using a questionnaire.

The above graph indicates how the tourists learn about the Netravali is shown in this chart. A significant number of visitors, 90 people learn about the village via family and friend suggestions which emphasises the importance of word-of-mouth. 72 people learn about Netravali through social media platforms which signifies that social media influences people to come to destinations like Netravali and 68 people found Netravali through an online search. 20 tourists learn through tourist guides and locals. It is interesting to know that none of the visitors learn about the Village via the Newspaper. casting doubt on more conventional methods of knowledge transfer. "Just 1 student knew about this village from a college trip to Netravali."., Only four locals, who are Goan villagers, knew about this place

**Figure 4.2.15:** Tourist demographics characteristic.

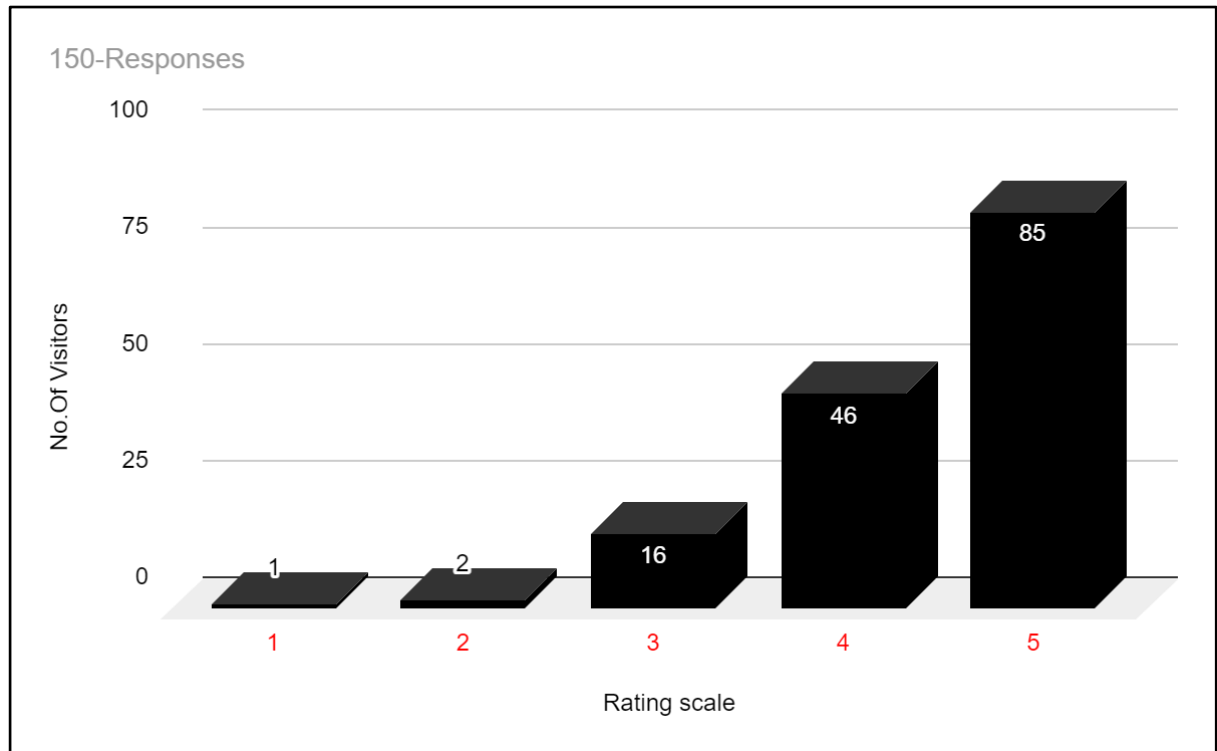


Source: Primary data was collected using a questionnaire.

The above bar graph provides the demographic characteristics of visitors to Netravali village. With the majority of 68 national tourists visiting Netravali from various regions of India, 45 people who are Goan visited Netravali from different parts of Goa which indicates that people of Goa like to see the sights of their state, and come in second position.

The beauty of Netravali village not only attracts national and state tourists but also attracts tourists from worldwide, which is 35 tourists from other countries have visited Netravali and only 2 people are classified as local from the surrounding area. This diverse range of tourists from international to local will contribute to its cultural and development activity.

**Figure 4.2.16:** Experience ratings of tourists.

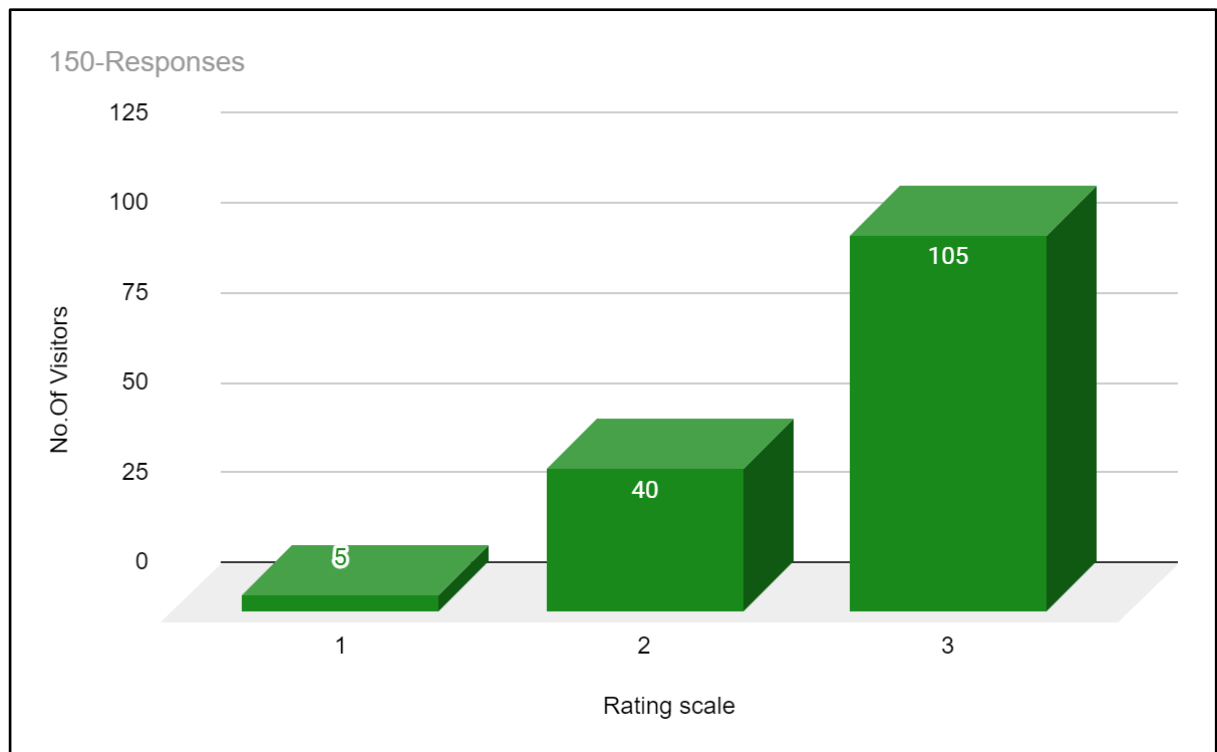


Source: Primary data was collected using a questionnaire.

The bar chart above provides the overall satisfaction level of tourists who visited Netravali village on a scale of 1 from 5 where 1 signifies a very bad experience and 5 signifies a very good satisfaction level. 79 visitors expressed a high level of satisfaction by rating 5 numbers, 40 people rated their experience as 4 which reflects a positive experience, and 13 people gave scale ratings of 3 to a smaller segment of visitors. A minimum number of visitors select 3 and lastly, 1 person selects a very bad rating identifying a very low satisfaction level.

This satisfactory level expresses visitors' experience at Netravali Wildlife Sanctuary and emphasises Netravali's nature to give a good experience to the visitors.

**Figure 4.2.17:** Chances of tourists re-visiting Netravali.



Source: Primary data was collected using a questionnaire.

The bar chart provides a rating scale ranging from 1- will not visit Netravali again and 3- will visit Netravali again. The data obtained indicates that the majority of tourists will return to Netravali village. Out of 150 responses, 105 visitors selected the 3 ratings that signify that tourists will visit again, and 40 tourists selected 2 ratings that indicate the possibility of coming back for another visit whereas only 5 visitors selected the 1st option that showed no interest in coming again to this place. This information highlights the good experiences of visitors and the potential of Netravali village to attract tourists to visit again.

**Table 4.2.2:** Forest places in Goa.

<b><u>SR.NO</u></b>	<b><u>THESE ARE SOME OF THE OTHER FOREST AREAS IN GOA THAT VISITORS HAVE VISITED</u></b>	<b><u>NO.OF TOURIST</u></b>
1	Bhimgad WLS	1
2	Biodiversity park Mollem	9
3	Bondla Wildlife Sanctuary	9
4	Canacona	6
5	Chandreshwar temple	1
6	Cotigao wildlife sanctuary	20
7	Dudhsagar waterfall	4
8	Krishnapur, Valpoi	1
9	Mhadei Wildlife Sanctuary	3
10	Rivona rock carving	2
11	Salim Ali Bird Sanctuary	3
12	Tambadi Surla	6
13	Not visited any other places	85
<b>TOTAL</b>		150

Source: Primary data was collected through a questionnaire from visitors who visited Netravali Wildlife Sanctuary.

The above table represents some of the forest areas that visitors had visited before coming to Netravali Wildlife Sanctuary. Out of 150 respondents 65 tourists visited above mentioned places in the table (**table 4.1.3**). It signifies that most of the visitors, 20 tourists had visited Cotigao Wildlife Sanctuary Canacona before visiting Netravali Wildlife Sanctuary. The second famous places that visitors visited are Biodiversity Park Mollem and Bondla Wildlife Sanctuary 9 Tourists

visited these Forest places before Netravali. Based on the above information it shows that in Goa various other forest places attract tourists from worldwide, this table shows that Goa is full of natural resources and has unique qualities that make people visit these many places all around Goa.

**Table 4.2.3:** Amenities that visitors want to see in Netravali village.

<b><u>SR.NO</u></b>	<b><u>AMENITIES THAT VISITORS WANT TO SEE IN NETRAVALI VILLAGE.</u></b>	<b><u>NO.OF SUGGESTIONS</u></b>
1	Accommodation -hotels, cottages, guesthouses, and restrooms etc.	<b>30</b>
2	Market, shops & restaurants, etc	<b>18</b>
3	Parking, transportation, fuel station, Internet and charging points, etc.	<b>25</b>
4	Adventure and Nature explore, etc	<b>19</b>
5	Suggestions for improving signage, cleanliness, management, restoration, medical, and emergency services etc.	<b>35</b>
6	Netravali village is unique and want to see it as it is.	<b>23</b>
<b>TOTAL</b>		<b>150</b>

Source: Primary data was collected through a questionnaire from visitors who visited Netravali Wildlife Sanctuary.

The above table represents valuable feedback from tourists. These are the amenities that a tourist wants to see in Netravali as a visitor. First of all 30 tourists would like to see good accommodation facilities such as hotels, cottages, guesthouses, restrooms etc in the village to rest and to stay overnight at Netravali village. 18 visitors suggested that they would like to see a marketplace for shopping, other shops & restaurants to eat something during their visit to Netravali, etc. 25 tourists suggested there should be parking, transportation, fuel station, Internet and charging points, etc. 19 visitors want to see adventurous activity in the sanctuary

and want to explore the natural environment of the wildlife sanctuary. 35 visitors suggested for improving signage, cleanliness, management, restoration, medical, emergency services etc, these things tourists found difficult in the Village and want these things to be improved. and lastly, 23 tourists said Netravali village is unique and want to see it as it is. Based on the above information it indicates that most of the tourists want to see improvement in the Netravali village for a better experience, for safety, to stay in Netravali and to improve the satisfaction level of the visitors.

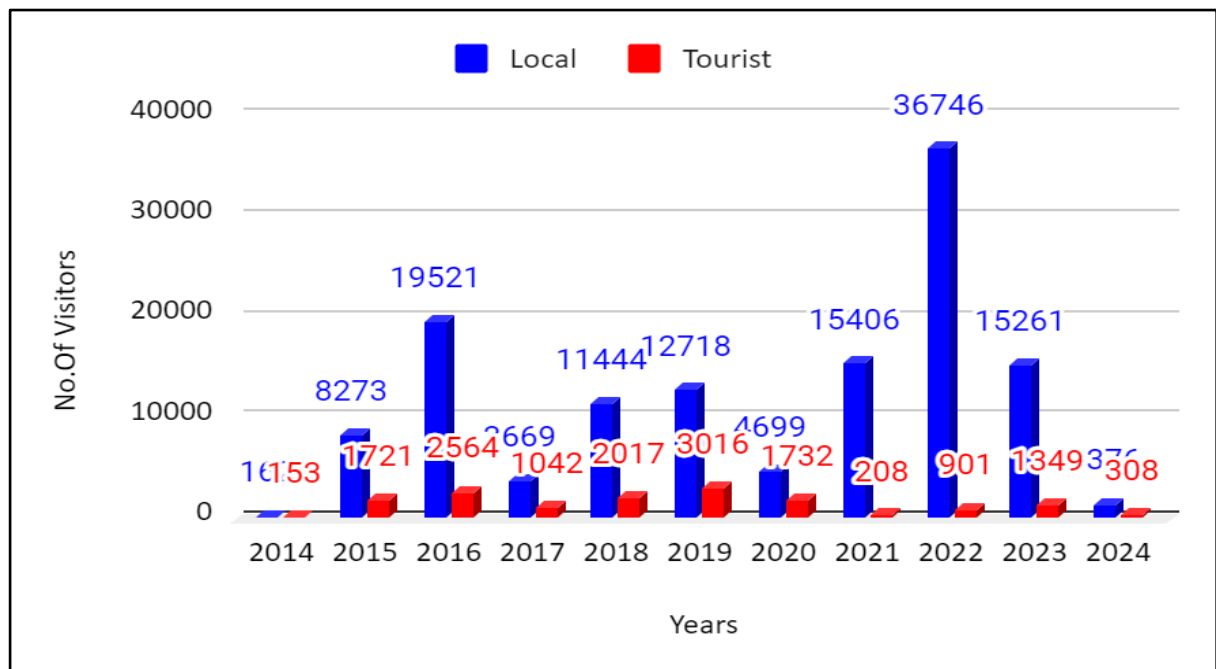
**Table 4.2.4:** Feedback from tourist visitors to the natural resource manager.

<b><u>SR.NO</u></b>	<b><u>THE FOLLOWING SUGGESTIONS WERE PROVIDED BY VISITORS TO THE NATURAL RESOURCE MANAGERS OF NETRAVALI.</u></b>	<b><u>NO.OF SUGGESTION</u></b> <b><u>S</u></b>
<b>A</b>	<b>Infrastructure and facilities</b>	
1	Clean washroom facilities in Netravali.	16
2	Photography & sitting points, and Seating arrangements.	10
3	Trash collection and trash bins	9
4	Safety gear, first aid kit and other instruments.	22
5	Clean environment	6
6	Parking facilities	2
<b>B</b>	<b>Network and Payment facilities.</b>	
1	Network and connectivity issues	6
2	Online portal for booking and cashless mode of transaction	13
3	Fees reduction	3
<b>C</b>	<b>Navigation, food, and information centre</b>	
1	Require an Information centre and interactive local guide.	11
2	Food stalls and shops	9
3	Installation and updation of informative signboards, maps and transportation.	20
<b>D</b>	<b>Tourism activities</b>	
1	Encourage eco-tourism activities, etc.	3
<b>E</b>	<b>Forest managers are doing a great job.</b>	<b>4</b>
<b>F</b>	<b>No suggestions</b>	<b>16</b>
<b>TOTAL</b>		<b>150</b>

Source: Primary data was collected through a questionnaire from visitors who visited Netravali Wildlife Sanctuary.

The above table represents the valuable feedback from tourist respondents who have visited the Netravali Wildlife Sanctuary to the nature manager. The above table represents the valuable suggestions of tourist respondents who have visited the Netravali Wildlife Sanctuary to the nature reserve manager. Out of 150 respondents, I have categorised them into 6 parts based on similar responses. The first category is about infrastructure and facilities, this category received the highest number of responses from the nature manager, such as safety gear, first aid kits, and other

instruments, 22 visitors feel that these facilities should be there in the sanctuary to improve the safety of the visitors and treat tourists during any emergency. 16 tourists said that there should be clean restroom facilities provided near the waterfall area and in the parking lot. The second category is Network and payment facilities, 13 respondents said that an Online portal for booking and cashless mode of transaction should be provided by the forest department for feasibility, to book tickets online and to take updates about the sanctuary, 6 people replied that there should be minimum network and connectivity to call some during emergency or urgency, only bsnl network is available at the village. The next category is Navigation, food, and information centre, 20 tourists responded that there should be Installation and updation of informative signboards, maps and transportation facilities to guide the visitors to their correct destination. 11 responded there be a guide to provide information about the Netravali village and sanctuary. Encourage eco-tourism activities 3 Respondents replied to have some tourism activities such as water rafting etc. Only 4 tourists said that the natural reserve managers are doing a great job of protecting the sanctuary. Finally, 16 said they didn't have any suggestions they liked the village as it is.

**Figure 4.2.18:** Annual visitors data from 2014 to 2024.

Source: Secondary data collected from the forest department of Netravali, Sanguem-Goa.

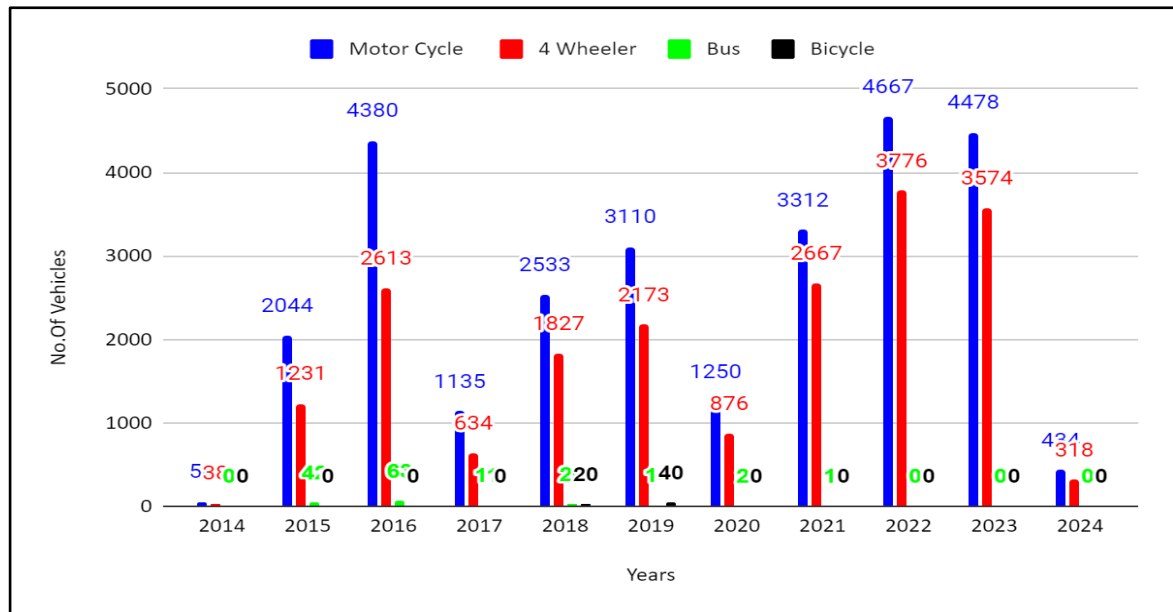
The above graph shows the data of all tourist visits from 2014 to 2024 the blue bars represent the local or national tourists visited during that period and the red bars represent the foreign tourists who visited Netravali during this period. On the Y-axis we measure years and on the X-axis we measure the number of visitors.

The data shows a fluctuation pattern in the number of tourists visiting Netravali village. with 162 local visitors in 2104 was higher than foreign tourists which are 153 in that year, both local and tourist shows a significant increase in the next year. In 2016 it recorded a greater number of local visitors with 19,521 visitors compared to tourists 2,564, however next year it showed a decline in both locals and tourists. Significantly the number of local visitors increased in 2018 & 2019 to 11,444 & 12,718 respectively, and foreign tourists increased to 2,017 & 3,016. In 2020 it showed a drop of 4,699 in locals and 1,732 in foreign visitors, perhaps as a result of the global pandemic. In 2021 there was a rebound in local visitors with 15,406 and 208 number of foreign visitors.

In 2022 there was the highest number of local visitors witnessed in Netravali with 36,746 and 901 foreign tourists.in 2023 and 2024 it showed there was a decline in both local and tourist

visitors (15,261 & 1376) and (1349&308) respectively. Overall it has shown increasing popularity of Netravali village among local and tourist visitors and becoming a well-known travel destination for visitors.

**Figure 4.2.19:** Annual vehicular data from 2014 to 2024.



Source: Secondary data collected from the forest department of Netravali, Sanguem- Goa.

The above bar graph is based on the secondary data from the forest department of Netravali, this is the unpublished data that highlights the preferred mode of transportation for motorcycles, four-wheelers, buses and bicycles which visitors use to travel to Netravali Village from 2014 to 2024. On the x-axis, we measure the years and the y-axis indicates the number of foreign and local visitors. This chart is to understand which mode of transportation is used by the visitors, the data showed that most of the visitors prefer to travel using a motorcycle rather than a four-wheeler. The bar graph shows that there is lots of fluctuation in the transportation used by visitors, especially among two-wheelers and four-wheelers.

In 2015, 2022 and 2023, it shows that the number of motorcycle users has increased by more than four thousand, followed by four-wheelers. 4667 the highest number of motorcyclists

seen in the year 2022, 4478 in the year 2023, and 4380 in the year 2016. The data shows that the use of bus transportation from 2015 to 2019 has been declining, only 42 buses were recorded in 2015, and in 2016 it was highest at around 63 bus users, 2017 shows a decline in use to 11 buses, respectively in 2018-19 it has been recorded further decline in the use of the bus by visitors. Moreover, only two years 2018 and 2019 have been recorded use of bicycle by visitors to reach Netravali which is 20 cycles in 2018 and 40 cycles in 2019. Overall this data highlights the increase in preference for motorcycles and four-wheelers and the most popular mode of transportation.

**Table 4.2.5: Construction of check dams in Netravali.**

<u>SR.NO</u>	<u>DRY STONE CHECK DAM FROM 2019-20</u>	<u>NO.OF CHECK DAMS</u>
1	Mangal Beat, Netravali Round (7.00 to 8.50 meters)	5
2	Verlem Beat, Netravali Round (5.20 to 6.50 meters)	6
	<b><u>GABION CHEKCK DAM FROM 2019-21</u></b>	
1	Mangal Beat, Netravali Round (8.00 to 9.00 meters)	4
2	Verlem Beat, Netravali Round (7.50 to 8.00 meters)	3
3	Netravali Beat, Netravali Round (7.50 to 9.20 meters)	6
4	Potrem Beat in Patiem Round (6.20 to 6.50 meters)	5

Source: Secondary data collected from the forest department of Netravali, Sanguem-Goa.

The above table represents the activities of the forest department Netravali to protect and conserve soil erosion and sediment control. Check dams are small in size, it are temporarily constructed structures using stones at a continuously flowing area, 5 dry stone check dams were constructed at Mangal beat, Netravali round, and Verlem beat, Netravali round 6 dry stone check dams were constructed in year 2019 - 2020. On the other hand, gabions check das are like wire cages inside filled with stones, these are placed where water flow is high so to control the water flow and soil erosion these gabions are constructed by the forest department. Mangal Beat,

Netravali Round (8.00 to 9.00 meters) 4 check dams, Verlem Beat, Netravali Round (7.50 to 8.00 meters) 3 check dams, Netravali Beat, Netravali Round (7.50 to 9.20 meters) 6 check dams and finally 5 check dams at Potrem Beat in Patiem Round (6.20 to 6.50 meters).

**Table 4.2.6:** Construction of water ponds at Netravali village.

<b><u>SR, NO</u></b>	<b><u>CONSTRUCTION OF WATER PONDS</u></b>
1	Water pond at Netravali Beat.
2	Netravali Beat (Mainapi).
3	Potrem Beat (Tudav), Patiem Round.
4	Netravali Beat (Jaquem), Netravali Round.
5	Netravali Beat (Mattoni)
6	Mangal Beat (Nundem teak plantation)
7	Mangal Beat (Devrem forest)
8	Bandawada Beat Mattoni(Karke)
9	Potrem Beat (Tudov)
10	Netravali Beat (Votemol)
11	Zambhukhadp Netravali Beat

Source: Secondary data collected from the forest department of Netravali, Sanguem-Goa.

The above table depicts the construction of water ponds by the forest department of Netravali at different places in Netravali village. These water ponds are essential for wildlife species such as reptiles, amphibians, birds, insects and other species like diverse flora and fauna. (Table4.1.5) these ponds are the basic source of water for wildlife especially during the summer season. The forest department constructed these water ponds to support the ecosystem and wildlife of Netravali.

## **4.2: FOREST RESOURCES MANAGEMENT**

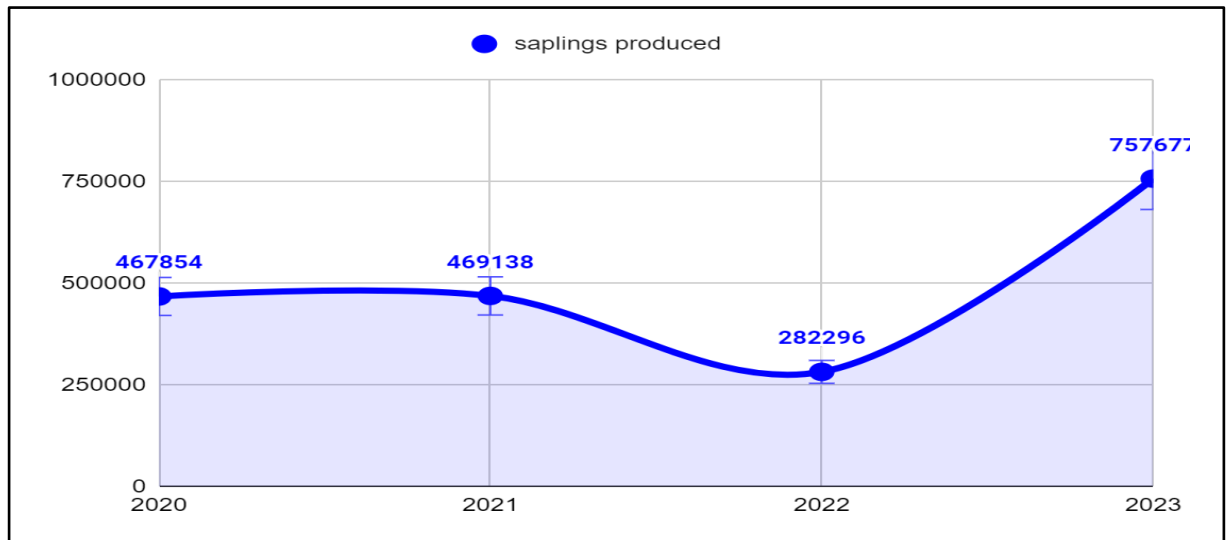
Netravali Wildlife Sanctuary is one of the most beautiful places in Goa which attracts thousands of people to explore its beautiful nature, rivers and waterfalls. According to the investigation the data revealed that especially during the rainy season in June to October this perennial waterfall of Netravali is flowing with its full potential mainly the Savri and Mainapi waterfalls which attract tourists from different places to enjoy its mesmerising nature and surrounding. Tourist activity is essential for local economic growth but it also harms when these things are not monitored or regulated, according to a report (<https://www.heralddgoa.in/Goa/>, n.d.) “due to continuous heavy rainfall in a village and high water current two people died after they were drowned in the Mainapi waterfall”. These things should be managed to protect nature and to improve the visitor's safety (4.3: Tourism plan).

## **4.3: FOREST DEPARTMENT ACTIVITIES.**

Here are some of the programs and activities of the Netravali Forest Department to protect the Netravali Wildlife Sanctuary, make people aware of the importance of the natural environment, and keep the natural resources clean and safe for future generations.

- Celebration of Vanmohatsav at Government High Schools
- Celebration of Wildlife Week
- Bird watching and awareness programme.
- Training program on Apiculture
- Day and night patrolling, awareness programmes, trekkers in every beat
- Plantation activities and free sapling distribution (Figure no 4.).
- Every year, on October 2nd, there is a cleanliness drive.
- Hanuman Jayanti etc.

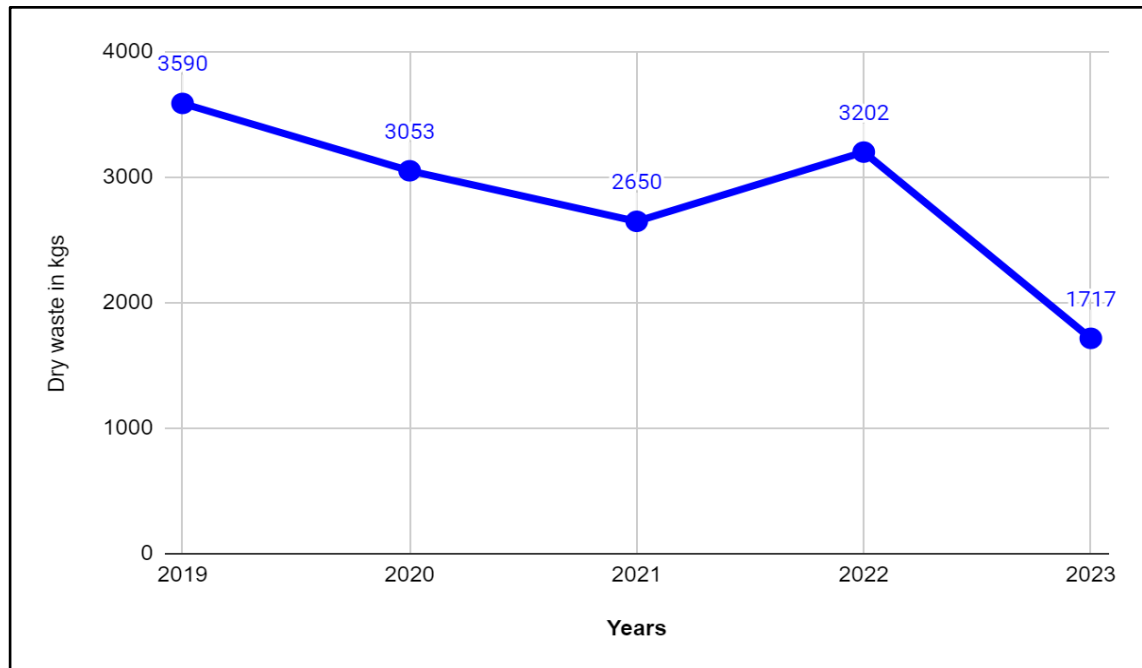
**Figure 4.2.20:** Sapling production report of Mattoni Nursery in Netravali Wildlife Sanctuary.



Source: Secondary data collected from the forest department of Netravali, Sanguem-Goa.

The above line graph represents the number of saplings that were produced in the "Mattoni Nursery in Netravali," Netravali Wildlife Sanctuary. The data is available from 2020 to 2023, which shows an increasing trend in the production of saplings. The total number of saplings that were produced in 2020 was 467854; in the next year, production slightly increased to 469138; in 2022, the trend shows a decline in the production of saplings to 282296, which shows the impact of the COVID-19 pandemic; and in 2023, the trend shows a drastic increase in the production of saplings.

**Figure 4.2.21: Total garbage collection report from Netravali Panchayat.**



Source: Secondary data collected from the forest department of Netravali, Sanguem-Goa.

The above line graph shows the garbage collected report by the Netravali panchayat. It shows a downward trend from 2019 to 2023. In 2019, the total garbage collected by the village panchayat was 3590 kilograms, in 2020, it showed a decline of 3053 kilograms, in 2021, it showed a further downward trend in garbage collection, in 2022, the trend rose to 3202 kilograms; and lastly, in 2023, the trend shows a steep downfall in garbage collection. This information signifies that as the year passes, the garbage collection in the village shows a huge decline, which is a good indicator for the village and nature.

#### **4.4: TOURISM PLAN**

This plan involves the various steps that ensure the Netravali Wildlife is sustainably maintained to attract visitors from worldwide and improve visitors' safety on different sites. This plan will provide a good experience to the visitors, and protect the natural environment of Netravali.

1. According to the study, most tourist visitors are attracted to Netravali to see its beautiful nature and waterfalls (Figure 4.2.13). However, The forest managers should allow limited tourists per day to avoid mass tourism, and accidents at the sites, this is very important, especially during the monsoon time when waterfalls are flowing at their full potential and chances of accidents are likely to be more.
2. The visitor should be allowed inside the wildlife sanctuary according to the carrying capacity of the waterfalls and other tourist spots.
3. It is important and necessary to create online portals and websites for booking tickets online and to keep people updated about the current situation in Netravali Wildlife Sanctuary.
4. Good network connectivity for basic calling, a feasible mode of ticket payment, clear and attractive signage, good road access, and navigation to the wildlife sanctuary.
5. Basic facilities inside the sanctuary include clean and well-maintained washrooms, changing rooms, clean and safe drinking water, a food centre, etc, to improve the visitor's experience in Netravali.
6. (Table 4.2.3) There is a need to provide basic and good eco-friendly accommodations, eco-lodges, hotels, homestays, and restaurants using sustainable building materials in Netravali to encourage visitors to stay overnight, which will contribute to the local economy's growth.
7. There is a need to provide a tourist guide to the visitor to explore the nature and wildlife sanctuary and to educate tourists about the historic sites and temples of Netravali.

8. There is a need for guidance and training for the locals to improve their skills and knowledge regarding hospitality and eco-tourism in Netravali.

## **CHAPTER 5: FINDINGS AND CONCLUSION**

### **5.1: FINDINGS**

This study has found that the Netravali village has the potential to attract tourists from different parts of the world.

1] The findings of the study are based on the primary data collected through surveys and questionnaires, the results of the study are based on a Likert scale from 1 to 5, where 1 indicates a bad experience for the visitor and 5 indicates a good experience. Most of the visitors, more than 50%, have been rated with higher ratings of 5, which shows that the experience and satisfaction level of the visitors are good in Netravali and Netravali Wildlife Sanctuary.

More than 46 visitors rate their experience on a Likert scale of 4 and 16 visitors give a rating of 3, which indicates that visitors are satisfied with their visit to Netravali, so there is a possibility that visitors will share their experiences with others, which might influence others to visit Netravali.

2] In (figure 4.2.14), which indicates that most of visitors around 90 out of 150 learn about the Netravali village through recommendations from family and friends, which states that the Netravali village and its beautiful natural environment create a positive impact on visitors, which allows them to share their experience to others and rest discover this place from social media and online search.

3] The study findings of a Likert scale of 1 to 3, where 1 indicates bad experience and will not revisit Netravali and 3 indicates good experience in Netravali and visitors will come again to the sanctuary and so as the result of the study majority of the visitors is rated 3, which shows the good experience of the visitors in Netravali.

- 4] Despite the COVID-19 pandemic the growth of tourist visitors has not been affected so much, the number of visitors has shown a rise in the village soon after the lockdown was lifted.
- 5] During the monsoon season it has been seen that the number of visitors has gone up especially in the month of June to October.
- 6] Data indicates that the carrying capacity for tourists is so high, therefore there is no limit has been imposed in Netravali.
- 7] Netravali needs to increase accommodation facilities for visitors, data shows that more than 94.7% of the visitors are not staying in Netravali and travelling to other places because of inadequate accommodation facilities.
- 8] This study found that most of the visitors arrived at Netravali village using rented vehicles which are two-wheelers and four-wheeler modes of transport.
- 9] The study found that one of the major reasons tourists arrive at Netravali is to see its beautiful nature and to see its 3 major waterfalls which are the major attractions of the Netravali village.
- 10] The study findings are based on a Primary survey where most of the visitors arrive from India, then Goa, and lastly from foreign countries to the wildlife sanctuary.

## **5.2: CONCLUSION**

This study focused on understanding the general effect of tourism activities on Netravali village and finding out ways to manage the growing potential visitors to Netravali to protect the village's natural environment from being damaged and to keep the village's nature safe forever. The study focuses on examining the trend of tourist visitors to Netravali village over the last 10 years, the mode of transportation used by visitors, and reasons behind most of the tourists' travel to this destination, and formulating a tourism plan for the future sustainability of nature. Although the existing literature on Netravali provides an overview of certain aspects but lacks detailed insights into the topic of sustainable tourism and management. Useful information was gathered using both primary surveys through well-framed and discussed questionnaires and secondary information was collected from the forest department of Netravali.

The finding of the study revealed that there is an increasing trend in the number of visitors to Netravali, specifically, it has been seen that the national visitors are in huge numbers than foreign arrive at Netravali village [Table 4.2.1]. Most of the visitors choose to travel using a two-wheeler rather than a four-wheeler [figure 4.2.12]. Although most of the visitors are attracted to village Netravali to see its beautiful waterfalls, rivers, and wildlife sanctuary etc, Visitors who come here are satisfied with their visit, according to a Likert scale of 1 to 5, more than 50% of the visitors rated their experience in the village by the rating of 5 out of 5 number [figure 4.2.16].

the study revealed that most of the visitors are day travellers they are staying at Netravali for a few hours according to suggestions from visitors the natural resource manager should provide accommodation, food and better washroom facilities to the visitors, these are some essential requirements of visitors the need to be improved by resource managers to increase the satisfaction and experience of the tourists. [Table 4.2.4]

## APPENDIX

### APPENDIX I: QUESTIONNAIRE FOR RESPONDENTS

#### TOURISM AND NATURAL RESOURCE MANAGEMENT IN NETRAVALI

Name:

Age:

Gender:

- Male
- Female
- Others \_\_\_\_\_

1. Are you a resident of Goa?

Yes,

No

2. What is your place of residence?

Ans \_\_\_\_\_

3. Kindly specify where you reside.

Urban Area

Rural Area

4. Is this your first visit to Village Netravali?

- Yes,
- No

5. Are you a tourist?

- Yes,
- No

6. If Yes, from which town /village did you travel to reach Netravali Village today?

Ans \_\_\_\_\_

7. Would you be staying at Netravali today?

Yes,

No

8. If Yes, Please Specify.

Ans \_\_\_\_\_

9. With how many people did you travel to the village Netravali?

Ans \_\_\_\_\_

10. How did you travel to village Netravali?

By Own Vehicle

Public Transportation.

With Friends

With Family

Rented vehicle

Others \_\_\_\_\_

11. Whether it is?

- 2-Wheeler
- 4-Wheeler
- Cycle
- Other \_\_\_\_\_

12. What are the reasons for visiting Netravali Village?

To see Netravali Wild Life Sanctuary

see waterfalls and Rivers

Bird Watching

Wildlife Observation

To visit Strawberry and other farms in Netravali

To visit temples in Netravali

Picnic

Field visit

Others\_\_\_\_\_

13. How did you learn about the Village Netravali?

- Online Search
- Social Media
- Newspaper
- Tourist Guide
- Family & Friends
- Others\_\_\_\_\_

14. Please scale your experience.

1. Very bad
- 2
- 3
- 4
5. Very Good

15. Will you visit Netravali again?

1. Never come again
- 2
3. Will definitely come again

16. Which other forest areas in Goa have you visited this time, if any?

Ans\_\_\_\_\_

Not visited

17. What amenities would you like to see in the village of Netravali as a visitor?

Ans\_\_\_\_\_

18. What would you suggest to the nature reserve managers for improving the visitor experience in the sanctuary?

Ans\_\_\_\_\_

## APPENDIX II: QR CODE



Hello Guys! This is Saiesh Velip from MA Economics Part II, Goa Business School at Goa University.

This QR code/link is for my dissertation purpose. I'm collecting the primary data on **Tourism and Natural Resource Management in Netravali.**

Please fill out the form and submit it.

Thankyou!

<https://forms.gle/FEum8ZbRPSHrdbPW6>

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