

ASSESSING THE IMPACT OF ECOTOURISM IN MAHARASHTRA FORESTS

P.S. Kamble, Atul Dake

Senior Professor, Department of Economics, Shivaji University Kolhapur

Research Fellow, Department of Economics, Shivaji University Kolhapur

Abstract

Eco-tourism is a sustainable tourism approach that promotes environmental and cultural understanding and conservation in natural areas. India is developing ecotourism spots in states like Maharashtra, which has a rich biodiversity of 15,732 sq km. Rapid urbanization has led to the creation of protected areas for rare and endangered species, promoting economic development through employment generation and awareness creation. However, rapid urbanization in hill stations like Mahabaleshwar and Panchgani has led to damaging tourist developments, such as clearing natural vegetation, cutting trees for fuel wood, increasing pressure on water and electricity resources, pollution, overcrowding, and litter. Experience-based tourism initiatives are gaining popularity in Maharashtra, allowing tourists to experience indigenous communities' lifestyles and culture. The Ministry of Environment, Forest and Climate Change (MOEFCC) has released guidelines in 2021 to support "low impact nature tourism" within protected areas and ecotourism zones around forests.

Keywords: Ecotourism, Biodiversity, Employment Generation, Maharashtra Potential.

INTRODUCTION

Ecotourism is a type of sustainable travel that emphasizes connecting with nature, raising awareness of environmental issues, and encouraging cultural preservation. Since biodiversity is a key component of tourism, India is developing several of its states as travel destinations. Rapid urbanization has an impact on biodiversity, which prompts the establishment of protected areas for uncommon and threatened species. Maharashtra is rich in biodiversity, with forests, marshes, grasslands, coastal forests, and evergreen forests covering 15,732 square kilometers of its forest reserves. Shinde and Pardesh, 2015). Because ecotourism encourages peace with environment and provides tourists with the chance to experience and explore nature, it is crucial for the protection of endangered species. Simultaneously, the significance of conserving indigenous culture and biodiversity is highlighted. Additionally, ecotourism advances economic growth. with generating awareness and jobs. The purpose of this essay is to examine the role that ecotourism plays in Maharashtra's biodiversity protection. In-depth research is required to examine stressors and how they harm biodiversity. In terms of environmental carrying capacity, ecotourism will cause the tourist industry to expand. Maharashtra's distinct terrain, which includes the deep Vidarbha forest in the north and the Konkan coast in the west, offers unmatched biodiversity and is a reflection of the state's distinct culture. Maharashtra's tourist industry has expanded quickly, but at the expense of the environment. This has resulted in the creation of more parks and habitats, the eradication of wildlife and unique creatures, and ecological damage. Thus, in order to grow ecotourism—where biodiversity is a valuable resource—sustainable tourist development is necessary.

IMPORTANCE AND NEED OF ECOTOURISM

Traveling may be fun if it involves seeing other cultures, eating delicious food, and engaging with people from different backgrounds. Ecotourism benefits the environment and the general public by providing unique experiences and knowledge that can raise people's quality of life. Furthermore, it might transmit information, assisting tourists in appreciating the location's ecological and historical significance. Ecotourism supports a healthy economy by fostering cultural diversity rooted in natural resources. But popular tourist destinations often fail to provide for the needs of Indigenous people, forcing them to relocate and causing destruction in the process. When traveling, environmental issues are usually ignored, and many well-known places are unaware of them. Though the most popular spots might not have much advertising or attract large crowds, by word of mouth, they might become apparent and seductive to visitors. Ecotourism may help reduce carbon footprint by reducing travel, which adds to pollution. Designated areas with walking pathways and shared transportation choices, such as hybrid buses and trolleys, can help reduce air pollution. Animals suffer when people travel recklessly because many tourist sites forcibly imprison animals or force them to participate in acts, which causes stress and pain. Instead, students should explore hiking trails, view animals in their natural habitat, enjoy the scenery, and get up close and personal with a variety of species. In conclusion, there are many benefits to ecotourism, such as financial support, a greater understanding of the environment, and the satisfaction of a better protected place. As

stated The world's aviation sector carried over three billion passengers in 2013, and by 2030, it is expected to carry five billion. This information comes from the Air Transport Action Group. This phenomenon produces surplus carbon dioxide and initiates a domino effect. everywhere. While residents find it challenging to create sustainable designs, visitors typically require additional services including housing, sewage systems, and water treatment plants. According to Joshi and Mutalik (2019), this might lead to polluted water, which would be harmful to humans, animals, and wildlife. The rapid growth of tourism has had a negative impact on the environment, resulting in garbage accumulating on the ground and in containers and endangering animals via shooting and animal entertainment. taking photographs. Feeding wild animals might cause them to alter their feeding habits. Animal Land industries can also cause erosion and animal extinction. It is vital to consider how tourism planning affects the environment, ecology, and social life. Many people believed that tourism was a lucrative sector with minimal restrictions and no hurdles to entry ten years ago. Numerous organizations are governed by Dakin's theories of self-interest, and significant changes are rarely brought about by outside forces or conflicting interests. Research has been done to evaluate the impacts of this world, and the concept of ecotourism has emerged. Travel that respects the environment and encourages sustainable development is known as ecotourism. It is commonly seen as a means of promoting environmentally friendly growth and protecting natural areas.

REVIEW OF THE RESEARCH LITERATURE

Eco-tourism in Maharashtra is a growing trend that promotes sustainable tourism development, conservation of biodiversity, and local culture.

1. Dr. Vandana M. Joshi highlighted the importance of biodiversity, unique ecosystems, and attractions of biodiversity in Maharashtra. She also highlighted the "Eco-tourism Policy" formulated by the Maharashtra Government. Adopting ecotourism leads to sustainable tourism development, generating income for rural communities and prioritizing the preservation of flora and fauna. The paper emphasizes the need for environmental quality, social equity, community empowerment, cultural integrity, and economic efficiency in tourist promotion methods.
2. Charles and Helber (1978) emphasized the multifaceted nature of the tourism industry, which has both economic and non-economic significance. They emphasized that tourism can significantly contribute to human understanding, job creation, foreign exchange, and standard living, making it a vital segment of the economy.
3. UshaBande's 2005 study outlined ecotourism as a sustainable travel strategy that maximizes profits from wildlife without disrupting its natural balance, aiming to restore public interaction with nature and maintain intact indigenous cultures and civilizations.
4. Amol S. Shinde and Rahul S. Pardeshi highlighted the negative impact of urbanization on biodiversity, urging the development of new rules and regulations to protect endangered species. The paper concludes that ecotourism can contribute to biodiversity conservation by providing employment and reducing youth migration.
5. Dr. Vishwanatha. S. March 2014 IJIRS Vol3 Issue 3 Ecotourism focuses on economic impact, which refers to the change in sales, income, or jobs generated by it. It aims to generate economic benefits, such as profits for companies, jobs for communities, or revenue for the government. Ecotourism can create jobs in remote regions, which historically have benefited less from economic development programs. This economic impact can increase political and financial support for conservation, as protected areas provide tangible benefits like biodiversity preservation and watershed maintenance. This study examines the positive and negative economic impacts of ecotourism in Kodagu district.

RESEARCH GAP

The review of some of the important research studies relating to the present topic of research reveals that, there are only a few studies, which have been carried out. However, the topic is very comprehensive and crucial and hence the greater number of studies are required and demanded therefore this study is very much necessary and required as well as forest is a very important natural resources. Its provided the number of benefits and advantages to the people and other living things. Eco-tourism is a sustainable tourism approach that focuses on experiencing natural areas, fostering environmental and cultural understanding and conservation. India is developing ecotourism spots to conserve biodiversity and promote economic development. Maharashtra's unique geography and forests provide unique experiences for tourists, while ecotourism stimulates economic strength by promoting sustainable practices among diverse communities. However, popular destinations often disregard environmental concerns, leading to relocation and devastation. Ecotourism also helps reduce carbon footprints by promoting sustainable practices and promoting responsible travel. The global airline transport industry's rapid growth puts pressure on nature, causing environmental degradation and causing environmental degradation.

RESEARCH METHODOLOGY

The ecotourism study gathers information on ecotourism in India and Maharashtra using secondary data from government websites, MTDC, and the Ministry of Environment, as well as official research papers, journals, policies, reports, and plan documents.

OBJECTIVE OF THE STUDY

1. To assess the impact of ecotourism in Maharashtra's Forest.

ECOTOURISM POTENTIAL IN MAHARASHTRA

Maharashtra, a state in Western India, has grown to be a significant hub for the growth of ecotourism as a result of its distinctive terrain, climate, flora, wildlife, and ecology. Popular tourist spots like Kalsubai and the Deccan Plateau are located in the Western Ghats, which is home to ruins that UNESCO has named a World Heritage Site. With six national parks, four tiger reserves, and thirty-five animal sanctuaries, the area is rich in biodiversity. Sayadri Range, Kaş Plateau, Gadchiroli Range, and Lonar Range are examples of unique ecosystems. Maharashtra's richness and variety are enhanced by these habitats, which makes the state a prime location for the growth of ecotourism.

PRINCIPLES OF ECOTOURISM:-

Eco-tourism involves travelling to natural destinations, reducing biodiversity impact, raising environmental consciousness, providing financial benefits for conservation, giving local people financial and power, respecting local culture, and conserving nature, all of which contribute to a more sustainable and eco-friendly lifestyle.

RESULTS AND DISCUSSION

Tourism and the preservation of a healthy ecosystem depend on biodiversity, which is impacted by fast growth. With 15,732 square kilometres of woodland, Maharashtra is home to a diverse range of habitats, including green forests, marshes, grasslands, beaches, and woods. A type of health-based travel that's crucial for preserving the environment and advancing regional culture is ecotourism. It also fosters economic growth by increasing awareness and generating jobs. British soldiers have long been drawn to the hill stations of Mahabaleshwar and Panchgani in India's Western Ghats, dating back to the late 1800s. However, the expansion of the consumer market in India, the rise in both public and private transportation, the removal of natural vegetation for the benefit of the tourism sector, the planting of fuel-producing trees, the expansion of hydropower resources, traffic pollution, congestion, etc. It led to a number of disturbances, including: Maharashtra's experiential tourism industry has been effective in introducing visitors to the low-carbon footprint, way of life, and culture of indigenous populations. Mangrove safaris are a top priority for the government, and the project is supported by the Mangrove Foundation, which is a division of the Maharashtra Forest Department. The Konkan area, which is sandwiched between the Arabian Sea and the Western Ghats, is known for its distinctive cuisine, which includes fish curry, ragi roti, and kokum butter, all of which are made using local products. In order to promote sustainable tourism, Konkani Ranmanus, a community-based ecotourism group, collaborates with regional planners in hilly and coastal areas. Individual Konkani enterprises as well as the Maharashtra Mangrove and Marine Biodiversity Conservation Trust (Mangrove) encourage ecotourism. Maharashtra Forest Department (foundation). It is a stand-alone entity. The Konkani way of life guards against resource exploitation in the deep, mountainous jungle and encourages sustainable development. Community fishing is done in addition to irrigated crops and agriculture. To give visitors a feel of local life, Kalinge Eco Tours provides homestays and mangrove expeditions. With funding from the Mangrove Foundation, Songaon Ecotourism promotes the value of mangroves in shielding villages from coastal erosion and floods by providing crocodile safaris and homestays along the Vashishtir River. Following training in biodiversity, Pravin Desai established the Vanoshi Forest Homestay in the vicinity of Dodamarg. Owner of MangarFarmstay, a tourist destination in Ranmanus, farmer BaluParab, claimed he had never considered moving his 150-year-old home until Gawade in Ranmanus persuaded him to do so. to become a tourist. Community-based, ethical tourism promotes rural development. 2021 saw the release of recommendations by the Ministry of Environment, Forests, and Climate Change (MOEFCC) to encourage "low-impact tourism" in the protected regions around forests and ecotourism destinations. But before they can be used, these techniques must be updated. The scientific community's research input, funding for ecotourism initiatives, and market targeting grounded in traveler motivation data are all necessary for a successful ecotourism strategy. India should make tourism-related investments and local policy changes in order to achieve the national aim of lowering carbon emissions. The tourism sector is expanding quickly and affects local communities in both positive and bad ways. When it comes to building attractions, shelters, and support spaces, both the public and private sectors ought to take the lead. the establishment of the Maharashtra Ecotourism

Development Board has discovered around 350 locations throughout the state as of December 2015. 43 projects have been finished and 187 agreements have been authorized by the Board since 2012.

Table 1 :Sanctioned Budget and Expenditure

Financial Year Grants	Sanctioned Amount		Expenditure Incurred	
	(in Lakhs)	%	(in Lakhs)	%
2012-13	816.83	2.109	604.42	1.78
2013-14	768.1	1.983	613.42	1.81
2014-15	1600	4.131	1389.74	4.10
2015-16	10069	25.999	9134.24	26.96
2016-17	5674.88	14.653	4678.83	13.81
2017-18	8000	20.656	7327.8	21.63
2018-19	8400	21.689	7389.95	21.81
2019-20	3400	8.779	2746.25	8.10
Total	38728.81	100	33884.65	100
Mean	5415.997		4754.319	
Standard deviation	3703.977		3387.529	
CV%	68.39		71.25	
CGR %	0.20		0.21	

Source:-annual report 2019-20 mahafires.gov.in

The graph depicts the sanctioned budget and expenditure from 2012-13 to 2019-20, indicating that the government is being more efficient in its spending. The sanctioned budget has been increasing over time, while the expenditure has been decreasing, indicating better financial management. However, there is significant variation in the amount of sanctioned budget and expenditure from year to year due to factors such as changes in the economy, government priorities, and changes in the cost of goods and services

The graph is labeled "Sanctioned Amount" and "Expenditure Incurred," representing the approved amount and actual expenditure. The sanctioned amount has increased from 15,000 in 2012-2013 to 25,000 in 2019-2020, while the expenditure has also increased but not as quickly. This suggests that the government is being more efficient in its spending.

The graph also shows that the amount of sanctioned amount and expenditure varies from year to year. For example, in 2014-2015, the sanctioned amount was 20,000 and the expenditure was 18,000. In 2018-2019, the sanctioned amount was 22,000 and the expenditure was 20,000. These variations are likely due to various factors, such as economic changes, government priorities, and changes in the cost of goods and services.

Overall, the graph indicates that the government is doing a good job of managing its finances.

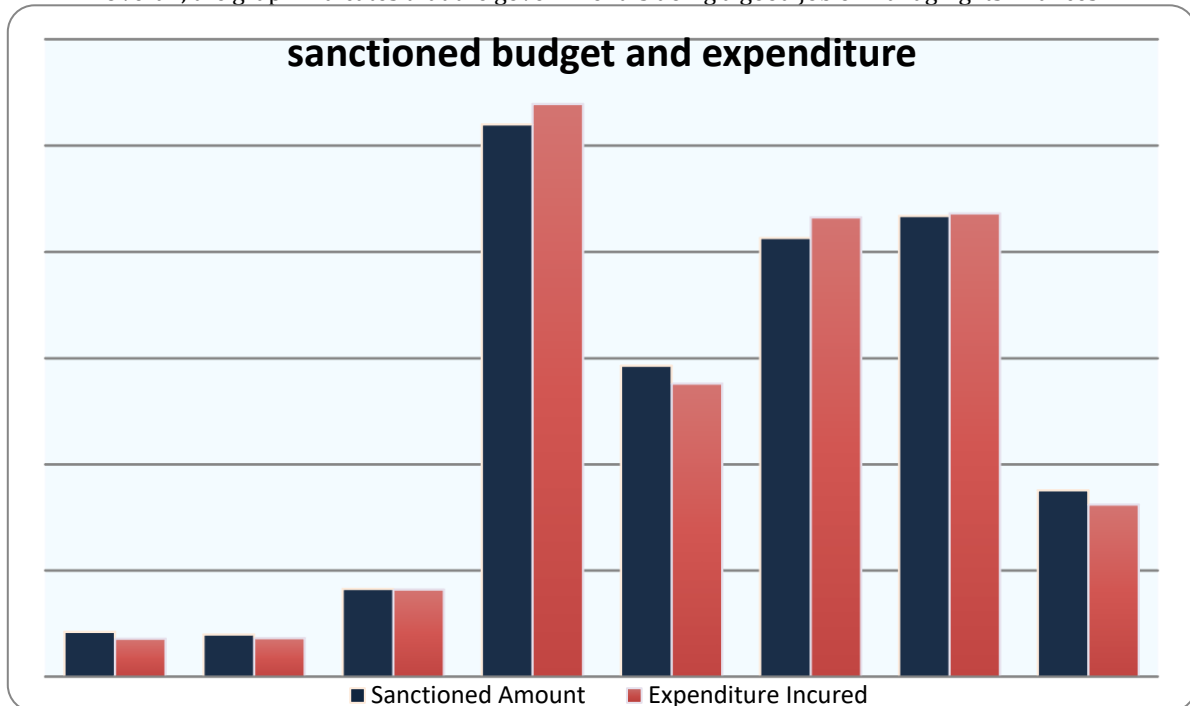


Table 2 :GDP Growth Rate of India or Maharashtra

	2015-2016	2016-17	2017-18	2018-19	2019-2020
Share in GDP (in%)	5.09	5.04	5.02	5.01	5.16
Direct (in %)	2.65	2.62	2.61	2.60	2.68
Indirect (in%)	2.44	2.42	2.41	2.41	2.48

Source:- (www.ijser.in)

It is observed that during the period under the consideration from 2015-16 to 2019-20. In the year 2015-16, the growth rate was 5.09. Direct Rate 2.65 while the indirect rate was 2.44. In the next three years (2016-17, 2017-18, 2018-19) the growth rate is seen to decrease. However, the growth rate in 2019-20 has increased.

Table 3 : Employment / Jobs Generation (Percentage) of India or Maharashtra

	2017-2018	2018-19	2019-20
Share in jobs (in%)	14.78	14.87	15.34
Direct (in %)	6.44	6.48	6.69
Indirect (in%)	8.34	8.39	8.65
Direct+ Indirect Job due to tourism (in million)	72.69	75.85	79.86

Source:- NAS 2021 (https://tourism.gov.in/)

It is observed that during the period under the consideration from 2017-18 to 2019-20. all the indicators of ecotourism job sector are showing positive trends.

Map: Eco Tourism Destinations



Table 4 :Overall Tourist Arrival Growth Rates

Destination	Tourist Inflow per year		CAGR
	Current 2001-02	Estimated 2021-22	
Kolhapur	350000	1405367	7.20%
Dajipur	20000	41327	3.70%
Panhala	425000	1181981	5.25%
.Ambejogai	250000	547781	4.00%
Semadoh	30000	107690	6.60%
Chikhaldara	100000	358965	6.60%
Amravati	70000	251276	6.60%
Totladoh	50000	130044	4.90%
Ramtek	200000	832011	7.39%
Nagpur	400000	1664021	7.39%

Nawegaon N.P.	100000	219112	4.00%
Tadoba	75000	206537	5.20%
Bhadravati	75000	164334	4.00%
Wardha	150000	583943	7.03%
Janjira	50000	143038	5.40%
Divegar	20000	59437	5.60%
Harihareshwar	100000	416792	7.40%
Karde	15000	77782	8.58%
Harne	25000	86219	6.39%
Dervan	50000	182885	6.70%
Kunkeshwar	35000	76689	4.00%
Ratnagiri	200000	641427	6.00%
Devgad	35000	90237	4.85%
Malvan	200000	641427	6.00%
Tarkarli	75000	269079	6.60%
Sawantwadi	50000	186352	6.80%
Amboli	35000	102986	5.54%
Koyna	30000	128565	7.55%
Wai	200000	752440	6.85%
Pratapgad	300000	1128660	6.85%
Pune	500000	2007141	7.20%
Bhimashankar	350000	1122497	6.00%
Mumbai	1000000	5590100	8.99%
Bhandardara	100000	369221	6.75%
Wani	400000	1282854	6.00%
Nashik	115000	368821	6.00%
Lonar	3500	18168	8.58%
Paithan	75000	240535	6.00%
Ajantha	350000	1136489	6.07%
Aurnagabad	600000	1670725	5.25%
All Destinations Visited	7208500	26484955	6.72%
Estimate for state	9372327	34405702	6.72%
Mean	180212.5	662123.9	
SD	203295	959845.1	
CV(%)	112.8085	144.9646	

Source:-Study Report on Preparation of 20 Years Perspective Plan for Development of Sustainable Tourism in Maharashtra (<https://tourism.gov.in/>)

Mumbai is the most visited city in the state of Maharashtra. Due to this the growth rate of Mumbai city is higher than other cities i.e. 8.99 is Dajipur city has the lowest growth rate of 3.70.

The tourist inflow per year table in Maharashtra, India, shows the number of tourists visiting each destination in 2023 and the compound annual growth rate (CAGR) from 2021 to 2023. The top five most visited destinations are Mumbai (1 million tourists), Pune (500,000 tourists), Kolhapur (350,000 tourists), Nagpur (400,000 tourists), and Aurangabad (600,000 tourists). The fastest-growing destinations are Karde (8.58% CAGR), Harihareshwar (7.4% CAGR), and Ramtek (7.39% CAGR), all popular for their natural beauty and cultural attractions. The average tourist inflow per destination in 2023 was 180,212.5, with a significant variation across destinations, suggesting potential for growth in less-visited areas. Overall, Maharashtra is a popular tourist destination with a wide range of attractions and steady growth, indicating a positive impact on the local economy.

IMPACT OF ECOTOURISM IN MAHARASHTRA

Ecotourism benefits local communities by creating jobs, preserving natural resources, enhancing cultural integrity, protecting animals and natural environments, and providing friendly and knowledgeable assistance to passengers. It ensures adequate conservation and management of natural resources for future generations, thereby enhancing the overall experience for locals.

DIRECT ECONOMIC IMPACT

Since British soldiers arrived in the Mahabaleshwar and Panchgani mountain reserves in India's Western Ghats to escape the heat of the plains, these areas have grown in popularity. The development of new tourism has been

hampered by the expansion of India's consumer class, the rise in both public and private transportation, and the removal of natural vegetation for hotels and venues as well as the planting of trees for fuelwood and the expansion of forests. Other issues include the pollution of water and electricity, traffic, congestion, and waste. Environmental and local officials attempted, but were unable, to contain the issue. In order to promote ecotourism, this paper proposes a management structure that splits the region into zones for various uses. Decisions and laws to carry out these will be necessary for the plan's implementation. modifications. A better tourist model and a healthier environment in Mahabaleshwar and Panchgani require a gradual shift in attitudes and conduct, and education is the key to bringing about these changes. (Woos, 2005)

INDIRECT ECONOMIC IMPACT:-

Healthy ecosystems and tourism both depend on biodiversity. Due to the impact of recent rapid urban expansion on biodiversity, efforts have been made to preserve biodiversity by creating protected areas for rare and endangered species. With 15,732 square kilometres of woodland, Maharashtra is home to a diverse range of habitats, including green forests, marshes, grasslands, beaches, and woods. The Western Ghats' Kaas site is now part of the UNESCO World Heritage List. However, because of legal noncompliance, animal protection is hard in poorer nations. An ecotourism industry that is sustainable and vital to animal welfare is ecotourism. It combines tourism with environment, allowing guests to take in the scenery and customs of the area. Additionally, ecotourism boosts the economy by generating jobs and increasing awareness of the local way of life and biodiversity. The purpose of this essay is to examine the detrimental impacts of ecotourism on biodiversity conservation in Maharashtra. The tourist industry will expand in terms of its environmental carrying capacity as a result of eco-tourism. Encourage the development of hotels, resorts, and ecotourism destinations to create jobs, and improve health and education in rural communities. Josh D.V. (2014)

Table 5: Geographical Division

No.	Name of geographical division	Area Sq.km	Description
1	Kokan	30,728	Tropical Beaches, lush Greenery, Prominent Forts
2	Western Maharashtra	89,885	Forested Hill & valley, flora & fauna, Ancient Caves, Cultural Heritage
3	Marathwada	24,911	Ellora caves, Kailas temple, Shri bhadramaruti Temple, Bibikamaqbara, Aurangabad caves, Pitalkhora caves, Nanded fort, Antur fort, Jayakwadi
4	North Maharashtra	64,813	Rivers, Dams, Crops, Wildlife
5	Vidarbha	97,406	Tadoba-Andhari tiger reserve, Borwildlife sanctuary, Pench tiger reserve, Nawegaonnagzira tiger reserve, Bhandardara, Gandhisagar Lake, Melghat tiger, Kasturchand Park, Kankan National park, Kolad, Igatpuri

Source:-geographical area of Maharashtra division wise

In above table Geographical division has been mention that Vidharbha has largest Geographic area compare to other. Marathwada has smallest Geographical area. Although Marathwada is small in area, Tourism places are high there.

Table 6 :Description Forest, Flora, Fauna(Joshi, 2014)

Description	Comment	Major destinations
Beaches	720 km coast line on western coast , Arabian sea Unspoiled virgin beaches	Mumbai Konkan coast Ganapatipule, Tarkarli, Diveagar , Harihareshwar
Climate	Cool and dry during hot season (March-May)	Hill stations Mahteran, Mahabaleshwar, Chikhaldara, Panchgani

Forest	Evergreen, Deciduous forest Mangroves	Wildlife Sanctuaries , National Parks Tadoba, Melghat, Radhanagari
Wildlife	Tigers, Leopards, Deer, Great Indian Bustard	Wildlife Sanctuaries , National Parks Tadoba, Melghat, RadhanagariMaldhok sanctuary
Lake	Lonar Crater ,Salt water ecosystem	Lonar
Culture	Specific to each region	Fairs and Festival Regional cuisine

Source:-International Journal of Innovative Research in Science, Engineering and Technology
(<https://www.cityofmyrtlebeach.com/>)

MAJOR CONCLUSIONS AND POLICY SUGGESTIONS

Any job's consequences may be categorized into three groups: direct, indirect, and induced. The effect of early travel costs, such as money spent at hotels or meals, is known as the direct impact. The procurement of goods and services (materials) from other firms has a direct impact on restaurants. There's also the impact of restaurant workers using a portion of their pay to buy other goods and services. Of course, the money won't affect the area if the restaurant uses outside vendors to get its goods and services. He left. Maharashtra is renowned for its natural environment, distinct culture, and abundant wildlife. In addition to protecting the environment and creating jobs locally, ecotourism allows visitors to see rich locations, go on animal safaris, and partake in delicious meals. lively attractions. In addition, it lessens the carbon imprint, saves wildlife, and boosts local involvement in the travel and tourist sector. An ecotourism policy may boost yearly visitor arrivals in Maharashtra, maintain positive relationships with the environment, economic activity, social justice, and culture, as well as generate a sizable amount of cash for the Indian economy. Government formulate such policies for tourism, which will reduce the damage to the environment. For Example Provision of PUC should be made mandatory for popular destinations. Government should launch some schemes so that the people living in the tourism places will benefit and the people living there will get employment. Travel Plan for popular destination. There should be a limit on the population coming and going to popular destinations. so that the population will not have much impact on the environment and there will be no pollution.

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