



Ecotourism in Morocco: Review of the Current Situation, Natural Potential, Cultural Diversity, Obstacles and Recommendations for Future Research

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ABSTRACT

This review attempts to highlight the past and current status of ecotourism in Morocco, investigate its committed as an essential sustainable product, and make recommendations to develop this sector. A deep electronic bibliographic search on Google Scholar, research engines, and databases including Scopus, Science Direct, PubMed, and Hindawi between 1970 and 2023. To accomplish this review, we used the following keywords: 'ecotourism, geotourism, and sustainable tourism, all in relation to Morocco. Currently, the state has developed articulate projects and policies looking for the enlargement of this segment as a strong alternative pillar. Equally, ecotourism is a way to protect cultural and natural heritage. However, tourist destinations remain conquered by seaside products. While other sustainable practices remain hostile. The concentration of marketing and infrastructure in empirical-coastline cities attracts visitors to these destinations, while other regions are less visited despite their richness in natural and cultural potentials. On the other hand, we proposed to upsurge the awareness of populations toward their cultural and natural heritage as a good manner to protect them and increase their incomes, which is sufficient to develop sustainable tourism. Finally, more deep studies on the effects of ecotourism on the natural ecosystems and cultural values are urgently needed to clarify the potential of natural products counting ecosystems, and their ecological services, of cultural heritage counting prehistoric monuments, mainly in isolated regions, and of infrastructure capabilities between distant places to encourage the equitable distribution of visitors in different regions.

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Keywords: Ecotourism, natural potential, sustainable tourism, Morocco.

Introduction

Since 2000, Morocco has focused more on touristic activities and their encouraging consequences for socio-economic development and the country's gross national product.¹ To achieve an alternative economic pillar, the state established promotion projects, including sustainable management plans.^{2,3} The prearranged plans pushed Moroccan tourism forward in the global arrival market and provided a significant economic supply.⁴ However, Moroccan touristic products are mostly conquered by mass tourism or seaside products.⁵ In contrast, sustainable tourism including ecotourism, mountain tourism, and natural tourism remain less developed and less competitive in the national and international markets.⁶

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The dominance of mass tourism in the kingdom of Morocco does not reflect the diversity of cultural and natural potentials in this country dating back 12 centuries.^{7,8} This abnormal situation is enforced firstly by the complexity of universal ecotourism requirements and secondly by the Moroccan market, which has not advanced greatly on that road on the ground.^{9,10} However, recently the adopted management strategies and their juridical backgrounds have given distinct consideration to a more ecological form of tourism, particularly within protected zones, and to the requirement of conserving natural landscapes, wildlife, and cultural heritage.^{11,12}

Moroccan nature contains both biotic and abiotic constituents which together form ordinary biodiversity on all bio-geographical echelons, from continental, regional, and local scales.^{13,14} There are 11 national/natural parks in Morocco and 38 RAMSAR wetlands. These ecosystems are rich in biodiversity, climatic conditions, and geographical location.^{15,16} They host attractive landscapes from coastal lines to Saharan Oasis, biodiversity combining unique plant species and their associated wildlife, and a variety of topographical structures from mountains to plains.^{17,18} All these elements have a great potential to be used in sustainable tourism in parallel with mass tourism. Consequently, the outcomes from this promoting activity will help in the conservation of nature and create permanent jobs for the local population.^{19,20}

Currently, tourist activities have taken a slight turn from old-style forms of tourism to new more sustainable practices.^{21,22} This behavior revolution might be due to the fact that converted it was influenced more by the local antiquity of history, moral values, and culture of the particular destination, which are widely present in Morocco.^{23,24}

Therefore, cultural heritage is suggested to play a crucial role in optimizing the potential of Moroccan destinations. Similarly, the location of Morocco in the extreme Northwest of the Maghreb, between Europe and Africa, besides the presence of nearly 3500 km of coastal lines including the Atlantic Ocean (3000 km) and the Mediterranean Sea (500 km) is suggested to promote the Moroccan market.^{25,26}

The fundamental aim of this review paper is to analyze the literature related to ecotourism in Morocco, counting: (i) the market for ecotourism in Morocco and Northwest Africa, (ii) the abiotic and biotic potentials of ecotourism, (iii) the obstacles to the development of these sustainable activities, and (iv) the future recommendations to develop this important and rational form of tourism. This review is suggested to be the first analysis of studies conducted related to ecotourism and to play a basic role in the orientation of future studies. Beginning with a literature analysis of the present references associated with ecotourism generally highlights the main realized works and helps in finding gaps that need more attention.

Scientific research on ecotourism in Morocco

Ecotourism is widely studied and discussed as an alternative to mass tourism.^{27,28} In this review, we have focused principally on data from the Moroccan market. In total, 50 scientific papers have been published on ecotourism in Morocco (Table 1). These papers have addressed eight topics: the status of ecotourism in Morocco, natural and cultural potentials, economic value, infrastructures, marketing, negative impacts, policies and management, and comparison with other countries. On the other hand, the Moroccan ecotouristic market and potential were compared with Tunisia,^{29,30} France,³¹ Egypt,¹ Costa Rica, and Vietnam.³²

Ecotourism in Morocco and Northwest Africa

Tourism is an essential opportunity for social and economic growth in developing countries, including those in North Africa.^{27,75} Based on the disadvantages documented in mass tourism,⁷⁶ ecotourism as an alternative is a significant economic asset to the countries in North Africa. Equally, the richness of biodiversity in North African countries could have double benefits: first, ecotourism will evaluate wildlife, cultural heritage, and landscapes. Second, ecotourism will help in the conservation of most threatened species and sites, as well as the maintenance of old cities and old traditions, particularly in less accessible zones.⁷⁷

In North Africa, mainly Egypt, Tunisia, and Morocco, sustainable tourism including ecotourism, has started in the last century.^{78,79} In Tunisia, tourists frequent forests, wetlands, and landscapes, with thousands of visitors in coastal lines and the Sahara, mainly in the South and North of the country.^{80,81} In Egypt, millions of Eco-tourists frequent principally archaeological monuments including pyramids and ancient cities.^{82,83} These activities account for nearly 20 to 25 % of total visitors in both Tunisia and Egypt. In Morocco, has started in early 2000, mainly in the Northern parts of the country.^{2,33} Currently, the ministry of tourism in Morocco gives a number of 150.000 visitors per year, where 50% are for the Atlas destination only, and 30% are for the desert product.⁸⁴ Visitors frequent national parks, wetlands, and geosites mainly in High altitude zones such as High and Middle Atlas.^{52,85} With their diverse wildlife, landscapes, and weather conditions, these sites attract an increasing number of local and international tourists.^{57,58,85} For example, local populations of the high Atlas Mountains receive thousands of tourists every year despite their obvious deficiency of information about the potential of the natural atmosphere in which they live as well as the real value of their traditional, social and cultural wealth.⁴² These visitors contribute to diversifying and increasing the incomes of rural and nomadic populations in these mountainous regions. Equally, they influence them to better defend the natural elements, not to leave their poor zones, and to be pleased with who they are. Similarly, the visitors raise the attention of authorities to protect the most visited areas and help the local population via solidary investments.^{79,86,87}

Potentials for ecotourism in Morocco

Table 1: Most topics cited by literature in Morocco

Topics	Authors
Status of ecotourism in Morocco	3,33
Natural and cultural potentials	2,20,30,34-59
Economic value	19,53,60-64
Infrastructures	3,65,66
Marketing	67
Negative impacts	68-70
Policies and managements	71-73
Comparison with other countries	1,29,31,32,74

The location in extreme northwest Africa between the Mediterranean Sea (in the north) and Atlantic Ocean (in the West), the exposure of eastern parts to Saharan influence, and the abundance of Mountainous chains make Morocco unique in terms of ecosystems, wildlife, and weather environments.^{88,89} Similarly, the cultural and traditional diversity from north to the South and from west to the east give Morocco a special place in the international market.⁹⁰ Equally, the location in the South of Europe makes the Kingdom the gateway for tourists to Africa.⁹¹

Ecosystems and associated wildlife

Thanks to the combination of Mediterranean, Atlantic, mountainous, and Saharan weathers, Morocco possesses a variety of climatic conditions, which have a direct impact on landscapes and ecosystems.^{92,93} The northern and western coasts are dominated by iconic ecosystems, including Mediterranean forests and wetlands in the Northern and central parts, mountains in the Atlas and Rif chains and the Saharan Oasis in the eastern and southern provinces.^{94,95} This geographical and topographical diversity supports an enormous animal and plant diversity.^{16,96} Morocco counts 11 national parks, including Toubkal Park, established in 1942 as the oldest one and 38 RAMSAR wetlands including Souss-Massa National Park considered the last wild habitat for the endangered northern Bald Ibis *Geronticus eremita*.^{18,97} Other sites of biological and ecological interest, such as the Argan Biosphere Reserve are widely distributed in Morocco.⁷⁷ These ecosystems host some special species, sites, and environments that attract nature tourists. In this case, the attractive roles of northern Bald Ibis toward birders, and Argan forests and their derivatives toward visitors and customers, are the best examples to explain the biotic potential to develop ecotourism in Morocco.^{40,98} However, many other places are less evaluated despite their richness in species and habitats such as Lagouira coasts located in the extreme South, considered as the last and best habitat for the endangered Mediterranean monk seal *Monachus monachus* on the Atlantic.⁹⁹ Equally, Bouzekraoui *et al* (2018),⁸⁵ Mehdioui *et al* (2020),¹⁰⁰ and wakass *et al* (2023)¹⁰¹ recorded and characterized various geosites in Atlas chain (High, Middle and anti-Atlas), central provinces, and coastal zones of the Atlantic. These sites are accessible and contain potential opportunities for Sustainable Tourism.

Cultural and traditional diversity

Since the Roman era, the Kingdom of Morocco has possessed a varied and dynamic history that witnessed a long series of diverse sovereign people, including the Berbers, Romans, Arabs, Jews, French, and Spanish.¹⁰² This mixture is mirrored through numerous features of Moroccan life, namely the culture, the languages, the cuisine, and the clothing.^{103,104} Therefore, traveling from province to province inside the kingdom might seem more like traveling from one country to another, and this is very attractive for tourists, mainly the cultural ones. However, Morocco's cultures can be divided into Berber and Arab.¹⁰⁵ Visitors visiting Morocco will certainly not get bored with every road they take. The Amazigh were the first occupants of Northwest Africa and they are considered the indigenous people of Morocco.¹⁰⁶ The history of the Berbers goes back more than 5000 years. It wasn't until

the 7th century, with the Arab invasion that the Amazigh became converted to Islam and Arabic.¹⁰⁷

Due to the succession of different cultures and traditions, the cultural heritage of Morocco is diversified and ancient⁹⁰. Nearly 300 historical monuments, zones, and sites have been classified as national patrimony.^{108,109} Equally, 98 buildings and monuments were inscribed, in Casablanca (49), Tangiers (20), Kenitra (19), Larache (6), Rabat (2), El Haouz (1), and Fes.^{108,110} In addition to moral values, these historical monuments are of great interest in attracting sustainable tourism as well as mass tourism. In this context, Jemaa el-Fna, located in Marrakech, could be considered the best example for tourists in Morocco.^{70,111} For nearly 10 centuries, this historical place has functioned as a market and gathering place in the middle of Marrakesh¹¹². Millions of visitors visit this iconic place for fanfare and observation of dressed animals, and therefore UNESCO classified it as “Masterpieces of the Oral and Intangible Heritage of Humanity”.^{70,113} The most important thing at this point is that these monuments serve as good indicators of the diversity of Moroccan culture and history, and which is an important piece in the tourism industry. However, to ensure better endurance and maintenance of these vulnerable sites, encouraging ecotourism as a sustainable form could help reduce the negative impact of mass tourism on buildings and sites.

Infrastructures and experienced personals

From independence to the end of the twenty century, the Moroccan infrastructure was medium to less developed.^{114–116} Between 2010 and 2015, nearly \$15 billion was deployed to develop the basic infrastructures in all regions of the country, counting those that host biotic and abiotic potentials.^{117,118} Similarly, the education system was dedicated to supporting the advancement of Morocco in industry, agriculture, and tourism fields, which form the most dominant parts of Moroccan incomes.¹¹⁹

Currently, Morocco has one of the best traffic systems in Northwest Africa.¹²⁰ Over the past two decades, the administration has constructed around one thousand miles of current roads, connecting maximum main regions and cities through toll expressways.^{116,121} In the near future, the Ministry of Equipment, Transport, and Logistics aims to construct a further fifteen hundred miles of highway and nearly two thousand miles of expressway by 2030, at an estimated cost of \$ 9.6 billion. Equally, Morocco possesses an 80-mile of railway network (with 120 posts serving travelers and freight), 27 commercial ports, and 15 airports, which serve millions of passengers every year between local and foreign visitors.^{122,123}

In Morocco, the hotel industry is very developed in both rural and urban zones due to the great position of tourism in the Moroccan economy (tourism contributed nearly 81.4 billion MAD to Morocco’s gross domestic product (GDP) during 2019).^{124,125} Recently, the Hilton hotel brand has increased its luxury brand, Conrad Hotels & Resorts, in Morocco, and this will be built in the novel luxury coastal municipality of Arzana, near Skhirat Khalid.¹²⁶ However, the most important element at this point is that the hotel infrastructure is distributed in rural and mountainous regions where nature and landscapes are less visited, such in the case of inns, lodges, and bivouacs in the desert (Vision 2020). On the other hand, the education system in Morocco offers graduate professional personnel and experts in hotelier, cuisine, reception, translation, and touristic guides. In reality, Morocco receives tourists from Asia, Europe, and America, and this needs more talented people, especially in rural zones where the conditions of ecotourism are not good enough.

Obstacles to ecotourism in Morocco

Despite the huge efforts deployed in the last two decades, the ecotourism segment in Morocco remains in its early stage far from the projected goals.^{53,127} It is always only annexed to mass tourism in the policies and management programs, and the administration considers the ecotourism segment a secondary matter. With the purpose of doubling the number of visitors by 2020–2030, the segment of ecotourism was neglected (Vision 2020). Therefore, and as the shortest reflection of the country’s strategy, the tourism business in Morocco is extremely focused on the shoreline. This concentration converts the

entire Moroccan tourism segment into mass tourism despite its richness and diverse potentials.¹²⁸

The ecotourism segment in Morocco has two key fragile points that disturb the entire offer.³ The first point is the concentration of tourists in a small geographical zone: the tourism industry (mass and sustainable tourism) is concentrated (about 80 % of visitors) only in 10 better-known cities such as Marrakech, Fez, Agadir, etc.^{29,129,130} The concentration of lodging capacity and most economical activities in the imperial cities and coastline are behind this issue.^{130,131} Equally, the ecotouristic potentials in rural and mountainous regions are neglected in the Marketing and publicity strategies, which is destructive for this premature segment. The second point is the low number of diversified sustainable touristic offers,⁸⁴ which is mostly observed in the state’s strategies.^{1,71} However, the reason/result association between the two opinions rests open to discussion since, if there was a varied and attractive touristic offer (rural, natural and green tourism), there would be a reasonable traveller dispersal, reducing the high concentration on the coastline and imperial zones and cities.

Although one of sustainable tourism’s (counting ecotourism) central objectives is to protect the environment, its evolution can have a negative influence instead.^{132,133} As a terminus’s reputation rises, resources occasionally become overtaxed, and natural charms suffer from overemployment.¹³⁴ Human travelers can disturb ecosystems and their associated wildlife, causing changes to their foraging and breeding performances, such as in the case of endangered Barbary macaques *Macaca sylvanus* captured and used as photo props in Jemaa El-Fna Square.^{70,133,135} Moreover, numerous ecotouristic destinations are in inaccessible zones, demanding wide-ranging air and vehicle travel that produces larger carbon footprints.¹³⁶ On the other hand climatic disorders such as warming, low precipitation, and desertification are threatening natural ecosystems in Morocco, such as the drought of lakes (Dayet Awa near Fez) and the fire of forests in the Rif, and these reduce the natural elements that attract visitors.^{5,137,138}

Ecotourism, principally the overexploitation of cultural monuments and buildings, causes the deterioration of the historical heritage^{139,140}. As small municipalities grow to accommodate the evolutionary arrival of visitors, original monuments and buildings often lose their original structures and designs. Instead of conserving their traditional occupations and small streets, they’re often forced to build new infrastructures of modern hotels, police officers, and other luxury services (restaurants and shops).^{139,141} Their traditional practices can be converted into services for visitors’ entertainment, eroding the heritage’s importance, value, and meaning.

Recommendation for future research and investment to develop the Ecotourism

Today, the tourism sector is stronger than in the last century. International tourist influxes multiplied between mid-1960 and the beginning of 1990 and then multiplied again from 1990 to 2010.¹⁴² The most isolated places, from the ice-bound Antarctic to the Amazon rainforest, have become reputable vacation destinations for sustainable forms of tourism.^{143,144} No place on our blue planet remains unvisited, and numerous states rely on the tourism industry for their revenue. This growth in tourism has incited worries about its impact on vulnerable ecosystems and traditional societies and led to the appearance of ecotourism.¹⁴⁵

In Morocco, despite the advantages of ecotourism, this segment remains less exploited.³ Research on the benefits of sustainable tourism on natural ecosystems, cultural values, and socio-economic aspects is urgently needed.¹⁴⁶ These studies should clarify the real eco-touristic potential of natural products counting species, habitats, and their ecological services, of cultural heritage counting prehistoric buildings and other monuments mainly in isolated regions, and of infrastructure capabilities such as the reduction of prices for air and railway travel between distant places to encourage the equitable distribution of visitors in different regions.^{147,148} On the other hand, the application of new technologies in the monitoring of natural potential and threatening factors is widely needed to evaluate in a cost-effective manner the evolution of sustainable tourism and its effects on potential.^{149,150} These elements will allow us to make smart decisions before irreversible points. Moreover, the education and sensitization of rural populations

on the importance of their cultural heritage and their environment and teaching them good practices toward sustainable tourism could help in the growth of this segment and the conservation of natural potential.¹⁵¹ Finally, the investment in the form of solidarity and cooperative tourism in rural provinces could help the local population develop their potential and increase their incomes, which is sufficient to avoid low revenue and movement to big metropolises.^{152,153}

Although the official side is obscure, there is still a brilliant side to ecotourism in the kingdom. Some single initiatives along with the appreciated involvement of NGO associations and cooperatives, started to make their steps in ecotourism progress.⁵² Even if these creativity jumps isolated, with the funding of particular foreign operators who find goals in local particulars, there are ongoing efforts to improve this section of sustainable tourism.¹⁵⁴

Conclusion

This review highlights the situation of the ecotourism market in Morocco and its employment in the state's destination as an alternative to the mass tourism. Despite the country's inability to force the appearance of ecotourism as a strategic touristic product, another singular, private, and civil organization initiative contributed to a large degree in establishing numerous small and medium projects focusing on ecotourism and commonly an ecological form of tourism throughout the country's territory. These types of initiatives, although less organized and less supported, demonstrated their effectiveness over official governmental strategies at least locally measuring. What will be now a significant productive strategy from the government is to collaborate and support these particular initiatives, promote ecotourism, and find a touristic terminus that conforms to the state's very diversified and rich cultural and natural potential. However, more deep investigations are needed to inventory more attractive sites and natural resources that can be used in sustainable tourism and to estimate the economic revenues of these activities at local and national scales. These recommendations are suggested to clarify the importance of sustainable tourism as well as attract investments in this domain.

Conflict of Interest

The authors declare no conflict of interest.

Authors' Declaration

The authors hereby declare that the work presented in this article is original and that any liability for claims relating to the content of this article will be borne by them.

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