

Toward the Improvement of Tourism Sustainability: The Role of Carrying Capacity Assessment for Durrës Coastal Area, Albania

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Abstract: - Sustainable tourism and ecotourism play an important role in areas where nature and people coexist together, like Durrës Beach in Albania. The main idea here is to find a balance between tourism and the environment. People should be able to identify how many tourists should be entertained and the type of fun activities that can be carried out at the destination, and all this could be achieved by knowing the carrying capacity. The method follows the carrying capacity concept and tests it by verifying different factors such as carrying capacity, environmental quality, and tourists' perceptions. The estimated carrying capacity for the three beaches in the Durrës coast in Albania is 50,661 tourists per day, while for Durrës city beach the figure is 6,985 tourists per day. It is very important to monitor the carrying capacity for tourism in such a way that sustainability is achieved in all aspects. The study's multidisciplinary approach and assessment method make useful recommendations a reality for the sustainable development of the Albanian coastlines. Furthermore, by using a multi-criteria analysis method, the opinions of the stakeholders for Durrës Beach can be obtained. Following the recommendations given by very prominent and early thinkers in the subject and carrying out the recommendations given by such renowned researchers can help Albania maintain its high ecosystems while improving the quality of life for its citizens.

Key-Words: - carrying capacity assessment, Durrës coastline, Albania, environmental factors, stakeholders, sustainable tourism.

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1 Introduction

Tourism has been a big deal for Albania in terms of its economy, especially in the last ten years, as it as it is profitable for businesses and the country as a whole. Currently, tourism directly adds 8.5% to 8.7% to the country's total GDP, and in 2023, nearly 10 million visitors were recorded for Albania. From January to July 2024, Albania welcomed approximately 6.4 million foreign visitors, [1], [2]. When considering the multiplier effects of indirect sources, the total contribution to GDP is nearly three times higher, exceeding 20%, making tourism one of the key drivers of economic growth.

Tourism has become a larger deal for the Albanian economy. The tourism sector is a major driver of the Albanian economy. The current value of the tourism sector to the Albanian economy is 20%. The sector provides employment for about 244,000 people, [3]. The "sea, sand, and sun" experience remains a core part of Albanian tourism.

The success of the tourism sector is largely dependent on the management of the coastal areas. The success of the tourism sector is also a reminder of the importance of the adoption of eco-friendly practices in the context of sustainable tourism. The Durrës Region is responsible for managing 62% of all registered visits to the country's seaside resorts. The peak tourist season is July and August. During the peak tourist season, the region faces a number of issues that include insufficient parking space, insufficient public transport, and overcrowding of cultural sites, beaches, and restaurants, [4], [5].

In order to stimulate economic growth in the Albanian economy, the government has a relatively liberal regulatory framework to support the attraction of foreign investment. The government has special legislation for strategic investments targeting strategic sectors for national development. The government tourism policies, regulations, and

initiatives across various sectors with support from various stakeholders are contributing factors for the country's recognition as a hub for tourism in the region, although challenges still remain, [6].

Coastal areas, in particular, have historically been managed along political and administrative boundaries rather than environmental considerations. The shift from a centralized to a market economy has significantly impacted land use, particularly in coastal regions, where speculative investments and uncontrolled, unplanned development are evident.

For example, as Albania is becoming a free-market country, its coastline is developing very fast, causing environmental pressures and increasing numbers of tourists too [7], [8]. This is visible in increased marine pollution, land being developed for tourism-related activities, and increased traffic congestion during the summer months. However, Albania's tourism policies and environmental regulations do not take into account the concept of Carrying Capacity (CC) even though it is an important concept that helps calculate the limits of tourism development without causing negative environmental impacts or overloading existing infrastructure. In terms of land management along Albania's coastline, statistics obtained from the Municipality of Durrës indicated that 80.3% of the coastline is privately owned, whereas only 19.7% is publicly owned (Table 1), [9]. This is an issue of concern in terms of governance, management, and sustainability of tourism development in Albania. In this regard, this study will focus on the Durrës coastline of Albania to discuss the possible application of the CC concept in improving governance of Albania's coastline for sustainable tourism development.

Table 1. Parcel's number according to the purpose of use - Year 2022

Municipality	Public	Investment	Managed	Total
Durrës	161	27	632	820

Source: [9]

According to the findings of [9], national tourism over the past two decades, the lack of integration of Carrying Capacity Assessment (CCA) indicators has led to ineffective and fragmented coastal management. Currently, rapid development along the Albanian coast is causing increased levels of overcrowding and environmental degradation. In 2023, a promenade on a part of the sandbank near the shore, as part of the first phase, had coverage of 28,000 m². This development reduced space for having fun and being creative on the sandbank, causing significant environmental effects.

This is an indication of why we need strategic planning with different political authorities, businesses, and different social organizations, as well as different communities, in order to reach a sustainable form of coastal management. This way, evaluating the effect of climate change on the coastal areas becomes an important measure that can help shape the future of the tourist industry towards sustainability without causing harm to nature, society, and local communities. The need for a strategic plan becomes obvious in Albania where it does not play an important part in its tourism industry. This study will use the Durrës coastline as a case in assessing how CC can be used as a tool for balanced development in Albanian society.

It should serve as a threshold beyond which further expansion can only occur through careful, well-planned measures, for instance, [10], [11]. CCA indicators act as early warning signals against the risks of overuse, as seen in heavily visited destinations like Durrës Beach, Albania.

However, despite its potential, the practical application of carrying capacity in guiding coastal tourism development remains underutilized in Eastern Europe, particularly in Albania. Some scholars, for example, [12], proved that the CC should not be handled as rigid numerical ceiling but rather as a dynamic, adaptive process with the inclusion of environmental, social and experimental components. Meanwhile, [13] argued that CCA is a key solution to tourism development challenges, offering planners and managers a reliable framework to estimate sustainable visitor numbers under stable, well-regulated conditions. While efforts are being made to protect and promote sustainable tourism, evaluating carrying capacities should be a central measure in drafting and implementing long-term tourism strategies, [14], [15], [16].

2 Literature Review

Carrying capacity has been around since the 70s and 80s. Well, it has ended up with a number of different meanings. When we are referring to a beach, carrying capacity refers to a number of things. The resources of the beach are fully utilized (physical carrying capacity), the environment is deteriorating (ecological carrying capacity), and the experience of visitors is negatively effected (social carrying capacity). Rather than being a simple calculation of the maximum number of users a beach can accommodate, carrying capacity encompasses a broader set of physical, biological, social, and economic factors that contribute to effective beach management, [17].

According to the World Tourism Organization (WTO) as of 1999, tourist carrying capacity (TCC) is “the max number of people who can visit a destination at the same time without harming the environment or hurting visitor satisfaction”, [18]. So, the concept of carrying capacity is, in a way, one of the major indicators of how close a beach is to its sustainable capacity.

Tools for calculating the carrying capacity of a tourist spot, as well as the current state of the coast, can aid in the crafting of sustainable tourism strategies, minimize social and environmental impacts, as well as sidestep the not-so-glamorous aspects of unmanaged tourism, [19]. Although there are limitations in the methodology, the concept of carrying capacity can still serve as a guide for crafting a sustainable tourism strategy. The research, for instance, can cover the physical, ecological, psychological, as well as economic aspects. The concept of carrying capacity is of major significance in the management of the environment, as seen in the importance of the concept in addressing problems related to the environment, such as the decline of biodiversity, degradation of resources, as well as the increase of endangered species.

However, the practical application of the concept of CC is difficult, a fact which is well explained in the literature on tourism as well as the environment. There are, for instance, limitations in the methodology for measuring the physical, ecological, social, as well as economic aspects. The opposition of developers to the application of the concept of CC, as a limit to the growth of tourism, makes the practical application of the concept difficult. The lack of agreement on the common vision for the development of the area, as well as the difficulties in the integration of the tools for the management of the area, are some of the factors which have hindered the practical application of the concept of CC for the management of tourism, [20].

A definition of PAP/RAC adopted the same definition in 1997, [21], [22]. As can be seen from the following definitions of CC, most of them focus on two aspects:

Firstly, “Capacity” refers to how many tourists can use a space without causing any harm. Even, there is a number for this capacity.

Secondly, “Personal experience on capacity” pertains to the acceptable growth of tourism and the point at which visitors’ enjoyment starts to decline, [23]. Despite the limitations, we should encourage the idea of finding the maximum number of acceptable users and limits on development. This capacity may change over time, during the tourist season, or within narrower time intervals. Such a

limit should be applied and monitored to avoid excessive demands in the field.

Table 2. Key research related to CC and its role in tourism sustainability

Authors	Scientific Research Journals	Main Findings
[24]	Tourism Carrying Capacity for Beaches of South Andaman Island, India.	The Andaman and Nicobar Islands could be considered for development as high-value, low-sustainability tourism destinations.
[25]	The Concept of a Tourist Area Cycle of Evolution: Implications for Management of Resources.	The Tourism Area Life Cycle (TALC) model was presented, which highlighted the importance of sustainable development by not exceeding the carrying capacity.
[26]	Sustainable Tourism and Carrying Capacity: A New Context	Suggested a structured approach to carrying capacity assessment as a challenge.
[27]	Tourism Carrying Capacity: Concept and Issues	Emphasized that CC is dynamic and varies by social, economic, and environmental factors.
[28]	The Challenge of Tourism CCA: Theory and Practice.	Analyzed case studies and emphasized the importance of tailoring CCA to local conditions.

Source: Author’s processing

Table 2 provides a concise overview of recent studies focusing on the role of carrying capacity assessment in improving tourism sustainability, [24]. Tourism carrying capacity is a big deal when it comes to talking about sustainable tourism. Well, it is the point or number of visitors that a particular area can support without damaging the environment or the experience of the visitors. This concept is used a lot in research, with many authors helping to explain it in terms of sustainable tourism

Early work on tourism carrying capacity was integrated with the theory of the “Tourism Area Life Cycle” or TALC in a 1980 article entitled “The Concept of a Tourist Area Cycle of Evolution”, [25]. Tourism destinations go through a life cycle from discovery to stagnation in which the ability of any destination to support development over time depends partly on its carrying capacity, [29].

Indeed, environmental degradation, overcrowding, and a decline in visitor satisfaction

are some of the consequences that usually result when carrying capacity is exceeded, and these frequently lead to the decline of a destination unless proper management interventions are undertaken.

The issue of tourism sustainability in relation to carrying capacity is further addressed, with the assessment and management of carrying capacity seen as vital in preventing environmental degradation. The authors noted that the pressures exerted on natural resources by tourism could exceed the ecological limits of a destination, beyond which such tourism would not be sustainable in the long term unless those limits were respected, [30].

A structured approach to carrying capacity assessment remains a challenge, [26]. A flexible method for coastal management has been proposed. In this method, flexible thresholds rather than absolute figures may be used. This flexible method has the potential for improving beach management practices by striking a balance between environmental impacts and recreational activities. Coastal Capacity Assessment (CCA) is no longer viewed as a numerical value but rather as a flexible process that depends on the context, type of tourism, environmental, social, and economic considerations.

Another prominent voice in this field, indicated that carrying capacity is not a threshold above which it should not rise but rather a concept that may be modified with regard to visitor expectations, environmental circumstances, and the perception of the local community, [27]. These studies highlighted the need for carrying capacity assessments to be integrated into local policies and planning strategies. Their guide presented various practical methodologies that tourism managers could apply in using carrying capacity assessment as a tool for sustainable tourism development. It indicates that managing tourism carrying capacity is integral to maintaining the integrity of natural resources while simultaneously ensuring economic benefits.

The CCA continues to be a strong tool for developing tourism sustainability. However, it has been shown that carrying capacity should not be treated as a rigid numerical ceiling but rather as a dynamic, adaptive process that includes environmental, social, and experiential components. As various scholars have argued, any proper assessment of carrying capacity is based on a deep understanding of the specific characteristics of the destination, combined with its challenges, [28]. By integrating these insights into DMPs, a better balance between growth and sustainability in the tourism industry is likely to be obtained.

3 Objectives and Methodology

The main objective of this study is to assess the carrying capacity of Durrës Beaches, the most popular beach in Albania, by evaluating the Physical Carrying Capacity (PCC), Real Carrying Capacity (RCC), and Effective Carrying Capacity (ECC).

The methodology is based on carrying capacity's approach and has been applied in various locations worldwide. The purpose of this approach is to identify the area's carrying capacity for visitors based on physical, biological, and management conditions through PCC, RCC, and ECC that contribute to the sustainable development of the region. The study also seeks to contribute to the sustainable management of coastal areas by planners, coastal area managers, and central and local government officials.

3.1 The Study Area

The study area we are looking at is in the middle of Albania's coastline, approximately 66.1 km, along the Adriatic Sea, as it is shown in Figure 1. The coastline of Albania is home to beautiful spots and this area is a favourite among visitors. Natural resources include sandy beaches, river ecosystems, protected areas, and natural monuments, stretching from Rodon's Bay to Kavaja Rock. This region is known for its rich cultural heritage and the hospitality traditions of the local communities, including balneal tourism, special interest tourism, heritage tourism, religious tourism, ecotourism, outdoor activities, and agro-tourism. Accommodation facilities are available both in the public and private sectors, [31]. The major entry point, Durrës port, receives a constant flow of visitors and tourists, [32].

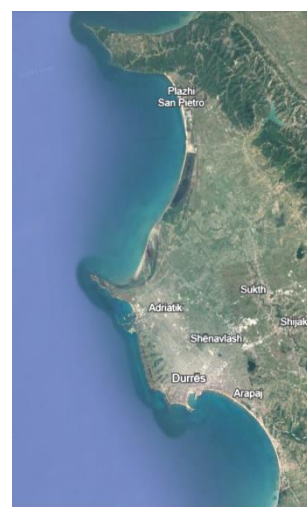


Fig. 1: Study area
Source: [33]

The main season for tourism normally covers the period from June to the first week of October, resulting in a prolonged tourist season of 120 to 150 days a year. This region is famous for its extensive sandy beach, Durrës Beach, which is the largest in the country. It normally attracts thousands of tourists during the summer season, who indulge in sunbathing, water sports, hospitality, and good food. The city of Durrës is located in the western part of the Republic of Albania, covering a total area of 432 km² with a total population of 350,749 inhabitants. Figure 2 shows that the total size of Durrës city has increased threefold since 1990, with its built-up area increasing twenty-three times, which is a result of its touristic characteristics and job creation in the services sector, which is the basis of its economy.

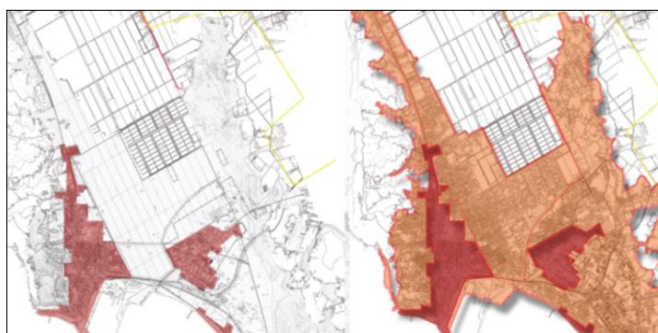


Fig. 2: Durrës city's size between 1990 and 2011
Source: [34]

The coastal area of Durrës is a preferred destination for tourists for various activities, including swimming, sunbathing, sports, viewing the landscape, photography, fishing, and exploring the coastal flora. The tourists are engaged in touring the area by motor vehicles, bicycles, etc.

3.2 The CCA of Durrës Beach in situ

The CCA of Durrës Beach involved an analysis of beach quality and management, tourist facilities, infrastructure, and support services, along with tourist activities. The assessment of beach carrying capacity took into account the area's topography and environmental factors such as temperature and sunshine, as well as management aspects like parking, littering, and safety measures. Over the course of a decade, participant observation was conducted in situ to capture both positive and negative experiences. Additionally, semi-structured and ad-hoc interviews with beach users were analyzed to address the researcher's concerns and objectives. The area assessed for the PCC was between the shoreline and the landward extent of the sandy beach is shown in Figure 3, Figure 4, Figure 5 and Figure 6 using 5.8 m resolution satellite images

from Google Earth, [33]. Meanwhile, Table 3 introduces the surfaces of the three beaches in situ.

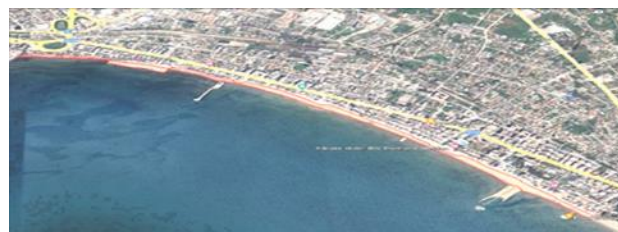


Fig. 3: The general surface of Durrës beach
Source: [33]



Fig. 4: The general surface without the promenade part
Source: [33]



Fig. 5: Lalëz Bay Beach
Source: [33]



Fig. 6: Kavaja Rock Beach
Source: [33]

Table 3. The surface of the study area

Beach	Surface (m ²)	Surface without including promenade (m ²)
Durrës Beach	145,082.20	116,856.98
Kavaja Rock Beach	163,716.3	163,716.3
Lalëz Bay Beach	860,845.45	860,845.45
Total	1,169,643.95	1,141,418.73

Source: Author's processing

Physical Carrying Capacity (PCC) is the maximum number of tourists that can physically fit into or onto a specific area over a designated period of time. It was determined using the equation:

$$PCC = A / A_p \times R_f \quad (1)$$

where

PCC- is the physical carrying capacity;

A- is the size of the study or visited area;

Ap- is the area required per person to be used;

Rf- is the rotation factor (frequency of beach users each day).

An optimum area required per tourist (Ap) is 10 m²;
Rf = duration of sun rays/ The time of use of the beach by vacationers.

Since the time of sunshine during the tourist season is 12 hours and the average time of beach usage by tourists is 5 hours, we have:

$$Rf = 12 \text{ hours} / 5 \text{ hours} = 2.4$$

$$PCC = A / Ap \times Rf$$

$$PCC = 1,141,418.73 / 10 \times 2.4$$

$$PCC = 273,940 \text{ visitors/day}$$

Table 4 introduces physical carrying capacity of beaches in relation to the number of visitors.

Table 4. PCC for Durrës beaches

Beach	Surface (m ²)	Surface without including promenade (m ²)	Visitors/day
Durrës Beach	145,082.20	116,856.98	34,819/ 28,046
Kavaja Rock Beach	163,716.3	163,716.3	39,291
Lalëz Bay Beach	860,845.45	860,845.45	206,602
Total	1,169,643.95	1,141,418.73	280,712 /273,940

Source: Author's processing

Real Carrying Capacity (RCC)

Real carrying capacity (RCC)s was determined using the equation:

$$RCC = PCC \times (Cf1 \times Cf2 \times Cf3 \times \dots Cf_n) \quad (2)$$

where RCC - real carrying capacity;

PCC - physical carrying capacity.

Cf1...Cfn - correction factors.

The correction factors were determined using the equation:

$$Cfx = 1 - Lmx / Tmx \quad (3)$$

where, Cfx - correction factor of variable x,

Lmx - limiting magnitude of variable x,

Tmx- total magnitude of variable x

The correction factors are derived from various biophysical, environmental, ecological, social, and

management variables. Since tourism relies heavily on natural conditions, this study will focus on specific correction factors: sunshine exposure, seasonality, and beach quality.

Calculating Correction Factors

Sunshine Exposure - Cf1

The sunshine is the major determinant for beach tourism. In Durrës, the summer season begins from June to September. This season has the maximum recorded temperature. Generally, the peak temperature is maintained from 12:00 hours to 16:00 hours during the summer season. The high intensity of sunshine during these hours may result in sunburns, which has contributed to a decrease in tourists. Hence, the high intensity of sunshine during the summer season is a limitation for the study area.

The limiting value for this parameter was calculated as follows:

In a year, 122 days multiplied by 4 hours a day give 488 hours of excessive sunshine. The total potential sunshine exposure hours were calculated as 365 days/year * 12 hours/day = 4,380 hours. Therefore, the correction factor for excessive sunshine hours was calculated as follows:

$$(\text{from (3)}) \quad Cf1 = 1 - Lmx / Tmx$$

$$= 1 - 488 \text{ hours} / 4380 \text{ hours}$$

$$= 1 - 0.11 = 0.89$$

Seasonality- Cf2

In principle, the summer season could extend to 180 days. However, in practice, it extends from June to September. This is a total of 122 days, which is the length of the five-month tourist season. Considering that the total number of days in a year is 365, the magnitude of this parameter is determined by the total. The correction factor for seasonality (Cf2) is calculated as follows:

$$Cf2 = 1 - Lmx / Tmx$$

$$= 1 - 122 \text{ days} / 365 \text{ days}$$

$$= 1 - 0.33$$

$$= 0.67$$

Beach Quality Correction Factor - Cf3

Another major factor affecting beach tourism is the quality of the beach. When the quality of the beach declines, the satisfaction of tourists is affected as well. In our case study, we assess beach quality based on previous authors' research and the Ministry of Environment and Tourism (MoET) assessment included in the annual Environmental Impact Assessment report, as it is shown in Table 5 (Appendix). The beach evaluation utilizes seven parameters: tide action, beach length, Watercolor,

litter, seawater quality, sand quality, and water temperature.

The estimation for Durrës Beach quality is given below:

$$Cf3 = 1 - Lmx / Tmx$$

$$= 1 - 2/7$$

$$= 1 - 0.28$$

$$= 0.72$$

Real Carrying Capacity was determined using the equation:

$$(RCC = PCC \times (Cf1 \times Cf2 \times Cf3 \times \dots Cf_n)) \quad (4)$$

where:

$$RCC = 28,046 \times (0.89 \times 0.67 \times 0.72)$$

$$RCC = 12,042 \text{ visitors/day for Durrës Beach.}$$

$$RCC = 206,602 \times (0.89 \times 0.67 \times 0.86) = 105,949 \text{ visitors/day for Lalëz Bay Beach}$$

$$RCC = 39,291 \times (0.89 \times 0.67 \times 0.58) = 13,559 \text{ visitors/day for Kavaja Rock Beach}$$

$$\textbf{Total beaches: } RCC = 273,940 \times (0.89 \times 0.67 \times 0.74) = 117,612 \text{ visitors/day for whole beaches.}$$

Effective Carrying Capacity (ECC)

Effective Carrying Capacity (ECC): This is the maximum number of tourists that a site can accommodate, including the management capacity (Mc). The Mc reflects the current state of beach tourism management, which depends on existing infrastructure, facilities, and amenities. Table 6 (Appendix) shows the authors' assessing regarding measure analysis and tourism activities for three beaches. The Effective Carrying Capacity (ECC) is obtained by multiplying the Real Carrying Capacity (RCC) by the Management Capacity (Mc).

The equation is as follows:

$$ECC = RCC \times Mc \quad (5)$$

where

ECC - effective carrying capacity;

RCC - real carrying capacity;

Mc - management capacity.

$$ECC = RCC \times Mc$$

$$ECC = 6985 \text{ visitors/day for Durrës beach,}$$

$$\text{Lalëz Bay Beach, } ECC = 39,201 \text{ visitors/day}$$

$$\text{Kavaja Rock beach, } ECC = 4,475 \text{ visitors/day.}$$

The PCC acts as a limit to the number of tourists that can be present at any time. The rotation factor is an important element for beach tourism products, influencing the tourism capacity of a destination and

the formulation of management strategies. While PCC's numbers are theoretical, RCC was calculated to verify these numbers by incorporating correction factors. This study examined three such factors: seasonality, sunshine, and beach quality. The capacity of Durrës Beach to entertain a maximum of 28,046 tourists at any given time is not the actual capacity. The actual capacity of the beach to entertain tourists on a daily basis is 12,042 people. When all the factors are considered, the actual capacity of the beach to entertain tourists on a daily basis is 6,985 people. With a 122-day tourist season, the beach can entertain a maximum of 852,170 tourists without interfering with the environment or the ecosystem.

In the year 2023, Durrës Beach had an estimated 3,100 beds distributed among 58 facilities. This excludes the number of beds found in private homes, second homes, apartments, etc., located in Neighborhood 13, along the shoreline of the city. Known for its "Sand, Sun, and Water", Durrës Beach attracts approximately 50,000 daily vacationers from nearby cities and the region on weekends. The Durrës Beach case study focuses on climate change adaptation's role in sustainable tourism.

In each of these studies, various approaches were implemented, each tailored to its specific environment, emphasizing that carrying capacity assessments need to be dynamic. In every study, the overall conclusion was that we need to balance carrying capacity with the well-being of that particular location. The overall takeaways are that we need more community involvement, better infrastructures, and more effective tourism practices.

4 Conclusions and Recommendations

The process of checking the number of people that a beach can accommodate is a major issue in sustainable tourism, especially for beaches such as Durrës Beach. The Effective Carrying Capacity is a practical solution for managing beach tourism in the present situation, helping policymakers identifies the ideal point where tourists are accommodated based on present situations.

From the analysis of tourism activities carried out on Durrës Beach, it is evident that the estimated carrying capacity is exceeded by the number of tourists visiting the beach. This implies that we need effective management strategies for beaches along the Durrës coast.

Although various plans are in place that takes into account issues of culture and environment, the local and national government have not seen major outcomes in addressing the various impacts of

tourism, including its physical, social, economic, and environmental effects. The assessment of carrying capacity is very important in identifying limits for tourism development and integrating various management strategies that are right for the process. This ensures tourism development is positively impacting the local economy, environmental heritage, and cultural heritage.

To make sure Durrës practices sustainable tourism we need good management of its beaches. This management should match the strategies of national governments. For the three beaches along the Durrës coastline, the estimated effective carrying capacity is 50,661 visitors per day, with Durrës city beach being able to accommodate 6,985 visitors per day. This information helps policymakers decide how many facilities are needed for visitors. The assessment of carrying capacity is very important in ensuring that environmental, economic, and social sustainability are not interfered with in any way. We need to know how many people can visit without causing problems. This helps ensure that tourism in Durrës benefits the economy does not harm the environment and respects its culture.

Identifying carrying capacity is very important in ensuring that tourism is developed sustainably, considering that it is strategically important for the Durrës Region. This ensures that we do not overcrowd beaches along the Durrës coastline, considering that each beach has unique local traits that need to be respected.

5 Recommendations

To make tourism in Durrës better for everyone we need to manage it with the implementation of Carrying Capacity Assessments. This means we have to make sure that the number of tourists is not too much for the environment. CCA ensures a healthy balance between the number of tourists and the protection of the environment.

National governments and local governments should work together to take care of the coast in Durrës. Before making plans for tourism and its development strategies, policymakers should take into consideration how visitors handle Durrës coastline. Furthermore, they should work together in three main areas: the physical, the socio-economic area, and the environmental aspects of coastal tourism.

Investing in the tourism infrastructure in Durrës should take into consideration how coastal tourism will affect the environment and local community in Durrës. The appropriate design of the right infrastructure and main facilities is important for

sustainable development.

Decision-making should include the active participation of public institutions, private sector actors, as well as the public. This will enhance the level of participation in the development of tourism that is consistent with the socio-economic sustainability of the area.

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APPENDIX

Table 5. Beach quality assessment

<i>Beach</i>	<i>Beach type</i>		<i>Beach Quality</i>	<i>Total estimated</i>					
	<i>Tide</i>	<i>Action</i>	<i>Beach Width</i>	<i>Water Estimated Color Coefficient</i>	<i>Litter</i>	<i>Seawater Quality</i>	<i>Sand Qualities</i>	<i>Water Temperature</i>	<i>CF</i>
Durrës Beach	AB	+		-	-	+	+	+	2/7
	+			0.28					
Lalëz Bay Beach	A	-		+	+	+	+	+	1/7
	+			0.14					
Kavaja Rock Beach	A	+		-	-	-	+	+	3/7
	+			0.42					

- Good quality “+” - Low quality “-”

AB*-; AB is a mixed beach, which contains characteristics of types A and B, the characteristics of type A: it is a beach mainly with a sandy composition and a strip width of over 60 m;

type B is a beach mainly with rocky and gravel composition, with a strip width of no more than 60 m;

Source: Author's processing

Table 6. Management measure analysis and tourism activities for beaches

<i>Beach</i>	<i>Beach</i>	<i>Managemen t</i>	<i>Beach activities</i>				<i>Total estimated.</i>			
	<i>Access Transport to beach Facilities</i>	<i>Traffic</i>	<i>Parking Posts</i>	<i>Beach Safety</i>	<i>Water Sports</i>	<i>Swimming</i>	<i>Scuba Snorkelling</i>	<i>Credit</i>	<i>MC Estimation</i>	
Durrës Beach	++ ++ +		+	++	+++	+++	-		14/24	0.58
Lalëz Bay Beach	+		+	+	++	++	++		9/24	0.37
Kavaja Rock Beach	++ + -		-	++	++	-		8/24		0.33

(+++) Fine, (++) Moderate, (+) Not good enough, (-) Low

Source: Author's processing