



Sustainable Cultural Tourism for the Preservation of Cultural Heritage in Laghouat City

Fatiha Imane MAHCAR¹, Rachida BENABBOU², Selen DURAK³ and Tülin VURAL ARSLAN⁴

¹B.U.Ü., Faculty of Architecture, Department of Architecture, Bursa, TURKEY, ORCID: 0000-0002-3862-4578

²Chosun University, Faculty of Engineering, Department of Architecture, Seoul, SOUTH KOREA, ORCID: 0000-0001-6395-9356

³B.U.Ü., Faculty of Architecture, Department of Architecture, Bursa, TURKEY, ORCID: 0000-0001-7499-8246

⁴B.U.Ü., Faculty of Architecture, Department of Architecture, Bursa, TURKEY, ORCID: 0000-0003-2072-4981

Corresponding Author: Fatiha Imane MAHCAR, mouniimy6@gmail.com,

Abstract

Tourism plays an important role in the process of heritage conservation. The sustainable development of cultural tourism which seeks a balance between economic activities, social cohesion and the preservation of cultural resources, appears to be a prominent solution to achieve a tourism that sustains heritage in a suitable way. Laghouat is a city located in south of Algeria, where the Ksour are considered a fundamental element of culture and authenticity. Today these Ksour and especially Ksar Laghouat, is suffering from deterioration and neglect. The aim of this research is to explore the sustainable cultural tourism dimensions in Laghouat city in Algeria. Through a survey, it tried to examine the dynamics of cultural tourism and its potential impact on heritage preservation.

Article Info

Research Article

Received: 05/06/2025

Accepted: 26/06/2025

Keywords

Cultural Tourism;
Sustainability;
Sustainable
Development;
Sustainable Cultural
Tourism

Highlights

Preservation of
cultural heritage
through sustainable
cultural tourism .

Laghouat Kenti'ndeki Kültürel Mirası Korumak İçin Sürdürülebilir Kültür Turizmi

Özet

Turizm, miras koruma sürecinde önemli bir rol oynamaktadır. Ekonomik faaliyetler, sosyal uyum ve kültürel kaynakların korunması arasında bir denge arayan kültürel turizmin sürdürülebilir gelişimi, mirası uygun bir şekilde sürdüren bir turizm elde etmek için önemli bir çözüm gibi görünmektedir. Laghouat, Cezayir'in güneyinde bulunan ve Ksour'un kültür ve özgünlüğün temel bir unsuru olarak kabul edildiği bir şehirdir. Bugün bu Ksour ve özellikle Ksar Laghouat, yaygın bir bozulma ve ihmalden dolayı muzdariptir. Bu araştırmanın amacı, Cezayir'deki Laghouat şehrinde sürdürülebilir kültür turizmi boyutlarını keşfetmektir. Şehrin yerel sakinleriyle bir anket yoluyla etkileşim kurarak, kültürel turizmin dinamiklerini ve miras koruması üzerindeki potansiyel etkisini incelemeye çalışmıştır.

Anahtar Kelimeler

*Kültürel Turizm;
Sürdürülebilirlik;
Sürdürülebilir
Kalkınma;
Sürdürülebilir Kültür
Turizmi*

Öne Çıkanlar

*Sürdürülebilir kültür
turizmi yoluyla kültürel
mirasın korunması.*

1. Introduction

Worldwide, historical cities maintain a built heritage that stimulates their cultural, economic and social development. The revitalization of cultural tourism and tourists' search for identity and originality gives meaning to the protection and development of several heritage policies. Moreover, tourism plays an important role in the process of heritage conservation, but mismanagement of the latter and misunderstanding of its mechanisms can engender significant damage to the cultural heritage of these historical cities. [1].

Algeria has natural, architectural and cultural potentials to be among the best tourist destinations in the Mediterranean basin. Laghouat is located in the south of the country, symbolizing an oasis where settled residents live by agriculture, crafts and trade. Nomads passed through this place, where they found it an ideal scene for change and rest. Laghouat is considered as one of the special achievements of vernacular architecture. [2] The Ksar Laghouat presents itself as a compound and en-closed dwelling attached to the southern slope of a hill. This organization gives the Ksar a stepped structure and a specific appearance. Ksar Laghouat represents a specific synthesis of space organization alongside valleys. This organization is illustrated by a type of local rural housing that is adapted to the climate and social conditions and uses materials provided by the environment. [2]

Reports from local organizations estimate that the Ksar Laghouat has many buildings that are still in reasonably good condition and could serve as a testing ground for a maintenance policy based on a return to traditional techniques. Therefore, the development of cultural tourism in such an area makes it possible to capture the

authenticity of the place, the creation of visitable sites and constitutes a potential vector of an identity strategy that is both local and open to the world. In line with these considerations, this research aims to verify the current situation of sustainable cultural tourism potentiality in Laghouat city in Algeria. Furthermore, this study seeks to discuss the interest of local inhabitants about the cultural tourism in Laghouat city in Algeria and also to verify different hypotheses about the interaction between cultural tourism, historical preservation, and Laghouat's distinct character. In order to prove these hypotheses, the survey is used to verify tourism potential in Laghouat city. These hypotheses can be divided into two main points:

H1-Tourism has a positive impact culture heritage and the local identity of Laghouat city through its economic, social and environmental benefits.

H2- Sustainable cultural tourism is used as a method to preserve historical centers through its political, economic, social and environmental dimensions in Laghouat city.

Tourism is defined as an economic, social and cultural phenomenon that involves the movement of people from place to another place for different purposes like personal, commercial or professional. [3] It includes short-term temporary movement of people to destinations outside the places where they normally live and work. [4] Actually, the tourism sector has become one of the great economic engines in many countries, forming part of the international political agenda. [5]

Cultural heritage can be defined as the tangible and intangible expressions of ways of living that are often developed by society and transmitted from generation to generation and are manifested in objects, customs, practices, structures, artistic expressions and values.[6]

2. Material and Method

In order to investigate the sustainable cultural tourism dimensions in Algerian cities; Laghouat city and verify the two hypotheses discussed in the introduction part, it deliberately opted for a comprehensive combined quantitative-qualitative approach. First, it examined the interest of local inhabitants of Laghouat city about the Algerian governance of tourism policy at the national framework level, through the SDAT strategy (Tourist Development Master Plan) which is currently under study for Laghouat city but not finished yet. In fact, the Tourist Development Master Plan (SDAT) is a component of the National Territorial Development Plan (SNAT), which shows how the State intends to ensure the triple balance, on the scale of the entire country of: sustainable development, improving the living environment and economic efficiency.[7]

Second, it knows that, in the definition of sustainable cultural tourism the participation of local people is very important to have social, economic and environmental benefits. Also for the development of sustainable cultural tourism, the participation of the local people is essential. Therefore, it opted for a questionnaire method to engage with the local residents of Laghouat and identify their important priorities, evaluation and thinking about the sustainable cultural tourism. It has developed the questionnaire based on 4 dimensions (political, economic, social and environmental). Each one of the

dimensions has been broken down into a series of questions targeting local residents of Laghouat city. Given the nature of the subject of this research, it found the best sample, that serves the purposes of the study, is the purposive sampling. It is the sample whose individuals were intentionally selected by the researcher due to the availability of some characteristics in those individuals and not others, but those characteristics are among the important matters for the study and it is the sample that is compatible with this study. [8]

The data of study were collected during the last quarter of 2023 from a sample of 446 local people of Laghouat city (students and graduates from the specialty of architecture, students and graduates from the specialty of tourism, students and graduates from the specialty of history, students and graduates from the specialty of heritage, architects from various specializations).

After studying the guidebooks, the methodology used in each guidebook was extracted and compared them with each other. Then the appropriate "pillar, sub pillar, issue and set of questions" were analyzed for the study of the case Laghouat city.

Once collected, the questionnaire responses, factor analysis was used as a reliability tool to verify the existence of sustainable cultural tourism dimensions in Laghouat city. Factor analysis is a method of checking whether a number of variables of interest are related to a smaller number of unobservable factors. These primary variables are the observed variables while the factors that are extracted in the process are the latent variables which cannot be directly observed in real life. [9] It is considered as a valuable tool to reduce dimension and group different characteristics. It also used The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, which is a statistic used to examine the adequacy of factor analysis based on the study sample. A high value of the statistic (from 0.5 to 1) indicates the suitability of the factor analysis to the available data, while a low value of the statistic (less than 0.5) indicates that the factor analysis is not suitable. [9]

The Factor Analysis was performed with the IBM SPSS Statistics 25 program in order to generate accurate results. In fact, IBM SPSS Statistics is a software platform of powerful statistical abilities. It allows the organization to quickly extract actionable insights from the data. Advanced statistical procedures help ensure high accuracy and quality in decision making. [10]

In general, the approach seeks to initiate a framework for assessing sustainable cultural tourism in a region with specific characteristics such as the case study Laghouat in Algeria, and the extent to which it is being pursued effectively as a tool for sustainable development.

Presentation of the Case Study “Ksar Laghouat”

Cities and Settlements in Algeria are generally concentrated in areas bordering the Mediterranean. However, very few cities are scattered in the southern part of the country. Among these cities, it finds the historical city of Laghouat. In fact, the Laghouat region is located in an arid to semi-arid area inside the steppe regions of

Algeria (Fig. 1). The total area within the administrative boundary is 25,052 km², with an estimated population of 581,771 inhabitants in 2013 (Fig. 1) [11].

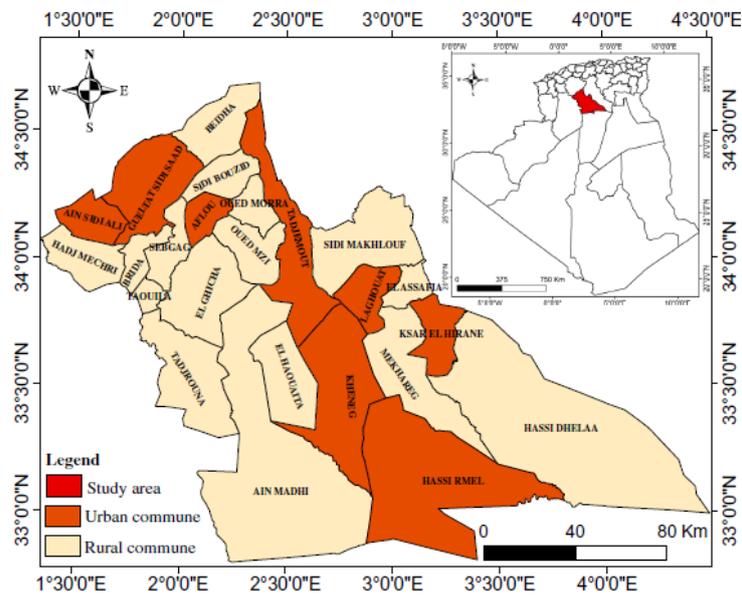


Figure 1. Location of Laghouat region [11]

The city of Laghouat is known for its old Ksar. A Ksar, is a fortified village (Berber architecture) found in north Africa [12]. The old Ksar of Laghouat was constructed in 1704 and classified as a national cultural heritage in 2007 (Fig. 2) [13]. The Ksar located in the north side and constitute main old nucleus of the city. It is one of the specific achievements of local traditional architecture (Fig. 3 and 4). In fact, it contains many monuments of heritage, like: mosques, museum, oases, towers, rock, doors and traditional houses (Fig. 5, 6 and 7). [14]

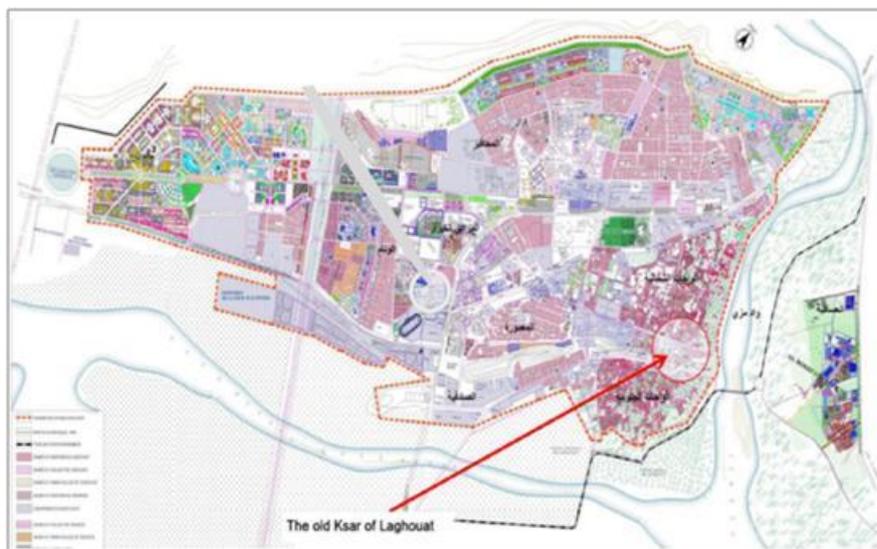


Figure 2. Location of old Ksar of Laghouat [14]



Figure 3. (Left) [14], **Figure 4.** (right). Old Ksar of Laghouat [12]

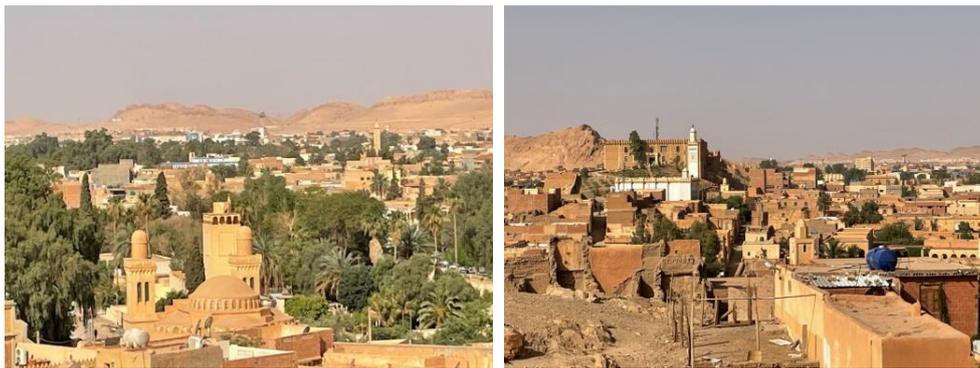


Figure 5. and **Figure 6.** Old Ksar of Laghouat



Figure 7. Nedjma Place of Ksar Laghouat

3. Results and Discussion

After conducting an extensive survey involving 446 participants from the local residents of Laghouat city, the necessary information was collected and data extracted thoroughly. Then, the extracted data had been comprehensively processed giving detailed results.

First, regarding the survey participants and as illustrated in Table 1, the demographic and tourism relevant characteristics of local people, concerning the gender variable that the largest percentage of the sample members are female. However, For the age group, it becomes clear to us that the number of sample members between the ages of 26 and

35 years is 248, which represents 55.6% of the total number of the sample. It is the largest percentage of the sample members. The data indicates clearly that the majority of the sample participants sees that Laghouat city has a tourism potential also they see that tourism helps to preserve and maintain the distinction of Laghouat city, its local identity, culture and heritage . These results indicate that the local population is confident that their city has a significant potential for cultural tourism.

Table 1. Demographic and tourism relevant characteristics of local people

Items	Frequency	Percentage
Gender		
Female	272	61,0
Male	174	39,0
Age group		
18 - 25	102	22,9
26 - 35	248	55,6
36 - 47	84	18,8
48 - 59	11	2,5
60 and over	1	0,2
Laghouat city has a tourism potential		
No	35	7,8
Yes	411	92,2
The effect of tourism on the local identity, culture and heritage in Laghouat city		
Helps to improve it	128	28,7
Helps to maintain it	284	63,7
It damages	7	1,6
It has no effect	27	6,1
The effect of tourism on the quality of life in Laghouat city		
Helps to improve it	283	63,5
Helps to maintain it	95	21,3
It damages	10	2,2
It has no effect	58	13,0
Total	446	100

Second, for the tourism relevant characteristics of local people, it appears from the table 2 that the majority of the sample participants expresses a general satisfaction level, which means that they are satisfied with having tourism in Laghouat city in autumn and winter seasons and strongly agree with the spring season. in addition, the participants view that there are economic and social benefits to society from tourism and the tourists who visit Laghouat city, as well as benefits accruing to the locals from touristic activities and tourists who visit Laghouat city.

These outcomes confirm clearly the first hypothesis which states that Tourism has a positive impact culture heritage and the local identity of Laghouat city through its economic, social and environmental benefits.

Table 2. Tourism relevant characteristics of local people

Items		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	Std. Deviation
In autumn, you are satisfied of tourism in Laghouat city	Frequency	24	285	54	63	19	1.94	1.514
	Percentage	5,4	63,9	12,1	14,1	4,3		
In winter, you are satisfied of tourism in Laghouat city	Frequency	31	252	58	75	30	1.91	1.254
	Percentage	7,0	56,5	13,0	16,8	6,7		
In spring, you are satisfied of tourism in Laghouat city	Frequency	237	110	42	39	18	3.03	1.330
	Percentage	53,1	24,7	9,4	8,7	4,0		
In summer, you are satisfied of tourism in Laghouat city	Frequency	4	28	64	255	92	4.24	2.153
	Percentage	0,9	6,3	14,3	57,2	20,6		
There are economic benefits to the community from tourism and tourists who visit Laghouat city	Frequency	97	274	42	25	7	1,98	1,362
	Percentage	21,7	61,4	9,4	5,6	1,6		
There are social benefits to the community from tourism and tourists who visit Laghouat city	Frequency	42	269	64	61	10	1,80	1,134
	Percentage	9,4	60,3	14,3	13,7	2,2		
There are environmental benefits to the community from tourism and tourists who visit Laghouat city.	Frequency	32	100	87	207	20	2,25	1,024
	Percentage	7,2	22,4	19,5	46,4	4,5		
There are benefits for resident from tourism and tourists who visit Laghouat city	Frequency	27	295	63	51	10	1,67	1,067
	Percentage	6,1	66,1	14,1	11,4	2,2		
Weighted mean							2.3525	
Std. Deviation							1.35475	

The weighted average was 2.3525 with Std. Deviation 1.35475, which indicate that the trend of (tourism relevant characteristics of local people) is ‘disagree’, as a general trend according to 5- point Likert scale as shown in table 2 since 2.3525 lie in the interval [1 – 2.59].So, the average of tourism relevant characteristics of local people, is 2.3525,

which consider a low level; since the intervals of level as follow (Table3)[15]: Low level: [1 – 2.59], Moderate level: [2.60 – 3.39], and High level: [3.40 - 5]

Table 3. point Likert scale [15]

Mean	Opinion	Weight
1 to 1.79	Strongly Disagree	1
1.80 to 2.59	Disagree	2
2.60 to 3.39	Neutral	3
3.40 to 4.19	Agree	4
4.20 to 5	Strongly agree	5

Furthermore, for a general evaluation of the data, factor analysis is performed in order to extracts different numbers of factors and finds out which number of factors leads to the most interpretable results. [16] Factor analysis was completed using IBM SPSS Statistics 25 program. The initial set of 14 questionnaire items in the second part of the questionnaire was targeted for this analysis.

Table 4 shows the results of the KMO and Bartlett's test. From the following table (table 4),it note that the value (Kaiser - Meyer - Olkin KMO) it is equal to 0.855 and it is an acceptable value as the minimum value for that value is 0.600. This means that the measurement is very good and the Sig of the measurement is 0.000 indicates sufficient total variance to use factor analysis.

Table 4. KMO and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy	0,855
Bartlett's test of sphericity	
Approx. chi-square	3049,388
df	91
Sig.	0,000

Table 5 illustrates the results of the total variance explained. The table shows the extracting 3 factors with values (Eigenvalues) greater than the correct 1.The percentages of explaining the variances from the total variance for each factor separately were also reached and the 3 factors reveal a percentage of 62,349, which is a high percentage.

Table 5. Total variance explained

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	Percentage of variance	Cumulative percentage	Total	Percentage of variance	Cumulative percentage	Total	Percentage of variance	Cumulative percentage
1	5,696	40,688	40,688	5,696	40,688	40,688	4,319	30,853	30,853
2	1,554	11,100	51,788	1,554	11,100	51,788	2,683	19,164	50,017

3	1,479	10,561	62,349	1,479	10,561	62,349	1,726	12,332	62,349
4	0,813	5,808	68,157						
5	0,813	5,805	73,962						
6	0,709	5,066	79,028						
7	0,649	4,636	83,664						
8	0,504	3,600	87,263						
9	0,464	3,312	90,576						
10	0,379	2,708	93,284						
11	0,295	2,108	95,392						
12	0,275	1,966	97,359						
13	0,204	1,454	98,812						
14	0,166	1,188	100,000						
Note : Extraction Method: Principal Component Analysis.									

In the questionnaire it has already implemented 4 axis of dimensions of sustainable cultural tourism (political, economic, social and environmental). Thus it used the factor analysis as a reliability tool to know the extent of sustainable cultural tourism dimensions in Laghouat city. Therefore, it conducted a Factor Analysis using 1,0 as the Eigenvalue in order to increase the components' strength. Table 5 illustrates the three factors.

The extracted factors, which represent the significant aspects of the sustainable cultural tourism dimensions, can be labeled as:

- Sustainable tourism strategy and cultural heritage.
- Priority of Algerian government strategy.
- Management and governance of sustainable tourism.

After examining the statistical tables and through the factor analysis results, it conclude that it endorse significantly the second hypothesis which highlights the existence of dimensions of the sustainable cultural tourism in Laghouat city. These dimensions of the sustainable cultural tourism can be used to help remarkably for the preservation of Laghouat city.

4. Conclusion

Sustainable cultural tourism is the meeting point between the needs of visitors and the region hosting them, which leads to the protection and support of future development opportunities, so that all resources are managed in a way that meets economic and social needs and in the same time it preserve historical and urban sites and environmental

diversity.[17] In Laghouat city, the revival of cultural tourism and tourists' search for identity gives meaning to the protection of heritage policies.

This research, which is conducted in the context of heritage protection and evaluation, has focused on sustainable cultural tourism. This type of tourism, which is considered an important tool in strategies for the protection of cultural heritage, stands out as an effective element in terms of both the physical protection of heritage areas and the visibility of their cultural values in the light of the experiences of various countries that have adopted this approach. The research findings reveal that sustainable cultural tourism can contribute to the goals of local development, social participation and cultural continuity by ensuring a multi-faceted evaluation of heritage.

The study has examined the extent of the cultural tourism dimensions in the city and its outcomes highlights an important potential for a sustainable development based on cultural tourism.

Funding

Not applicable.

Conflict of Interest

There is no conflict of interest regarding this article.

Author Contribution

Authors contributed equally.

5. References

- [1] Kherbouche, S. Le tourisme culturel durable comme facteur de mise en valeur du patrimoine architectural -Le cas de la ville historique de Tlemcen, Master Thesis, University of Abou Beker Belkaid Tlemcen, Tlemcen, Algeria, (2012).
- [2] Si Amer, A. N. La prise en compte des attributs touristiques dans le processus de patrimonialisation de l'espace oasien : cas de l'oasis de Zgag El Hadjadj à Laghouat, Algérie. *Colloque International Ressources patrimoniales et alternatives touristiques : Entre oasis et montagnes*, Ressources patrimoniales et alternatives touristiques: entre oasis et montagnes, Ouarzazate, Maroc, November 2011, published 31 March (2013).
- [3] UNWTO, Glossary of tourism terms. 2008. Available online: <https://www.unwto.org/glossary-tourism-terms> (accessed on 05/11/2023).
- [4] Mousavi, S. S.; Doratli, N.; Mousavi, S. N.; and Moradiahari, F. Defining Cultural Tourism, in *International Conference on Civil, Architecture and Sustainable Development (CASD-2016)*, London, United Kingdom, Dec. 1-2, (2016).
- [5] Rodríguez, C. P. Travelling for pleasure: a brief history of tourism. 2020. Available online: <https://www.europeana.eu/en/blog/travelling-for-pleasure-a-brief-history-of-tourism> (accessed on 05/11/2023).
- [6] European Union, *Sustainable Cultural Tourism*, European Union, Luxembourg, Luxembourg, (2019).

- [7] Sid, A. Eléments de la stratégie de développement du tourisme en Algérie, UNCTAD, Single-year Expert Meeting on Tourism's Contribution to Sustainable Development, Geneva, Switzerland, 2013, https://unctad.org/system/files/non-official-document/ciem-p05_fr.pdf (accessed on 11/11/2023).
- [8] Dovetail Editorial Team. What is purposive sampling? 2023. Available online: <https://dovetail.com/research/purposive-sampling/#:~:text=Purpose%20sampling%20is%20a%20technique,judgmental%20sampling%20or%20selective%20sampling> (accessed on 11/11/2023).
- [9] Fawad, Kh. Learn Research, How to Perform Exploratory Factor Analysis (EFA) using SPSS. 2023. Available online: <https://researchwithfawad.com/index.php/lp-courses/data-analysis-using-spss/how-to-perform-exploratory-factor-analysis-using-spss/>(accessed on 12/11/2023).
- [10] IBM. IBM SPSS Statistics. 2023. Available online: <https://www.ibm.com/products/spss-statistics> (accessed on 12/11/2023).
- [11] Saadoud, D.; Guettouche, M. S.; Hassani, M. & Peinado, F. J. M. Modelling wind-erosion risk in the Laghouat region (Algeria) using geomatics approach. *Arabian Journal of Geosciences*, (2017), 10, 363.
- [12] Baroud, D.; Chettih, A. Réhabilitation des fortifications de la ville de Laghouat, Master Thesis, University of Amar Telidji, Laghouat, Algeria, (2009).
- [13] Bencheikh, D.; Bederina, M. Assessing the duality of thermal performance and energy efficiency of residential buildings in hot arid climate of Laghouat, Algeria. *International Journal of Energy and Environmental Engineering*, (2020), 11.
- [14] Directorate of culture of Laghouat, *PPSMVSS Plan Permanent de Mise en Valeur et de Sauvegarde des secteurs sauvegardés* (Permanent Plan for the Development and Safeguarding of Safeguarded Sectors), Laghouat, Algeria, (2011).
- [15] Anonymous. Statistical thinking / التفكير الإحصائي مبادرة لنشر كل ما يخص الإحصاء وتحليل البيانات. 2019. Available online: <http://statistic-think.blogspot.com/2019/02/blog-post.html>(accessed on 12/11/2023).
- [16] UCL. Statistical Methods and Data Analytics, factor analysis | SPSS annotated output. 2021. Available online: <https://stats.oarc.ucla.edu/spss/output/factor-analysis/> (accessed on 13/11/2023).
- [17] Ramdhani, L.; Charef, A. The reality and challenges of local investment in desert tourism, "Laghouat Province as a model" واقع وتحديات الاستثمار المحلي في السياحة "ولاية الاغواط نموذجا الصحراوي". *Journal of Economics and Development - Sustainable Local Development Laboratory* -Yahya Fares University, Medea, Algeria, (2017), 7.