

Thermal Tourism in Algeria: Potentials, Efforts, and Challenges

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Abstract

Thermal tourism is one of the most important forms of therapeutic tourism, based on the use of natural mineral and thermal waters with recognized healing properties. It combines medical treatment and relaxation, contributing to improved public health and local economic development. With the growing global interest in health and wellness tourism, thermal tourism has become an important driver of the tourism and health sectors. This study examines the reality of thermal tourism in Algeria during the period 2018–2023, focusing on the country's natural thermal resources and public efforts to develop this sector. It reviews the spatial distribution of thermal resources and highlights key programs and projects launched to promote thermal tourism. The study also identifies major challenges facing the sector, including weaknesses in the legislative framework, underutilization of thermal resources, limited medical supervision, administrative and investment constraints, weak promotion, and increasing regional and international competition. The study concludes by stressing the need for integrated strategies to ensure sustainability and enhance the contribution of thermal tourism to national development.

Keywords: *thermal tourism, health tourism, thermal springs, thermal resources, Tourists, Algeria.*

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1. Introduction

Tourism today is considered one of the fundamental pillars of the global economy, given the growing role it plays in supporting economic and social development pathways. In light of the geo-economic transformations the world is witnessing, tourism has become one of the most dynamic and fast-growing industries, especially with many countries moving to reduce their reliance on traditional sectors such as energy and mining, and seeking to diversify sources of income. In this context, tourism has emerged as a strategic option capable of generating wealth, providing job opportunities, achieving regional balance, and contributing to the strengthening of foreign currency revenues, particularly in countries endowed with attractive natural, cultural, and historical resources.

Among the types of tourism that have witnessed remarkable development in recent years, thermal tourism stands out as one of the oldest and most important forms of therapeutic tourism. Since ancient times, it has been associated with the use of natural resources with healing properties, primarily mineral and thermal waters, as a means of treatment and recovery. Over time, thermal tourism has evolved into an integrated tourism activity that combines therapy, psychological relaxation, and entertainment, making it an effective contributor to improving individuals' quality of life and supporting the local economy.

Today, thermal tourism is gaining increasing global attention, due to the healthy and natural alternatives it provides to chemical medicines, as well as its growing popularity among large groups of tourists seeking both relaxation and recovery. In this regard, Algeria possesses a vital and strategic asset that can make it an important player in this field, as dozens of thermal springs with unique physical and chemical properties are spread across its national territory. These range from sulfuric, calcareous, to ferruginous waters, which are natural resources with great therapeutic potential.

The value of these resources is not limited to their natural dimension alone but also extends to a historical dimension, as Algeria is home to a number of mineral baths that date back to the Roman era, specifically before the year 46 BC, giving this type of tourism a distinctive cultural and civilizational aspect.

Despite these unique assets, thermal tourism in Algeria still faces a set of structural and institutional challenges that hinder its growth and prevent it from achieving its expected economic and social roles. Hence, this study seeks to diagnose the reality of thermal tourism in Algeria by highlighting its strengths and available opportunities, analyzing the obstacles facing the sector, and presenting a set of proposals and mechanisms capable of activating this vital form of tourism within a broader framework of economic diversification and sustainable development.

2. Previous Studies

The high value accorded to human health has led to an increase in research and studies aimed at examining mechanisms for promoting health in societies, and

enhancing methods and means of disease prevention. Among these means is thermal tourism, which has received increasing attention in recent decades, and some studies have addressed this topic. Among these studies is the study of (Emir & Arslanturk, 2015), which aimed to analyze the strengths, weaknesses, opportunities, and threats of thermal tourism in the Turkish city of (Afyonkarahisar) through the opinions of a sample of 1135 tourism students from various levels. According to the results, the presence of the university is considered a strength, while the absence of an airport in the region is considered a weakness. The existence of year-round thermal tourism is considered an opportunity, while the negative impacts of construction are considered a threat.

On the other hand, the study of (Draghici, Pintilii, Peptenatu, & Comanescu, 2014) aimed to identify the contribution of spa tourism to the development of the local economy in Romania during the period 2000-2012, a period during which Romanian tourism witnessed remarkable dynamism. The study also aimed to examine the importance of spa resorts in Romania's regional systems, which were developed based on spa resources. The study relied on a rich bibliographic analysis of the development of health tourism, in addition to the quantitative measurement of this process. The study confirmed the hypothesis of the importance of spa tourism in the sustainable development of local economies with limited resources.

The study of (Fertas, Benmahamed, & Alouat, 2022) aimed to analyze and understand the dilemma between natural potential and the confirmed and ongoing delay in tourism development through a case study of the mountainous municipality of Hammam Kerrakour, which is known for its mineral springs that in turn contributed to the activity of thermal tourism. The SWOT model was used, which allows internal and external analyses of thermal tourism. The goal was to determine how strength factors can be used to take advantage of development opportunities in the region, and then how development actors can overcome weaknesses and thereby repel threats. Striking disparities were observed between the somewhat organized spaces in the high plains of the Setif region, such as the Setif-El Eulma axis.

On the other hand, the study of (Tuncer, Menekay, & Savasan, 2020) aimed to determine whether customers residing in thermal tourism institutions are satisfied with these institutions and to evaluate the customers according to their demographic information. In carrying out the survey, 1468 forms were completed in institutions of the thermal health sector. These data were then subjected to reliability analysis, the independent samples T-test, and Anova analysis in the SPSS 23.0 package program. As a result of the analyses conducted in the research, there is a 99% level relationship between gender, age, education, profession, the effective reasons for preference, the reasons for booking hotels, and the services provided in thermal hotels.

3. The Theoretical Framework of Therapeutic Tourism and Thermal Tourism

In recent years, health tourism has become one of the important types of tourism, especially with the development and ease of travel, as the number of people wishing to benefit from health services is increasing. Among the oldest types of health tourism is thermal tourism, where individuals have benefited from the therapeutic properties and relaxation of thermal waters since ancient times.

3.1 The Nature of Health Tourism and Its Types

The increasing demands of societies for living a healthy life have led to the emergence of health tourism, which is considered one of the alternative types of tourism. People have become more ambitious in terms of disease prevention, treatment, obtaining information about their treatments, and applying new methods that support healthy living today more than in the past. Health tourism also provides people with the opportunity to learn about different cultures and enjoy vacations, as well as the chance to restore their health at reasonable costs and higher quality (Aslan, Mete, ŞİMŞİR, & ÖRGEV, 2022, p. 303).

Health tourism is defined as all the relations and developments resulting from the residence and travel of people whose main motive and objective is to improve or maintain their health condition or treat their illnesses (Białk-Wolf, Arent, & Buziewicz, 2016). Health tourism is a combination of recreation, prevention, and treatment, and it is directly shaped and influenced by the motives behind it, including (Roman & Wojcieszak-Zbierska, 2023, p. 04):

- Recovery after illness and trauma;
- The desire to eliminate the negative effects of stress;
- Anti-aging and cosmetic procedures (including plastic surgery);
- Combating addiction;
- Improving an individual's health condition by undergoing an intervention or specialized healthcare procedure in a comfortable atmosphere in a non-hospital environment;
- Access to increasingly diverse complementary treatments related to preventive healthcare measures.

Health tourism is mostly divided into two main categories: those who travel primarily for medical reasons and whose main motivation is healing or recovery, and those who do so for preventive or wellness reasons (thermal tourism). In addition to these two main categories, a third category can be added, consisting of people who do not wish to receive any form of special care but who choose destinations or health resorts to enjoy the existing environmental conditions for reasons of comfort, escape, or connection with nature (Brandão, Liberato, Teixeira, & Liberato, 2021, p. 04).

3.2 Factors of Global Health Tourism Growth

The number of participants in health tourism has steadily increased in recent years, and several factors have contributed to the growth of health tourism, including the following (GHA, 2023):

- ✓ **Cost Savings:** The cost of treatments and medical procedures varies significantly between countries due to factors such as labor costs, government subsidies, and differences in the cost of living. By traveling to countries with lower healthcare costs, tourists can save a substantial amount of money. These cost savings can be particularly attractive to uninsured patients or those needing elective procedures not covered by insurance.
- ✓ **Access to Specialized Treatments:** Some specialized treatments may not be available or may be limited in availability in certain countries. This may be due to a lack of advanced medical technology, a shortage of medical specialists with specialized skills, or restrictive regulations on certain treatments.
- ✓ **Shorter Waiting Times:** Patients in some countries may face long waiting periods for certain treatments or medical procedures due to factors such as limited healthcare resources or high demand. These waiting times can be especially challenging for patients suffering from chronic pain, deteriorating conditions, or urgent medical needs. Health tourism offers patients the opportunity to bypass these waiting times and receive the necessary treatment more quickly.
- ✓ **Higher Quality Care:** Some health tourists perceive that the quality of care in another country may be higher than what is available in their home country. This perception may stem from factors such as the reputation of the healthcare system in the destination country, the use of advanced medical technology, or the expertise of medical professionals.
- ✓ **Combining Medical Procedures with Leisure Travel:** Health tourism offers a unique opportunity for individuals to combine medical treatments or wellness experiences with leisure travel. Many health tourists choose to extend their stay in the destination country to explore the local culture, visit tourist attractions, or simply relax and recover in a beautiful environment. This combination of medical and leisure travel can contribute to the patient's overall well-being and enhance their recovery process.

3.3 The Origin and Nature of Thermal Tourism

Related research indicates that thermal springs began to be used for healthcare purposes as early as the 6th century BC. Discoveries by Asian archaeologists indicate data showing that thermal springs were used for bathing 5000 years ago. The same situation applies to other continents, such as North and South America (the Indians), Africa (the Egyptians), Australia, and Europe (the Greeks and Romans) (Metodijeski, et al., 2019, p. 08), where individuals primarily frequented them for care and social interaction. They were widely used until the

1980s and 1990s. Since the end of the 20th century and with the confirmation of the wellness concept, modern spas have spread mainly in the West, revolving around a rich basket of advanced treatments (massage, cosmetics based on many elements and raw materials) (Migliaccio, 2018, p. 02). Although this type of tourism has developed more rapidly in areas that contain hot groundwater, it can also be artificially developed in regions that do not have these characteristics (Kervankiran, 2016, p. 111).

There are no globally agreed definitions of thermal tourism and thermal tourists. Similar to strange designations, some authors refer to thermal tourists as therapeutic tourists (Gómez-Ullate, 2017, p. 125). Thermal tourism is considered an alternative form of tourism that includes tourists' visits to thermal baths, hydrotherapy centers, and thalassotherapy centers, with the aim of restoring their physical and mental health using therapeutic waters. Participation in thermal baths can take place alongside other recreational and cultural activities (Nikoli & Lazakidou, 2019, p. 318). Thermal tourism is also defined as the use of geothermal mineral waters with a temperature higher than 18–20°C for therapeutic, recreational, relaxation, and cleansing purposes (Doruk, 2019, p. 19).

Thermal tourism also expresses a process in which thermal waters are used for recreational and leisure purposes, as well as in different methods such as thermal mineral water baths, drinking, inhalation, and mud baths, as well as therapeutic practices through the combination of supportive treatments such as climatotherapy, physiotherapy, rehabilitation, exercise, psychotherapy, and diet (Aksoy, 2023, p. 58).

On the other hand, thermal tourism or thermal therapy refers to tourists' use of cold or hot mineral waters for health purposes, both for drinking and external applications, and it is a type of tourism that covers the requirements of transportation, accommodation, and hospitality (Tuncer, 2021, p. 50).

3.4 The Importance of Thermal Tourism

According to Bennett et al. (2004), although thermal tourism, health tourism, spa tourism, and medical tourism are defined in different ways, in reality they serve the same purpose, as they allow people to gain or protect their health (Bennett, King, & Milner, 2004). The rising quality of life, the rapid aging of the world's population, and the increasing costs of medical treatment have driven people to seek other therapeutic methods as a result of the growing level of well-being around the world (Bayat & Yalman, 2020, p. 553). Thermal tourism helps treat individuals' health problems through spas and health facilities that they visit for health and rehabilitation purposes, with a focus also on mental and emotional health. It also provides solutions for the increasing health problems people suffer from due to double work schedules and stressful lifestyles (Aksoy, 2023, p. 58).

The minerals, natural heat, and hydrotherapy methods present in thermal waters provide a number of benefits such as reducing stress, relaxation, improving skin health, and treating muscle and joint disorders.

According to the survey conducted by the Global Wellness Economy Monitor 2023, there are an estimated 31,290 thermal/mineral spring facilities operating in 130 countries, and the revenues of this type of tourism were valued at \$46 billion in 2022, compared to \$66 billion in 2019. The thermal/mineral spring industry is heavily concentrated in the Asia-Pacific region and Europe, which together accounted for 94% of industry revenues and 93% of facilities in 2022. The main markets include China (\$10.2 billion in 2022), Japan (\$8.6 billion), and Germany (\$6.8 billion) (GWI, 2024).

Health and thermal tourism have become an emerging sector of the market aimed not only at those seeking thermal treatments but also at those seeking disease prevention, physical improvement, spiritual balance, or even those longing for cultural programs and relaxation. In this sense, this specialized tourism has become more complex and creative, requiring high-quality equipment and infrastructure, and offering a wide range of products and services related not only to the diversity of spa treatments but also to complementary recreational activities related to contact with nature, cultural heritage, as well as other regional resources. This creates effective links with the region and becomes an important force that shapes regional development by creating positive pressure on local economic bases with indirect effects on the region (Barros, Sousa, & Fernandes, 2020, p. 04).

The availability of thermal tourism services for 12 months and the high operation of facilities during the process of stay and treatment lead to high levels of employment. The easy integration with other alternative types of tourism and activities that improve human health in thermal facilities, as well as leisure and enjoyable opportunities, have been helpful in making thermal tourism a multifaceted sector (Şanlı & Kara, 2019, p. 267).

4. Study Methodology

This study seeks to achieve the following objectives:

- To monitor and describe the natural and material potentials that Algeria abounds with in the field of thermal tourism, in terms of the diversity and distribution of thermal springs and mineral waters with therapeutic properties, or in terms of the forms of thermal tourism, the number of thermal springs, and their visitors.
- To analyze the governmental efforts made to develop the thermal tourism sector in Algeria within the framework of the National Plan for the Development of Thermal Tourism (PNDTT).
- To diagnose the most important challenges and obstacles hindering the growth of this type of tourism, whether legal, regulatory, economic, human, or structural.
- To propose practical mechanisms and recommendations that would develop thermal tourism in Algeria and enhance its contribution to diversifying the national economy and creating local job opportunities.

Accordingly, this article relies on the descriptive approach in order to provide a scientific reading of the reality of thermal tourism in Algeria, with a focus on presenting the quantitative development of the activity of this sector during the period from 2018 to 2023. It has relied mainly on official data and statistics issued by the Ministry of Tourism and Traditional Industry, which were employed to monitor the general trends of thermal tourism and to identify the most prominent challenges that stand in the way of its development at the national level.

A theoretical framework supporting the article was also formed based on the concepts of therapeutic tourism and thermal tourism, relying on academic references and previous studies that addressed the topic from different angles. This framework enabled the construction of a knowledge background that helped clarify concepts and interpret phenomena related to the subject. The data were analyzed in a descriptive manner reinforced with figures and percentages, allowing for an understanding of the general trends and providing a scientific vision regarding the strengths and shortcomings in this vital field.

5. Potentials of Thermal Tourism in Algeria

5.1 Thermal Springs

Algeria abounds with an important wealth of thermal resources, spread across the various provinces of the country, and its waters are characterized by physical and chemical properties of high therapeutic value.

Rheumatism, joint disease, skin diseases, blood pressure, arteriosclerosis, asthma, and allergies; nervous system diseases; ear and throat diseases; gynecological diseases; urinary tract diseases; kidney stones; hemorrhoids; back pain; bone diseases.

Figure 1. The most prominent therapeutic properties of Algerian thermal springs and mineral baths

Source: Prepared by the researchers based on the website of the Ministry of Tourism and Traditional Industry.

A study for updating the thermal inventory, carried out in 2015, showed the existence of 282 thermal springs, distributed between natural springs and wells. In addition, 90 concession rights were granted for the exploitation of these resources. In view of the physicochemical and therapeutic properties of these waters, around 100 thermal springs were identified as suitable for hosting new therapeutic projects, among them 34 mineral baths still exploited in traditional ways. Among the most famous mineral baths in Algeria are: Hammam Debagh and Hammam Ouled Ali in Guelma Province, Hammam Essalihine in Khenchela Province, Hammam Sokhna and Hammam Kerkour in Setif Province, Hammam Telaghma in Mila Province, Hammam Zelfana in Ghardaia Province, and others.

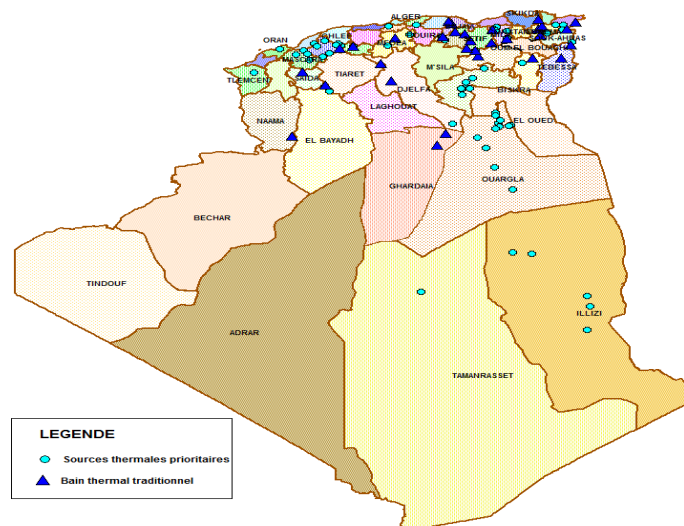


Figure 2. Map of thermal springs in Algeria

Source: Prepared by the researchers based on the website of the Ministry of Tourism and Traditional Industry.

The mineral baths in Algeria take several forms, including traditional baths, modern baths, or even mineral resorts which are called *complexes* in Algeria; natural baths in their various forms, both mountainous and Saharan; archaeological or historical baths, some of which date back to the Roman era; and thalassotherapy centers.



Figure 3. Example of a Roman mineral bath in Algeria (Hammam Essalihine, Khenchela Province)

Source: Directorate of Tourism of Khenchela Province.



Figure 4. Example of a natural mineral bath in Algeria (Hammam Debagh, Guelma Province)

Source: Directorate of Tourism of Guelma Province.



Figure 5. Example of a natural mineral bath in Algeria (Hammam Kerkour, Setif Province)

Source: Directorate of Tourism of Setif Province.

5.2 Thalassotherapy (Therapeutic Tourism with Seawater)

Algeria seeks to establish high-quality investment projects with international standards in the field of thalassotherapy. Its advantage lies in the long Algerian coastline, which extends over 2,148 km. However, we notice a significant shortage in the number of thalassotherapy centers in Algeria, as shown in the table

below. This is attributed to the novelty of the Algerian experience in using this type of therapeutic tourism, which only started very recently in 2018.

Development of the number of thalassotherapy centers during the period (2018-2023)

Table 1

Year	Thalassotherapy Centers – Public	Thalassotherapy Centers – Private
2018	2	1
2019	2	1
2020	2	1
2021	2	1
2022	2	1
2023	2	1

Source: Website of the Ministry of Tourism and Traditional Industry.

5.3 Therapeutic Tourism with Hot Sand

The vast southern regions of Algeria, which represent about 80% of the country's total area, form a distinctive destination for therapeutic tourism, where sand burial therapy is used as a natural means of healing. Hundreds of tourists, both domestic and foreign, visit these regions to benefit from the advantages of this type of alternative medicine, especially in treating diseases such as rheumatism, joint pain, obesity, and others. Despite the increasing demand, this therapeutic method still lacks medical and legal supervision, which necessitates intensified efforts and in-depth studies to regulate it and adopt it as a recognized therapeutic and preventive option.

5.4 The Material Potentials of Thermal Tourism in Algeria

Thermal Complexes in Algeria during the period (2018-2023)

Table 2

Year	Thermal Springs	Thermal Complexes – Public	Thermal Complexes – Private	Licenses for Exploitation of Thermal Waters	Projects Under Construction	Stalled Projects
2018	282	8	15	83	38	19
2019	282	8	18	92	43	20
2020	282	8	18	93	44	20
2021	282	8	19	93	44	20
2022	282	8	21	92	25	22
2023	282	8	24	93	25	18

Source: Website of the Ministry of Tourism and Traditional Industry.

When analyzing the data related to active thermal institutions during the period from 2018 to 2023, we notice the stability of the number of thermal springs, estimated at 282 springs distributed nationwide. This stability is mainly due to the lack of updating of the previous thermal inventory, in addition to the absence of

actual efforts from the competent authorities to discover new springs, classify them, and include them among exploitable and investable thermal resources.

Despite this stagnation in the number of springs, a relative development has been observed in the state's efforts aimed at growing and developing this sector. This is evident through the increasing number of licenses granted for the exploitation of thermal waters from year to year, as the number of these licenses rose from 83 in 2018 to 93 in 2023. This is a considerable number, but it still remains below the required level, which necessitates doubling efforts to discover new thermal springs and conducting detailed studies to classify them according to the temperature of their waters and the strength of their flow, leading to granting licenses for their exploitation in order to support the thermal tourism sector in Algeria.

It is also worth noting the important role played by the private sector in establishing thermal complexes near these springs, as the number of private thermal complexes rose from 15 in 2018 to 24 in 2023. Meanwhile, the number of public complexes remained weak and stable, estimated at only 8 complexes during the same period. On the other hand, we notice significant fluctuation in the number of thermal projects under construction and others that stopped for various reasons.

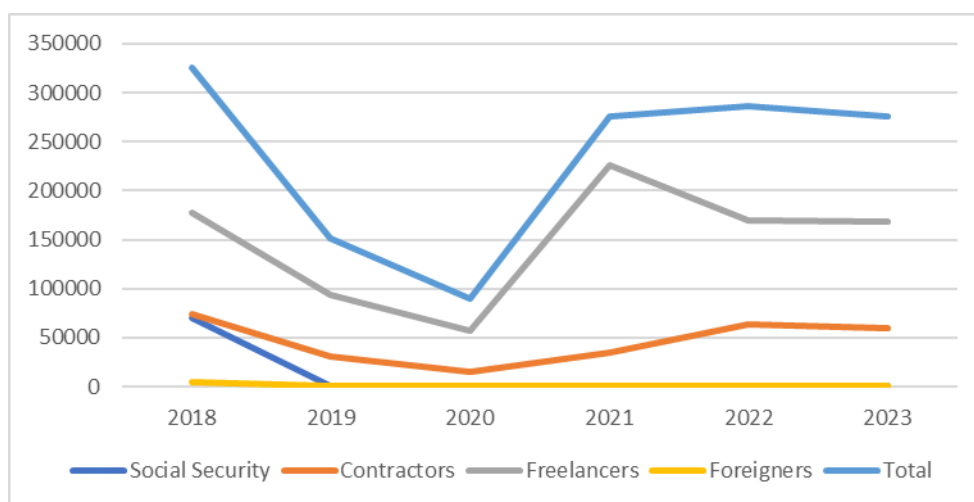


Figure 6. Number of thermal tourists in Algeria (2018–2023)

Source: Website of the Ministry of Tourism and Traditional Industry.

By analyzing the data of Figure No. 06 during the period from 2018 to 2023, it becomes clear that there is a fluctuation in the number of visitors to thermal tourist destinations in Algeria. After recording the highest level of visitors in 2018, estimated at 325,218 bathers, their number decreased to 275,191 bathers in 2023. This decline can be mainly attributed to the repercussions of the COVID-19 pandemic and the accompanying precautionary measures and near-total closure of tourism institutions and facilities, which led to a decrease in the number of therapeutic and thermal tourism visitors. It also affected the behavior of thermal

tourism-goers and significantly reduced their visits to thermal springs. In addition to this, several other factors contributed, such as the increasing demand for other types of tourism like recreational or cultural tourism, as well as the weakness of thermal tourism promotion both domestically and abroad.

It is worth mentioning that Algeria today has a total of 34 thermal hotels or inns, representing about 2% of the accommodation facilities available in Algeria overall.

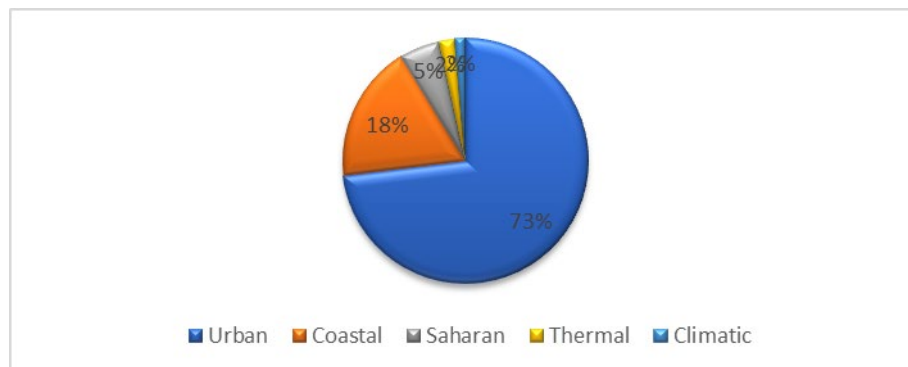


Figure 7. Classifications of accommodation facilities in Algeria by geographical character in 2023

Source: Website of the Ministry of Tourism and Traditional Industry.

6. Government Initiatives for the Development of Thermal Tourism in Algeria

Thermal tourism is considered one of the priorities of the tourism sector in Algeria, given the wealth of natural thermal resources spread across different regions of the country, in addition to the growing domestic and foreign demand for this type of tourism from various segments of society. Today, thermal tourism has become both a means of recreation and treatment, making it a promising sector capable of being a contributor to the national economy.

In this context, a national strategy was developed for the growth and development of thermal tourism, from which emerged a comprehensive development plan covering the short, medium, and long term. This plan aims to define the goals, priorities, and procedures, while identifying the stakeholders and partners involved in achieving and implementing it. The development project was prepared according to a strategic approach that takes into account the general direction of the state toward diversifying the national economy, particularly by supporting the tourism sector as an alternative to traditional resources. Focus was also placed on the specificity of thermal tourism as a non-seasonal type of tourism, which makes it more stable and sustainable compared to other forms of tourism, as well as its natural alignment with the principles of sustainable development.

The development of thermal tourism is based on a methodology that first prioritizes the national market, by improving the quality of services and developing

expertise, thereby ensuring the economic continuity of thermal institutions. This is considered a fundamental step toward expansion and opening up to international markets later. The development of this sector is also based on two main axes: the first is the health aspect, by setting ambitious goals and effective measures to promote therapeutic tourism, and the second is the recreational aspect, by expanding the scope of thermal services to include multiple leisure activities.

The development plan for thermal tourism was prepared within a comprehensive vision consistent with the Master Plan for Tourism Development (SDAT 2030). The sector's situation was diagnosed by analyzing strengths and weaknesses and identifying opportunities and threats. The plan also outlined the goals and general orientations, defined clear strategic axes, and included a work program aligned with time phases extending from 2016 to 2030, covering short-, medium-, and long-term stages.

This plan is based on five main strategic orientations, which can be clarified in the following table:

The five orientations of the thermal tourism development plan in Algeria

Table 3

Orientation	Content
First Orientation	Identification, inventory, and protection of thermal resources
Second Orientation	Development of the tourism offer specific to health and recreational tourism
Third Orientation	Establishing the foundations and rules for structuring the thermal sector
Fourth Orientation	Making thermal tourism a genuine tool for social and economic development
Fifth Orientation	Making thermal tourism more visible through the definition of a communication and promotion strategy specialized in this field

Source: Website of the Ministry of Tourism and Traditional Industry.

In addition, the government is working to organize several initiatives to promote and publicize thermal tourism in Algeria. It organized an international forum on thermal tourism on October 27 and 28, 2023, in the city of Setif, which saw the participation of experts and representatives from Algeria, Tunisia, Jordan, Egypt, Saudi Arabia, Croatia, Bulgaria, Turkey, and the Czech Republic. The forum discussed several themes, most notably investment opportunities in thermal tourism, the modernization and development of thermal institutions, and methods of utilizing thermal waters for both treatment and recreation. This is in addition to the various national and international conferences organized periodically by different Algerian institutes and universities under the supervision of the Ministry of Higher Education and Scientific Research.

Through this strategy and its accompanying plan, Algeria seeks to transform thermal tourism into a leading tourism branch, capable of contributing to

the diversification of the national economy and strengthening Algeria's position as a sustainable therapeutic and recreational tourism destination.

7. Challenges of Developing Thermal Tourism in Algeria

Thermal tourism in Algeria faces several obstacles and challenges that hinder its development and its achievement of a place as a strategic tourism sector, despite the country's natural qualifications and rich thermal resources. These obstacles and challenges can be summarized as follows:

- ✓ **Weak legislation and legal regulation:** There is no specific and sufficiently organized legal framework governing the activity of thermal tourism in Algeria, in terms of classification, exploitation, monitoring, and medical standards, which creates a legal vacuum affecting the development of this modern type of tourism in Algeria. This is despite recent legal amendments, namely the issuance of Executive Decree No. 24-362 dated November 7, 2024, which includes the conditions and modalities for granting the concession to use and exploit thermal waters.
- ✓ **Weak exploitation of thermal resources:** It is noted that out of 100 thermal springs capable of hosting new thermal projects, there are only 34 mineral baths and 3 thalassotherapy centers, which clearly reflects a weakness in employing and optimally investing in these resources.
- ✓ **Weak development and basic facilities:** Most thermal springs in Algeria suffer from a lack of infrastructure such as road networks, transportation, accommodation, and health facilities. Most of them are also located in rugged mountainous areas, which weakens their attractiveness and limits their ability to attract visitors, especially from abroad.
- ✓ **Poor management of therapeutic services:** Most thermal complexes—whether public or private—suffer from poor quality of services provided, the absence of hygiene and comfort conditions, as well as neglect and mismanagement. There is also a severe shortage of specialists in thermal treatment, which forces the tourist to rely on himself or on unprofessional traditional practices, creating a paradox between the need for treatment and the absence of the necessary medical competence.
- ✓ **Lack of medical and technical supervision:** The random and traditional exploitation of thermal springs is often carried out without specialized medical supervision or clear standards of health safety, which reduces their therapeutic effectiveness and opens the way for unregulated practices.
- ✓ **Shortage of qualified human resources and expertise:** There is a clear shortage of skilled labor in the fields of balneotherapy, tourism management, and health marketing, which affects the quality of services provided to tourists.
- ✓ **Absence of an effective marketing and promotion strategy:** Thermal tourism in Algeria still suffers from weak media and digital promotion, both domestically and internationally, which reduces its competitiveness compared

to other countries that possess the same natural resource and promote it effectively, such as Turkey and Italy.

- ✓ **Administrative and investment obstacles:** Thermal tourism projects in Algeria face difficulties in administrative procedures, whether in obtaining licenses or benefiting from the right to use and exploit thermal waters, in addition to the large number of paper and digital files required for investment in the thermal field and for the establishment of thermal institutions, in accordance with Executive Decree No. 19-150 dated April 29, 2019.
- ✓ **Decline in private sector interest:** Despite some individual initiatives, private investment in thermal tourism remains limited, due to the absence of attractive incentives and weak institutional support. The repercussions of the COVID-19 pandemic and the focus on other more profitable types of tourism, such as beach tourism, have also contributed.
- ✓ **Seasonality of thermal tourism:** Although thermal waters can be exploited year-round, demand remains linked to seasons and holidays, especially during the winter period, which reduces the economic efficiency of the facilities throughout the year.
- ✓ **Environmental impacts and lack of monitoring:** Some uses of thermal waters by visitors are carried out in ways that may harm the environment surrounding the thermal source. An example of this is the use by a number of visitors of high-temperature waters to boil eggs in Hammam Debagh in Guelma Province. Most of these environmentally harmful practices are trends spread across social media, amid the absence of effective environmental monitoring to ensure the sustainability of the resource.
- ✓ **Regional and international competition:** Algeria faces competition from neighboring countries such as Tunisia and Morocco, which have significantly developed thermal tourism and provide integrated, high-quality services at competitive prices. This is not to mention the international competition from other countries such as Turkey, Italy, Hungary, the Czech Republic, and others.

8. Conclusion

In light of the above, thermal tourism in Algeria is a promising sector that possesses tremendous natural potentials, represented by a large number of mineral springs and baths spread across different regions of the country, distinguished by the diversity of their physical, chemical, and therapeutic properties as well as their historical prestige. The Algerian government has shown increasing interest in developing this type of tourism through the preparation of the development plan for thermal tourism within a comprehensive vision consistent with the Master Plan for Tourism Development (SDAT 2030), encouraging investment, improving infrastructure in some sites, and updating the legislative framework regulating thermal tourism in the country. However, these efforts still face a series of challenges, most notably the weak actual exploitation of thermal resources, the lack of medical and technical supervision, the poor quality of tourism services, the

insufficient promotion of this modern tourism product, and the intense regional and international competition.

In this context, the following recommendations can be proposed:

- ✓ The necessity of developing a specific legal and regulatory framework for thermal tourism that governs exploitation standards, ensures service quality, and stimulates thermal investment.
- ✓ The modernization and upgrading of traditional baths, with efforts to equip them and expand thalassotherapy projects, in line with international standards of comfort and treatment.
- ✓ Encouraging local and foreign investment in the establishment and development of thermal tourism infrastructure, including hotels, resorts, and treatment centers, with the provision of special incentives and privileges for investors, particularly regarding obtaining licenses to exploit thermal springs.
- ✓ Strengthening the partnership between the public and private sectors to develop infrastructure and improve service levels.
- ✓ Training and qualifying specialized human resources in the fields of management, physiotherapy, and tourism marketing.
- ✓ Adopting an effective promotion strategy that highlights the specificities of Algerian mineral baths at both the national and international levels.
- ✓ Supporting and encouraging academic and applied scientific research in the field of thermal tourism through the creation of specialized research programs and the funding of studies concerned with analyzing the therapeutic properties of mineral waters, assessing the economic and social impact of this type of tourism, and proposing innovative scientific solutions for its development.
- ✓ Studying successful international experiences in the field of thermal tourism and working to emulate and benefit from them, such as the experiences of Tunisia, Jordan, or even Turkey.

The implementation of these recommendations would contribute to transforming thermal tourism into a true source of sustainable development in Algeria and integrating it among the strategic alternatives for diversifying the national economy.

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