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# COVID-19 PANDEMIC AND TOURISM: WHAT CONTRIBUTION OF TRANSPORT TO THE RESUMPTION OF DOMESTIC TOURISM ACTIVITY IN ALGERIA?

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# **Abstract:**

The COVID-19 pandemic continues to impact the health and economy of countries. The tourism sector has been hit the hardest around the world. It has been at a standstill since March 2020 and its resumption of activity after the lifting of containment continues to arouse the interest of specialists in the sector as many countries still maintain the closure of their borders, including Algeria. This situation is forcing the revival of domestic tourism activity in these countries. We aim to analyze the contribution of transport in the resumption of tourist activity in the interior of Algeria to allow the population, weakened and stressed by the confinement of COVID-19 for more than 5 months, to spend pleasant holidays, and this through the evaluation of the potential of the transport sector and those of tourism as well as the measures taken by the government to revive the economy and the transport sector for the period after confinement. The results showed that Algeria has significant potential in the transport and domestic tourism sector and that the revival of activity can be done quickly. However, it remains to be seen whether tourists will be able to adapt to the COVID-19 health protocol.

# **Keywords:**

tourism, transport, COVID-19, domestic tourism.

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#### 1. INTRODUCTION

The COVID-19 pandemic since its onset in Wuhan has spread rapidly and has been shown to have a broad spectrum of severity (Guan, W. J., Ni, Z. Y., Hu, Y., Liang, W. H., Ou, C. Q., He, J. X., ... & Du, B.,2020) and many impacts on the daily lives of citizens across countries around the world. On January 27, 2020, China's National Health Commission released a report indicating that the virus could be transmitted not only by respiratory droplets, but also by direct contact (Fan, C., Liu, L., Guo, W., Yang, A., Ye, C., Jilili, M., ... & Wang, Y. 2020). There is currently no vaccine or specific effective antiviral treatment for COVID-19, which imposes an urgent need for global surveillance of affected patients (Xie, M., & Chen, Q.2020) and the implementation of preventive measures.

Several countries continue to make efforts to minimize human contact by closing as well as national management of public places to ensure the safety of people, through social distancing, since the global organization Health (WHO) has developed a strategy to interrupt human-human contact and isolate patients at an early stage (Vellingiri, B., Jayaramayya, K., Iyer, M., Narayanasamy, A., Govindasamy, V., Giridharan, B., ... &Rajagopalan, K. 2020). This pandemic has prompted many countries to opt for distancing measures through total and sometimes partial confinements and other measures to stop transmission and save lives (Wu, J. T., Leung, K., & Leung, G. M.2020).

Closing borders between countries and limiting mobility within each country has also been one of the actions that many countries have taken, either at the right time or with a little delay, to stop the spread of COVID-19. Thus the banof international travel affected more than 90% of the world's population, and tourism largely ceased in March 2020 (Gössling, S., Scott, D., & Hall, C. M. (2020). Tourism and its affiliated industries have already experienced many crises, but the one related to the COVID-19 pandemic is of a much higher magnitude than previous crises due to its global scale and the widespread closure of travel, businesses and activities of life. According to its memo of April 14, 2020, the World Travel & Tourism Council (WTTC) estimated that 75 million jobs are at risk globally with a potential loss of travel and tourism GDP of up to US \$ 2.1 trillion this year. year(Lapointe, D. 2020). It is now clear that the world has changed forever because of COVID-19 and has had a significant impact on all individuals and on all sectors and that the adaptation to this situation by each of the countries of the world, through actions for each sector, including tourism, is becoming an urgent necessity.

ISSN:9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

Indeed, Algeria, like other countries in the world, was affected by the COVID-19 pandemic, and recorded 32,055 people infected with the coronavirus and 1,261 deaths as of August 5, 2020 (APS.Sante-science-technologie, Algeria press service. 2020). The measures taken by the Algerian government since the start of the pandemic consisted of applying distancing through the application of partial containment. The latter aims to reduce the mobility of the population between regions, the closure of restaurants, mosques and various establishments open to the public as has been done in many years.

Many countries (Wen, J., Wang, W., Kozak, M., Liu, X., &Hou, H. 2020) The closure of land, air and sea borders has blocked thousands of Algerians traveling during the start of the pandemic in many countries due to COVID-19. This pandemic has had in Algeria and everywhere in other countries numerous socio-cultural, economic and psychological impacts on various tourism actors, some of them will still influence for years (Sigala, M.2020). The gradual lifting of containment in Algeria for a return to normal life continues to attract the attention of researchers in various specialists and decision makers. It is now known that nothing will be the same as the world has experienced a number of major epidemics or pandemics over the past 40 years, but none have had similar implications for the global economy as the COVID pandemic. 19 [6]. The tourism sector is the most affected in Algeria and throughout the world. The resumption of its activity seems very difficult since the borders are currently still closed in Algeria, which means that only domestic tourism has the possibility of attracting Algerian and local tourists after more than 5 months of global shutdown. It remains to be seen whether it can play its role in replacing foreign tourism for Algerians.

In this study, three objectives are essential and aim to know the contribution of transport in the activation and development of domestic tourism, during this pandemic which is likely to be registered over time, in the absence of external tourism following the border closure. Firstly, we aim to know the possibilities of travel within the Algerian territory, through the offers of land, air and sea transport. Second, we are shedding light on Algeria's tourism potential to see if diversity exists and could attract Algerian tourists in this period of the COVID-19 pandemic where the fear of contamination is still present. Third, we aimed to know the measures taken by the Algerian government to help the tourism sector to maintain its workers and avoid bankruptcy, knowing that the Algerian people who have just come out of a long confinement and a way of life very particular needs to

ISSN:9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

change air, leisure and contemplate the beautiful landscapes, in order to reduce the psychological impacts of COVID-19.

#### 2. METHODOLOGY.

This study will be based on the analysis of data from different reports that focus on the transport sector. (Air, land and sea), and also on the orientations of tourism planning documents in Algeria to know the potentialities and the diversity of the tourism sector. For the measures taken by the government to help the tourism sector in this period of the COVID-19 pandemic, we intend to highlight the actions taken through the national economic recovery program launched by the government to face the economic impacts generated by the pandemic.

# 3. A TRANSPORT SECTOR DEVELOPED ACCORDING TO THE SIZE OF THE ALGERIAN TERRITORY.

The attractiveness of the territory is therefore the potential of a region to attract tourists according to the quantity and diversity of the natural and human attributes that compose it while adapting to the market demand. A territory that wants to develop its lures in order to make its product more attractive must be able to diversify its offer of services and to rely on natural places, tourist infrastructures, a diversity of attractions including historic and cultural places, entertainments, in addition to providing transportation services and introducing welcoming people with a culture different from tourist's culture (BAOUALI, BAZIZ, HADJIEDJ, 2019).

Generally, tourists have a global vision of the tourist destination they want to visit, this is what is called the image of the city. This image is the result of the aggregation of several elements, namely tradition, the city's culture, its natural environment, works of art, music and even the celebrities who have their origin in this city (CHENIKI, BAZIZ, 2020).

The vast territory of this country has made it necessary to put in place a territorial plan that meets the needs of the different regions in terms of economic development, tourism and mobility. This planning formulates the main principles governing the construction of major transport infrastructure, major equipment and collective services of national interest. In this context, Algeria has experienced an intense development effort for more than a decade. This effort has intensified since 2005 and is now experiencing a new boom. Transport is at the center of development strategies based on the desire to make industrialization one of the major axes of action, which in turn requires enhanced accessibility to the territory. Also, the transport policy of recent years has gradually focused on investment in

ISSN:9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

infrastructure, with State funds. The succession of plans (Economic Recovery Support Plan (PSRE) launched in 2001 (PSRE 2001-2004), additional growth support program (PCSC) 2005-2009, and other programs, have devoted significant investment to transport infrastructure, with rail as the preferred mode, rolling stations and guided transport (metro, trams and cable transport).

# 3.1 AIR TRANSPORT, A FACTOR IN TOURISM DEVELOPMENT.

Air transport plays an important role in rapid travel and constitutes one of the pillars of the national economy, and in particular for the tourism sector. To this end, the public authorities have initiated, for years, a major program of realization, part of the five-year plans aimed at strengthening air transport activity. Thus the vast Algerian territory has 36 airports open to public traffic. The latter are distributed as follows: North part (9), High plateau part (10), South part (17).

The Algerian network of airports is extensive, also, the rest of types of infrastructure (aerodromes, heliports ...) are in adequate number, but it is necessary to notice certain problems in relation to the capacity of the airports: saturations are foreseen in the short term at the airports of Oran, Constantine, Hassi-Messaoud, Touggourt, Annaba and In Aménas(Ministry of transports, 2010)Although there is some backlog of works, the planned investments would provide a safe, modern and quality infrastructure. The planning of needs at the airport level is based on the prospects for socioeconomic development according to the national land use plan (SNAT) 2025, focusing on the creation of poles of competitiveness and excellence and new cities in the region. level of the 3 most important regions located in the north, the highlands and the south of the country.

An assessment of passenger traffic shows that during 2019, the activity of all airport establishments recorded around 14.5 million passengers handled (see Table 1), an increase of more than 7 million passengers. compared to 2008. On the national network, the number of passengers handled in 2019 was estimated at around 5.9 million passengers (Ministry of transports, 2020), i.e. an increase of 146% passengers compared to the year 2008. On the other hand, on the international network, the number of passengers handled in 2019 was evaluated at more than 8.6 million passengers, an increase of 226% compared to 2008.

EISSN: 2602-5388

**Volume** : (13)

**Number**: (02)

year : 2022

Pages: 754-770

**Table 1:** Travelers treated by establishment in 2019.

Establishment	National	International	Travelerstreated by establishments	Share of travelers processed by establishment%
SGCIA <sup>1</sup>	2 178 894	5 664 105	7 842 999	54
EGSA Oran <sup>2</sup>	1 572 911	317 992	1 890 903	13
EGSA Alger <sup>3</sup>	1 056 089	1 526 570	2 582 659	18
EGSA Constantine <sup>4</sup>	1 042 385	1 115 170	2 157 555	15
Total	5 850 279	8 623 837	14 474 116	100

Source: Ministry of Transport, 2020.

Share of travelers processed by establishment%

Algiers Airport handles more than 50% of total passenger traffic, 40% of the traffic being domestic 60% international. It also handles 50% of the country's aircraft traffic. The domestic market is marked by the monopoly of Air Algérie and the international one is subject to very restrictive bilateral agreements.

Algiers Houari-Boumediene Airport, which has received a new terminal with a capacity of 10 million passengers / year, will achieve a total capacity of 16 million passengers / year. Among other things, the Ahmed Bella airport in Oran located in the west of the country recorded the construction of a new terminal (Terminal 2), which increased the capacity to 5.5 million passengers / year. It is noted that the works of the airports do not only concern the northern fringe of Algeria, but also the South (the great Sahara). Indeed, upgrading and redevelopment work has been undertaken at the airports of Adrar, Biskra, Bordj-Badj-iMokhtar, Djanet, Tamanrasset and Timimoune, in order to encourage national and international Saharan tourism (Ministry of transports, 2020).

ISSN:9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

# 3.2 Maritime transport: what potentialities for travel on the Algerian coast?

The geographical position of Algeria vis-à-vis the Mediterranean and its remarkable tourist potential has favored the development of maritime passenger transport. Indeed, shipping companies operate the maritime passenger transport service between 8 Algerian ports (Ghazaouet, Oran, Mostaganem, Algiers, Bejaia, Skikda and Annaba) and the Spanish (Almeria, Alicante, Palma and Barcelona) and French (Marseille) ports. ). In 2019, passenger traffic handled at the ferry terminals reached more than 775,000 passengers, an increase of over 320% compared to 2008 (Ministry of transports, 2020). In order to improve the conditions to welcome and treat passengers and ensure their comfort, a major construction and modernization program has been initiated at the 08 ferry terminals. In this context, the Algiers and Bejaia sea stations were received and equipped with all the amenities. Thus the 8 ports can play an important role in the maritime transport of travelers in these Algerian cities.

Figure 1: New Algiers and Bejaia ferry terminal





**Source**: Ministry of Transport, 2019

EISSN: 2602-5388

**Volume** : (13)

Number : (02)

year : 2022

Pages: 754-770

#### 3.3 ROAD TRANSPORT COVERING A VAST TERRITORY

Overall, the national transport system is well developed, both in basic infrastructure and in transport, operator and fleet services. Road transport is the most widely used mode for both passenger and freight transport. This mode has experienced a real boom since its liberalization in 1988, hence the need to adapt road infrastructure. Almost all economic activities and towns are served by the road network. The northern part of the country has recorded road traffic growth of around 7% per year for the past ten years. This growth was sustained after the completion of the East-West motorway (Ministry of transports, 2010). Road transport in Algeria provides 90% of the movement of goods and more than 80% of the movement of people on a road network of more than 133,000 km (see figure 2). More than 5 million vehicles, 20% of which are heavy vehicles, circulate on the national road network. The vehicle fleet is estimated at the end of 2018 at around 6.4 million units, all types of vehicles combined (ONS, 2020).

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Figure 2: Algerian road network by 2025

Source: Ministry of Public Works, 2019.

To better enhance the road network and allow citizens to move around the vast Algerian territory, a network of bus stations has been created in most cities (see figure 3)



Figure 3: Algerian bus station network

**Source**: Ministry of Transports, 2019

EISSN: 2602-5388

**Volume**: (13)

**Number**: (02)

vear : 2022

Pages: 754-770

# 3.4 RAIL TRANSPORT CONNECTING THE REGIONS OF THE COUNTRY.

Rail transport occupies a central position in the country's development strategies. The Algerian rail network extends over a total length of rail lines of 4,183 km. In 2019, the rail network transported over 34.5 million passengers, an increase of 180% compared to 2008 (Ministry of transports, 2009),and (Ministry of transports, 2020). It is a good means of transport and rapid travel for tourists, particularly in the northern part of the country. This network connects the Algerian territory to Tunisia in the eastern part and Morocco in the western part. Rail transport occupies a central position in the country's development strategies. But while politics can change the rail transport system, it remains determined by the country's geographic and demographic, economic and political structures. Various structural factors have determined the development of the rail transport system and will continue to manage its development.

An elementary factor in the evolution of this system is the geography of the country. The north and the south are crossed from west to east by a double mountain barrier (Tellian Atlas and Saharan Atlas) with between the two massifs of plains and high plateaus which extend from the Moroccan borders to the West into the valley of Hodna. The Sahara alone covers almost 87% of the territory with a desert climate. The only truly "welcoming" region is the coastal region with a Mediterranean climate.

The natural conditions of the country in turn influence demographic change with a strong tendency of the population to concentrate in the littoral region. The population is grouped together on the coast and in the north of the country where the main towns are also located. As one descends towards the south, the number of inhabitants per square kilometer decreases to almost zero in more than half of the territory. Following the demographic trend and responding to basic economic laws, the economic fabric is also focused on the coast in order to be as close as possible to areas of high population concentration with great demand without straying too far from the supply lines. mainly by sea.

EISSN: 2602-5388

**Volume**: (13)

**Number**: (02)

year : 2022

Pages: 754-770

In this context, the Algerian rail network extends over a total length of Algerian railway lines is 4,183 km, with a density of rail lines of 1.75~m/km2. But if we do this calculation for Algeria by excluding the desert, that is to say, by considering only the 17% of their surface, where 87% of the population lives according to the national land use plan, this density increases to 96~m/km2 (see figure 4).

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Figure 4: Main axes of the Algerian rail network

**Source**: Ministry of Transport, 2019

ISSN: 9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

# 4. WHAT TOURISM POTENTIAL FOR ALGERIA THAT COULD ATTRACT LOCAL TOURISTS DURING THE COVID-19 PANDEMIC?

The Algerian territory is endowed with enormous tourist potential, the different types of seaside, Saharan, mountain, cultural and other tourism are available in Algeria which gives a wide variety of choices for the local tourist. The large coastal region that stretches over 1,200 km attracts millions of vacationers. The development of the sector is part of the guidelines of the master plan for tourism development (SDAT) in the different horizons, so the government has declared tourism as a national priority until 2030. This master plan identifies five dynamics to develop the tourism sector: enhancement of the destination Algeria; the development of tourism poles of excellence by rationalizing investments; the initiation of the "tourism quality plan" in order to develop the quality of the tourism offer; and the promotion of public-private partnership and the tourism financing plan.

The Algerian hotel park has been reinforced in recent years, in 2019, this park had 1,195 establishments with a total capacity of 102,244 beds (ANDI, 2019). The construction of hotels and similar establishments increased by a factor of 3.4 between 1985 and 2019 and in terms of hotel accommodation capacity, the latter increased by more than 200% during the same period (ONS, 2010).

In 2019, the hotel portfolio was distributed as follows:

- 8 5-star establishments with 4,242 beds;
- 6 4-star establishments with 1,800 beds;
- 46 3-star establishments with 4,605 beds;
- 158 2-star establishments with 1,295 beds;
- 160 1-star establishments with 8,533 beds;
- 804 "non-classified" hotel establishments with a capacity of 50,634 beds.

Thus, transport is one of the pillars of tourism activity, it must adapt to preventive measures to avoid contamination of travelers. Indeed, to promote a destination, it is necessary in this period of the COVID-19 pandemic to take the preventive measures in terms of distancing and hygiene that can have a significant impact on the way people live and evaluate activities. recreation and travel such as hiking, outdoor activities and nature-based tourism or even personal services at tourism locations [10]. Knowing that tourism has been one of the industries most affected by the virus, but it is also one of the most responsible for the spread of COVID-19 .(Iaquinto, 2020).

ISSN:9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

It now remains to know the prevention protocols against the COVID-19 pandemic approved by the Ministry of Tourism for application in the tourism sector and to see how the adaptation to preventive barrier measures will be carried out, which require financial envelopes for their implementation. implemented.

# 5. WHAT CONTRIBUTION FROM THE ALGERIAN GOVERNMENT TO HELP THE RESUMPTION OF TOURISM ACTIVITY?

The negative effects of the COVID-19 pandemic which crippled the economies of countries and including that of Algeria prompted the government to take measures to revive activity. The Algerian finance minister indicated that the government is ready to inject, immediately, for investment and economic recovery, the equivalent of 1000 billion dinars, to which is added 10 billion dollars available (RABHI.2020). In addition to this, a commission to safeguard the national economy in the context of the COVID-19 pandemic was installed on July 18, 2020, to take charge of the categories affected by the COVID-19 pandemic, and to cope with to the impact of this pandemic on the national economy and safeguard jobs and national companies. A commission was also set up to assess the losses and damages suffered by the country since the onset of the pandemic, economically and socially (APS.2020)

A health protocol was drawn up on the eve of the summer and holiday season (Ministry of Tourism .2020), it aims to preserve and protect the health of customers and staff working both in hotel establishments and in areas dedicated to tourist activities. , in compliance with the sanitary conditions and recommendations issued by the scientific committee responsible for monitoring the evolution of the COVID-19 pandemic. This protocol defined, according to the instructions of the World Health Organization (WHO) and Tourism (OMT), the practical rules of health prevention in the face of COVID-19 and emergency recommendations in the event of a case being discovered. COVID 19 at destination:

- Tourism and travel agencies;
- Hotel accommodation establishments;
- Thermal activities, fitness and thalassotherapy;
- Tourist restaurants;
- Tourist guide;
- · Craft activities.

ISSN:9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

In the protocol document, the obligation of a commitment by hoteliers to set up monitoring units responsible for monitoring the health situation is indicated and has authorized the use of only 50% of the accommodation capacity. hotels, and this for a better application of social and physical distancing measures for the benefit of tourists. It is also noted in this protocol preventive measures for the operation of swimming pools and beaches under hotel structures. The ban on the organization of artistic evenings and the daily disinfection and cleaning of rooms and public structures are also included in this health protocol against COVID-19. In this same context, it is reported to prohibit any rental formula in private homes or guest rooms in coastal regions during this pandemic period. The protocol requires the wearing of protective masks or bibs, including by hotel staff, as part of the prevention against the spread of the pandemic.

It was also recommended to tourist agencies and tour operators, the use of ICT in order to attract customers and facilitate the payment and settlement of invoices via modern applications and thus fight against the spread of the pandemic. It is also required the use of only 50% of the capacities of tourist buses and the imperative of their disinfection as well as the guarantee of availability of disinfectant products for customers.

Among other things, the government has opted for the establishment of facilities for the transport and movement of tourists during this period after confinement. To this end, agreements have been signed between the Ministry of Tourism and the Ministry of Transport to boost internal tourism. They aim to put into action two framework agreements between public and private operators to materialize a collegial and united approach aimed at reviving the activities of their sectors (BENALI, 2020). Air and rail transport will thus play a very important role in reviving the domestic tourism sector.

ISSN:9577-1112 EISSN: 2602-5388 Volume: (13) Number: (02)

# 6. CONCLUSIONS: TRANSPORT, TOURISM AND PREVENTION REQUIREMENT AGAINST COVID-19

year: 2022

Pages: 754-770

The COVID-19 pandemic has had very negative effects on countries around the world, the right to travel and to benefit from the services of hotel and tourism operators has been restricted in an unprecedented manner (BAUM, HAI, 2020). Thus, for many countries, all that remains now is to encourage domestic tourism to allow their citizens to resume the path of normal life after more than 5 months of confinement, which has certainly had very negative psychological impacts which are beginning to appear. see yourself through aggressive behavior. Algeria, faced with this situation, has no other choice but to encourage domestic tourism to allow its population to breathe and regain a taste for life, especially as the tourism potential of this country is very important and can attract citizens.

The transport sector, for its part, has all the means in air transport which will be able to use these 36 airports for travel. Road and rail transport are also being developed to help revive domestic tourism. Among other things, maritime transport with its infrastructure also has the capacity to ensure the movement of tourists on the Algerian coast, which is over 1200 km long. A single handicap can arise, and that is the ability to put preventive measures in place, which requires financial means and adaptation by tourists and staff to barrier gestures against COVID-19.

# 7. Bibliography List:

BAOUALI R., BAZIZ A., HADJIEDJ A.(2019). Comparative competitiveness indicators which ranking for algerian tourism?.GeoJournal of Tourism and Geosites, vol 24, n°1.2019. P135

Baum, T., & Hai, N. T. T. (2020). «Hospitality, tourism, human rights and the impact of COVID-19,» *International Journal of Contemporary Hospitality Management*, vol. 32 n°7.

CHENIKI K., BAZIZ A. (2020). Evaluation the ability of local municipalities to promote strong brand image in algerian cities. GeoJournal of Tourism and Geosites, vol 28, n°1.2020. P22.

Fan, C., Liu, L., Guo, W., Yang, A., Ye, C., Jilili, M., ... & Wang, Y. .(2020). Prediction of epidemic spread of the 2019 novel coronavirus driven by Spring Festival transportation in China: a population-based study, *International journal of environmental research and public health*, vol. 17, n°5, p. 1679.

Gössling, S., Scott, D., & Hall, C. M. (2020). Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, pp. 1-20.

Number : (02)

year : 2022

Pages: 754-770

Guan, W. J., Ni, Z. Y., Hu, Y., Liang, W. H., Ou, C. Q., He, J. X., ... & Du, B.(2020). Clinical characteristics of coronavirus disease 2019 in China, *New England Journal of Medicine*, *vol* 382,  $n^{\circ}18$ , pp. 1708-1720.

Iaquinto, B. L. (2020). Tourist as vector: Viral mobilities of COVID-19. *Dialogues in Human Geography*, vol. 10, n° 2, pp. 174-177.

Lapointe, D (2020). Reconnecting tourism after COVID-19: the paradox of alterity in tourism areas. Tourism Geographies, pp. 1-6.

RABHI M.(2020). Économie / Actualité, » Liberté, 14 Juillet 2020. [En ligne]. Available: https://www.liberte-algerie.com/economie/les-pistes-de-relance-342056.

Sarah Benali Cherif. (2020). «Conventions entre les ministères du Tourisme et des Transports: Actions pour Booster le tourisme interne,» 16 Aout 2020. [En ligne]. Available: http://www.elmoudjahid.com/fr/actualites/157858.

Sigala, M. .(2020). Tourism and COVID-19: impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, vol. 117, pp. 312-321.

Vellingiri, B., Jayaramayya, K., Iyer, M., Narayanasamy, A., Govindasamy, V., Giridharan, B., ... & Rajagopalan, K. .(2020). COVID-19: A promising cure for the global panic,» *Science of the Total Environment*, p. 138277.

Wen, J., Wang, W., Kozak, M., Liu, X., & Hou, H. .(2020). «Many brains are better than one: the importance of interdisciplinary studies on COVID-19 in and beyond tourism.,» *Tourism Recreation Research*, pp. 1-4.

Wu, J. T., Leung, K., & Leung, G. M.(2020). Nowcasting and forecasting the potential domestic and international spread of the 2019-nCoV outbreak originating in Wuhan, China: a modelling study. *The Lancet*, vol. 395, n° 10225, pp. 689-697

Xie, M., & Chen, Q.(2020). Insight into 2019 novel coronavirus — an updated intrim review and lessons from SARS-CoV and MERS-CoV. *International Journal of Infectious Diseases*, vol. 94, pp. 119-124.

\*\*\* Andi. Infrastructure-d'hebergement. Agence nationale de développement et de l'investissement.(2019). [En ligne]. Available: http://www.andi.dz/index.php/fr/94-vivre-enalgerie/186-infrastructure-d-hebergement.

\*\*\*APS.Sante-science-technologie,Algeria press service. (2020). [Online].Available: http://www.aps.dz/sante-science-technologie/108265.

\*\*\* APS.(2020). Economie, Algérie presse service, 18 Juillet 2020. [En ligne]. Available: http://www.aps.dz/economie/107566

\*\*\* Ministry of Transports.(2010). National Transport Plan. Ministry of Transport, Algiers.

ISSN:9577-1112 EISSN:2602-5388 Volume: (13) Number: (02) year: 2022 Pages: 754-770

- \*\*\* Ministry of Transports. (2020). Air transport statistics. Ministry of Transport, Algiers.
- \*\*\* Ministry of Transports. (2020). Annual production indicators. Ministry of Transport, Algiers.
- \*\*\* Ministry of Transports. (2020). Annual production indicators," Ministry of Transports, Algiers.
- \*\*\* Ministry of Tourism .(2020 ). Protocole Sanitaire anti COVID-19 pour les activités touristiques.. [En ligne]. Available: https://www.mtatf.gov.dz/?page\_id=815.
- \*\*\* ONS. (2020). Annual situation of the national automobile fleet. National Statistics Office, December 31, 2018. [Online]. Available: http://www.ons.dz/spip.php?rubrique372.
- \*\*\* ONS. .(2020). «Tourisme,» . [En ligne]. Available: http://www.ons.dz/IMG/pdf/file\_\_Tourisme.pdf.

# Ref.

<sup>1</sup>Algiers Houari-Boumèdiène International Airport has been, since November 1, 2006, managed and operated by an EPE / SPA, a subsidiary of EGSA-Algiers called "SGSIA" (Algiers airport services and infrastructure management company).

<sup>3</sup>Algiers Airport Services Management Establishment, under the supervision of the Ministry of Transport. EGSA-Algiers manages, develops and operates 16 airports located in the north from Algiers in the south to Tamanrasset, including 5 international airports and 11 national airports.

<sup>4</sup>Constantine Airport Services Management Establishment is responsible for the maintenance, development and management of 07 airports located in the north from Constantine to the east in Tebessa, including 6 international airports and 1 national airport.

<sup>&</sup>lt;sup>2</sup> Oran Airport Services Management Establishment, under the supervision of the Ministry of Transport. EGSA-Algiers manages, develops and operates 12 airports located in the north from Oran to the south towards Bechar, including 4 international airports and 8 national airports.