

**Building roads to dominate:
Roads in colonized Algeria in the 19th century
Construire des routes pour dominer :
Les routes dans l'Algérie colonisée au 19^{eme} siècle**

**Dr. RENIMA Ahmed
University of Oran 1 Ahmed ben Bella
E-mail : renima.ahmed@univ-oran1.dz**

Abstract :

After the alliance of the rising European powers against the Algerian state and its Ottoman allies, and at the beginning of the nineteenth century, the United States of America entered the conflict in the Barbary Wars, which put an end to the Algerian State in 1860 after the success of the French military campaign.

France exploited the victory and turned to an expansionist colonial policy in Algeria. For 70 years, the French army was able to eliminate all revolutions and forms of armed resistance and embarked on settlement projects that began by building roads, bridges, and then railways to provide security for European settlers and exploit agricultural and mineral resources.

The road-building process knew the contribution of successive governments in Paris, military and civilian bodies in France and Algeria, and even settlers, owners of funds, and banks contributed to the establishment of a good and effective transportation network that facilitated the process of penetrating the country, consolidating colonialism, and confirming domination over Algerian society for more than 132 years. In 1962, the Algerian people restored the sovereignty of the new republic of Algeria.

Key words

Colonisation, building roads, communication network, colonized Algeria, French Colonial Empire, European settlers.

Résumé:

Après une certaine alliance entre les nouvelles puissances européennes pour lutter contre l'État d'Alger et ses alliés ottomans, et au début du XIX^e siècle, les États-Unis d'Amérique sont entrés dans le conflit de la guerre des États Barbaresques, l'Europe a pu finir l'État algérien en 1860 après le succès de la campagne militaire française, par la prise d'Alger.

La France exploite cette victoire et se tourne vers une politique coloniale expansionniste en Algérie. Pendant 70 ans, l'armée française parvient à éliminer toutes les révolutions et formes de résistance armée et se lance dans des projets de colonisation qui commencent par la construction de routes, de ponts, puis de chemins de fer pour assurer la sécurité des colons européens et l'exploitation des ressources agricoles et minières.

Le processus de construction de routes était encouragé par les gouvernements successifs à Paris, des corps militaires et des compagnies civiles en France et en Algérie, et même des colons, des propriétaires de fonds et des banques ont contribué à la mise en place d'un réseau de transport performant et efficace, ce projet a facilité le processus de pénétration du pays, la consolidation du colonialisme et l'affirmation de la domination sur la société algérienne pendant plus de 132 ans. En 1962, le peuple algérien a restauré l'Etat Algérien dans toute son intégralité et souveraineté, la nouvelle république d'Algérie à bénéficier de toutes les infrastructures coloniales ainsi que le réseau routier.

Mots clés

Colonisation, construction de routes, réseau de communication, Algérie colonisée, Empire colonial français, colons européens

E-mail de correspondance : ahm.renima99@gmail.com

Introduction

Before the French conquest in 1830, Algeria was relatively a powerful country that posed a constant threat to Spanish campaigns on the coasts of the Maghreb; its naval power repelled European attacks; and its foreign trade was active with European countries, neighbouring countries, and countries of the African Sahel sub-Saharan countries¹.

A number of reasons prompted the Kingdom of France to conquer Algeria, knowing that France had been planning this occupation before 1830, the date of the successful military campaign. The reasons were political, military and economic, and then cultural and religious.

The Algerian state was an ally of the Ottoman state², which began to weaken and fall at that time, while European countries were waiting for the opportunity to control the Ottoman lands and the lands of their allies, such as Algeria, Tunisia, Egypt, and Libya, in addition to France's belief that it would gain a wealth of up to 150 million francs in the treasury of Algeria. The loss of the French army and its defeat in Europe, prompted Napoleon Bonaparte to send one of his spy officers to Algeria to develop a military plan that would allow him to establish French protectorates in North Africa, whose borders extend from the Far Maghreb to Egypt. However, the Algerian land army, which consisted of Janissary troupes, was weakened by the Ottoman Sultan Mahmoud II in Istanbul. Recruitment in Algeria was based on soldiers coming from the Ottoman Caliphate in the East because of the weakness of population in Algeria, and the Algerian navy was greatly weakened after the assassination of Admiral Hamidou Ben Ali Raïs by the US fleet.

Economic ambitions of France in Algeria were the major reasons. Algerian natural resources and agricultural products such as wheat, in addition to the France's attempt to postpone the payment of its debts owed by Algeria, which are represented by large quantities of wheat imported by France during the Napoleonic wars, encouraged France to occupy Algeria. In a letter sent to the French government, the French Commercial Consul stated: "The material benefits that will accrue to France as a result of the invasion of Algeria - in addition to the millions of gold francs in the Algerian treasury - are more useful and better for France than any economic conquest in its entire history, as there are incredibly fertile plains, mines rich in iron and lead, and mountains full of mineral elements all waiting for the hands that extract them" (AGG- L .45 - Lettre du Gouverneur Général au Général commandant de la province d'Oran, 14 juin 1868).

France's desire to spread the Christian religion in Africa, starting with Algeria, was recognised by the French Minister of War in his report to King Charles X of France: Divine

¹. See : JULIEN, CHARLES-ANDRE. (1994). *Histoire de l'Afrique du Nord : Des origines à 1830*, 2 vols, Payot et Rivages. Paris. / KADDACHE, MAHFOUD. (1998). *L'Algérie durant la période ottomane*, Office des publications universitaires, Alger. / MEROUCHE, LEMNOUAR. (2017). *Recherches sur l'Algérie à l'époque ottomane Vol I Monnaies, prix et revenus, 1520-1830, Vol II La course, mythes et réalité*. Editions Bouchène. Paris.

². Ottoman state, Sublime Ottoman State : (1299–1922) دولة عليه عثمانیه Devlet-i 'Alīye-i 'Osmānīye, never was an official Empire, it was Sultanate from 1299 to 1517, then caliphate until 1924.

Providence has wanted to take advantage of your Majesty in the person of your consul by the worst enemies of Christianity, and perhaps it was not by chance that he made Louis' son "pious" in order to avenge religion and humanity, and perhaps time will be happy for us to take advantage of this opportunity to start spreading the city among the people and making them Christians. France saw itself as the protector of the Catholic Church, so the religious factor of the invasion is found in the role of the Christian cleric in the occupation campaign of Algeria.

The Algerian army was unable to defend the country, which it ruled for three centuries under a military republic system under the authority of the Diwan (Parliament); Algeria was allied with the Ottoman Caliphate. In the last 30 years before the fall of Algiers, the state was weak and in constant decline, despite its alliance with the Ottoman Caliphate and the rest of the Maghreb, the Levant and Maghreb. European superiority in terms of state organisation, scientific, technical and industrial development, and demographic increase was evident and forced Muslim countries to fall one after the other.

After dozens of military attempts during three centuries, a French expedition consisting of about 30,000 soldiers managed to occupy the city of Algiers, which was the capital of the country. In two years, most of the coastal cities were occupied, the Algerian resistance was organised internally and entered into existential wars with the French armies from 1830 to 1871 in order to prevent the French from controlling the fertile northern region. Then the French army penetrated into the desert until it managed to occupy the entire southeast in 1922 (Djanet) and in 1935 it occupied the southwest (Tindouf). After a major national revolution that took place from November 1954 to July 1962, Algerians were able to reclaim the country, liberate the cult and obtain the right to full sovereignty.

The French military and settlement endeavour was accompanied by a great effort to build roads and railways that were necessary and urgent to complete the conquest and settlement operations. Several political, administrative and technical departments and bodies came together to implement road projects, build bridges, and build settlements and farms for Europeans by confiscating Algerian lands. The French rulers Encouraged immigration from Europe to Algeria, in order to establish Christian European society in the country, and then progressively dominate the Algerian people, after losing the all elements of their sovereignty. Indeed, this project was conditional on a set of plans and regulations as well as a number of specialised administrative and technical bodies and institutions that embarked on various mechanisms and programmes. Roads were the first condition inherent and linked to the military force that carried out the process of occupying the territory. Road construction and civil works were supported politically, financially, technically and in terms of security, and building roads started whenever the French army managed to end national military resistance in one region after another.

The topic of roads is of great importance in historical studies, especially during the period of modern European colonial expansion, and the case of Algeria, which was quickly transformed from an area of occupation to an area of colonisation, is a paradigmatic model for

understanding the dynamics of both the colonial phenomenon and the act of resistance. This research is an attempt to answer questions about the importance of road building in Algeria during the period of the first occupation from 1830 to 1880, when France decided the future of its presence in Algeria as a colony.

How did the road-building project accelerate the process of colonisation in Algeria over a century (1830-1930) while at the same time contributing to the decolonisation in more than half a century (1918-1962)?

Despite the importance of the topic, specialised studies on the subject are rare, and are usually found in books on the general history of colonial Algeria, but what drew my attention to the topic was a PhD thesis by Boualem Belkacemi on the railways in Algeria.

- Belkacemi Boualem, (1984). French railways in Algeria 1850 -1900, a contribution to the study of colonial history, PhD thesis, University of East Anglia. England.

There are many French sources written during the nineteenth century, which talks about the construction of roads in colonised Algeria, in general studies on the French occupation and colonisation development during the ninth century such as:

- Travaux des établissements français en Algérie 1852-1854.
- Nettement Alfred, *Histoire de la conquête de l'Algérie*, Paris, 1870
- Baudicour De, L. (1860). *Histoire de la colonisation de l'Algérie*, Paris.
- Wahl, Maurice. (1882). *L'Algérie*. Librairie Germer Baillière & Cie. Paris.

There are also many others works and studies, relative to this topic in the second half of the 20th century, they cover colonial history in general studies and not the road networks in particular.

1. The project

The 19th century, exactly from 1830 to 1878, of French endeavour of colonisation considered by a large number of overseas historians to be marked by a significant "trial and error" in terms of the political future of the new colony, has, on the contrary, a "taking root and consolidating" character for the historian who attaches importance to analysing the colonial process of infrastructure development in Algeria. During these forty years, an impressive number of works were carried out with the sole aim of advancing military colonisation and consolidating economic domination. The construction of a road network, which began in the early years of colonisation, leaves no doubt as to the purpose of colonial policy at that time. By the end of the 19th century, French colonialism had created a grid of roads, railways and telegraph lines across Algeria, all key factors in the colonial strategy to "pacify" the country and strengthen European control over Algerian society.

Paradoxically, the Ottoman administration, which had ruled the country for several centuries, had not used a developed and extensive road network to establish its authority over the entire territory. Effective control of the Tell towns, combined with a subtle system of alliances, enabled the interior of the country to remain under the sovereignty of the Capital Dar Es-Sultan (BELKACEMI, 1987: 93).

In 1830, the road network consisted of three main routes: first, Algiers to Constantine capital of the Eastern province (Bâylik Al-sharq). Second, the road from Algiers to Oran (Bâylik al-gharb) western province; the third, from Algiers to Medea- Beylik of Titteri in the south, more known as Trik-es-Sultan (Sultan Road). These routes fulfilled a variety of functions: political, by linking the capitals of the three Beyliks to Algiers; military, because they enabled the regions they crossed to be controlled; and economic, because they were used by the movement of travellers and goods and by the convoys responsible for transporting the tributes of the Beyliks to Algiers.

Alongside these main routes, there was a network of roads in the interior and south of the country, which played a significant commercial role but was of minimal strategic importance. These roads were paved or gravelled only around the towns; the rest of the network was in the form of tracks or paths. This situation made them partly impassable for caravans and military convoys during rainy periods.

2. The first roads

The decline of the country in general from the second half of the 18th century onwards is clearly demonstrated by the underdevelopment of the communication routes. Nevertheless, this weakness of the road network was to be of great advantage to the Algerian resistance movements against the colonial army. In some regions, it even helped to delay the onset of colonial occupation.

In the immediate aftermath of the French invasion, the progress of the colonial forces towards the interior of the country depended on the existence of roads that could be used to move military convoys and transport artillery, ammunition and supplies (MARTIN, 1963: 69). Later, in 1860, the Director General of Civil Affairs (a real civilian deputy governor who also held the post of Prefect of Algiers) reiterated the principles that should govern any colonial venture, in these terms: “Colonisation is above all a question of public works” (F. 80-301 - Lettre de Mercier - Lacombe à son ancien secrétaire. 4th of Décembre 1860.).

The future of this colonial adventure thus depended on the establishment of a road network capable of facilitating the extension of military operations on the one hand and allowing the advance of civilian colonization on the other. The colonial army immediately began building a strategic road network, the first unpaved roads appeared approximately in Algiers, the Mitidja, and the Sahel. Between 1830 and 1840, troops stationed in the province of Oran opened the Oran-Mers el-Kebir road, while in Bougie (Béjaïa) and Bône (Anaba), they built strategic roads to control movements in the region. In 1857, the colonial army

founded Fort Napoléon and opened the Kabylie road, at the same time as taking part in the work on the railway from Algiers to Blida (F. 80 1753. A - Note sur les travaux civils de l'Armée d'Afrique (sans date).

The European population was essentially mercantile or destined for agricultural colonization, the work was carried out by troops, Algerian prisoners, and the system of *corvées* imposed on the tribes. Military engineers directed these operations (F. 80 1753. A - Note sur les travaux civils de l'Armée d'Afrique (sans date). The construction of the road network was laid by the colonial army, which was concerned only with strategic imperatives. Most of the time, this network followed the route of the Turkish roads and tracks, at least partly in response to the same military considerations (BOYER, 1960: 297). From 1830 to 1844, more than 1,000 kilometres of military roads were opened in the three provinces. It was not until 1845, after the occupation of a large part of the Tell,³ that a road policy was introduced and the road network was classified for the first time as royal or national roads, strategic roads, provincial roads, and district roads.

This classification was a response to colonial requirements, as demonstrated by the creation of a road and bridges department and the need to allocate an annual budget for maintaining the existing network and building new roads. Although the development of road projects from this period onwards took into account the concerns of civil colonization and trade, the fact remained that strategic imperatives dictated the broad lines to be followed (SOLAL, 1957).

General Valée, Governor General of Algeria, was one of the first who showed the special importance of the road in the process of military occupation. In one of his letters to General Négrier, he wrote in May 1838: "The establishment of France in Algeria can only be gradual. As soon as to have a road in front of us, our duty is to strongly organise the country it crosses, and we must not move forward until our domination is established over the territory surrounding our base". (AGG .1E 134-4 - Lettre du 20 Mai 1838.). In the colonial strategy, the construction of the road preceded the military expedition. The success or failure of military operations depended on the road. Just as the security of French domination could only be guaranteed by the existence of safe and rapid communications routes (SOLAL, 1957).

As early as 1865, Napoleon III emphasised the importance of communications. The creation of the Société Générale, in response to this imperative, gave new impetus to the public works programme.⁴ An emergency plan was drawn up, giving priority to coastal development, port expansion and the improvement of communication routes linking the rich plains of the north to the ports. The construction of a large number of roads from this period onwards coincides strangely with the years of poverty in the country, and the resulting influx

³. Tell: The Algerian Tell to the north of Algeria, the area where most of the country's arable and fertile land is located, as opposed to the dry lands of the Sahara desert. The Tell is about 300.000km² and the Sahara is about two (2) Millions Km².

⁴. F 80-1757- Travaux Publics, Rapport DUCOS, 31 mars 1870. La Société Générale pris l'engagement de réaliser une somme jusqu'à concurrence de 100 millions pour l'équipement de la colonie, et de mettre à la disposition de l'Etat 100 autres millions destinés aux grands travaux publics.

of labour. The new extension of the road network was in line with Mac Mahon's policy of reactivating the policy of colonisation centres and expanding economic domination (GOLDZEIGUER, 1977: 584-585). In turn, the towns of Tiaret, Saïda, Tlemcen, Cherchell, Aumale, Guelma and Souk-Ahras were linked to the ports and major centres of colonisation.

The policy of reinforcing military occupation in the regions under colonial domination, which was followed in the initial phase, provides a partial answer to the question as to why colonial control of the interior of Algeria was delayed by 40 to 50 years. In regions where communication routes were lacking and in inaccessible areas, Algerian resistance lasted longer (south-west, Kabylia, Oases, Aurès, etc.) despite the huge military efforts made to put an end to these armed struggles. It was not until the advent of the road, and then the railway, that these regions fell under French domination.

In 1840, a first classification was made; in 1845, four categories of roads were determined: royal roads, strategic roads, provincial roads and district roads. Since then, changes have been made in 1864, 1865 and most recently in 1879. As in metropolitan France, a distinction is made between national roads, departmental roads, trunk roads and roads of common interest. The network of national roads covers 2,983 kilometres, 1,559 in the department of Algiers, 819 in that of Oran and 605 in that of Constantine. There are 1,316,020 metres of classified departmental roads, 4,982,328 of trunk roads and 1,298,573 of roads of common interest. The total development therefore represents a length of 10,579,921 metres; if we add up the stages listed in the Roman itineraries, we only arrive at a total of 7,900 kilometres (WAHL, 1882: 321).

The 1879 classification increased the number of national roads from 5 to 10, as shown in the table below:

Route n° 1, from Algiers to Laghouat, via Blida, Médéa, Boghar, Djelfa.

Route n° 2, from Merz-el-Kébir to Tlemcen, via Oran, Misserghin, Aïn-Temouehent.

Route n° 3, from Stora to Biskra, via Philippeville, Constantine, Batna.

Route no. 4, from Algiers to Oran, via Blida, Millana, Orléansville, Relizane, Mostaganem, Arzeu.

Route n° 5, from Algiers to Constantine, via Ménerville, Bouira, Bordj-bouArreridj, Sétif.

Route n° 6, from Oran to Géryville, via Sig, Mascara, Saïda, Aïn Sfisifa.

Route n° 7, from Relizane to Morocco, via Sig, Sidi-bel-Abbès, Tlemcen, Lella-Maghrnia.

Route n° 8, from Maison-Carrée to Bou-Saâda, via l'Arba, Tablat, Aumale.

Route no. 9, from Bougie to Sétif, via oued Agrioun and Châbet-et-Akra.

Route n°10, from Constantine to Tébessa, via Ouled-Ramoun and Aïn-Beïda.

3. The road and civil colonisation

The construction of a road network led to the creation of cafés and caravanserais along the routes. They acted as stopping-off points for travellers and traders on the one hand, and advanced military posts and control and surveillance points for the Arab offices on the other. Above all, they represented the "first stage in the development of colonial villages". The table of the situation of the French settlements (1852-1854) emphasised that the caravanserais along the Algiers-Oran road were "laid as the first milestones of centres which would later live on the great communication from Algiers to Oran" (*Travaux des établissements français en Algérie, 1852-1854*: 183).

By imposing the coffee post and the caravanseraï, which in turn became the embryo of the colonial village, the road thus became a determining factor in colonial strategy. While in general, the road provoked the birth and blossoming of centres of colonisation (BAUDICOUR DE, 1860: 133). The fact remains that in several cases it was the village that provoked the construction of roads. As was the case with the Duvivier - Souk-Ahras road (*Travaux de la chambre de commerce de Bône, 1881*). This interaction between civil colonisation and roads demonstrates, if proof were needed, the importance of communication routes in colonial policy (military or economic) during the 19th century.

The colonial centre developed in three distinct stages during the 19th century. From a coffee station and/or caravanseraï, which provided police and economic control, it evolved into a roadside village living of commercial traffic. It played a strategic role in providing security for settlers and stimulating agrarian colonisation. The third stage coincided with the relative "state of peace" during the period 1857-1870, and the appearance of the first railway lines. Paradoxical as it may seem, the consolidation of colonisation in the occupied regions and the increased protection afforded to settlers, as well as the extension of the land policy from the 1860s onwards - direct results of the road policy pursued up to that point - threatened the very future of the road network. The decline was caused by neglect of road maintenance and the meagre budgets allocated to road construction.

The first railway lines accentuated this decline by reducing the commercial flow of roads and their role in the economy of the colonial centre. In 1868, the railway from Algiers to Oran, which was under construction, was considerably less important than the road from Algiers to Oran, which was nearing completion. In the same year, Mac Mahon, Governor of Algeria, wrote of plans to create the colonial centres of Oued-Rhiou, Djidiouia and Merdja de Sidi Abed in the Cheliff valley, that it seemed to him "...that they would have little future because the great movement of travellers and goods in the Cheliff valley will certainly take place via the railway" (AGG- L .45 - Lettre du Gouverneur Général au Général commandant de la province d'Oran, 14 juin 1868). In conclusion, he recommended the creation of

agricultural centres instead of road villages, a move dictated by economic imperatives, which means the need to create new resources for settlers that the declining road network could no longer provide. By the end of the 1870s, the colonising and economic military role of the railway became clearer. The predominance of railways over roads in colonial strategy from this period onwards is demonstrated by the growing number of requests for railway constructions for the most of new villages, urban locations and cities (BELKACEMI, 1987: 100).

Until the end of the 1870s, the road was essential to the success of military expeditions and the development of civilian colonisation in Algeria. With the advent of the Third Republic and the victory of the colonists over the military administration, in France, the road was placed in a different strategic perspective. Its role was now to ensure the success of the centres of occupation and the expansion of the colonised territories. Roads had enhanced the value of the land it crossed and thereby encouraged the economic potential of the settlers. In 1865–66, the Bône region experienced an intense economic boom, characterized by the exploitation of iron ore at Mokta-El-Hadid, the construction of the port of Bône for the export of this ore, the arrival of a large number of European immigrants, and an increase in commercial transactions, all thanks to the construction of the Duvivier-Souk-Ahras, Guelma-Constantine, and above all, Bône-Constantine roads (*Compte rendu de la chambre de commerce de Bône*. 1881). The road also increased land values that there was fierce speculation about the acquisition of land along the routes of the planned roads, with the aim of selling it once the road was built (YACONO, 1955: 418). By providing access to markets, the road stimulated agricultural production by settlers and reduced farm-gate prices.

The organisation of roads network consists of a major artery running parallel to the coast from the Tunisian border to the Moroccan border, linking up at the main points on the coast at Philippeville, Bougie, Algiers, Mostaganem, Arzeu, and Oran, and branching off inland as far as Biskra, Bou-Sâada, Laghouat, and Géryville (El Bayedh). Only four roads have been completed of the ten national roads programed: road no. 2 from Mers-el-Kebir to Tlemcen; road no. 4 from Algiers to Oran; road no. 5 from Algiers to Constantine; and road no. 9 from Bougie to Sétif. Each of the other six need a maintenance section, a section open to traffic, and a section used as a track. 70% of the national roads have been completed and some of them are in a state of maintenance; 92.55% are open to traffic, and 7.45% are incomplete. It should be noted that the incomplete or incomplete sections are in the south, which means in the region where the needs of viability are least urgent. Works on departmental roads and footpaths is far from equally advanced (WAHL, 1882: 322).

Construction of roads in Algeria is extremely difficult because the climate and the shape and composition of the soil. The mountains are not very high, but their slopes are extremely steep, and you have to wind your way around them or cross them through wild gorges; the rivers are shallow, but their beds are wide and their courses unstable. The paving materials are of fairly poor quality; in summer, drought disintegrates them; in winter, under torrential rain, the land collapses and slips away. The average cost of construction roads was 28 francs per meter for the carriageway and ordinary works, however the exceptional

engineering work that had to be carried out in the Chiffa gorges to reach Médéa, at Châbet-el-Akra between Sétif and Bougie, in the Tisser valley before Palestro, and in the Allala wadi on the departmental road from Ténès to Orléansville. Maintenance costs range from 1.50 to 2 francs per running meter. Natural obstacles caused high costs and this will delay the development of roads for a long time in the future. It was less difficult to establish a complete network of railways than a complete network of ordinary roads. It is true that the costs of establishing and maintaining a network are higher, but they covered them with the profits from its operation. The creation of railways, useful in any country, is a necessity of the first order for Algeria. Commercial products, whether agricultural or mineral, need cheap transport. Native or European farmers will extend their plowing if they are sure of selling their harvest; if, on the other hand, they have to bear the expense of a costly cart, they will sow as little as possible. Without railways, colonisation is uncertain and sluggish; with railways, which will give it security and the certainty of success, it will develop rapidly (WAHL, 1882: 323).

The new colonial vision was based on the development of fast railways, it will help the authorities to control the country with relatively small forces and to prevent revolts or put them down instantly. The first program for the Algerian railways was officially drawn up in 1857 by a decree according to the proposition of Marshal Vaillant. Work began three years later.

4. Bridges

The construction of bridges, considered by the military engineers and the public works department to be one of the priorities of colonisation, undoubtedly played a decisive role in the progress of the occupation by enabling settlers to penetrate previously inaccessible territories. Yacono cites the example of the Djendel, Teniet-El-Had, and El-Kantara bridges, which was built over the Cheliff River, which enabled the west bank to be massively colonized (YACONO, 1955: 419). Special interest was given to build bridges in the central regions. In the department of Algiers, northern centre, the number of bridges rose from 4 in 1840 to 47 in 1848. The risk of fire and sabotage prompted the colonial administration, since the 1840s, they replaced the American timber bridges with bridges built entirely of masonry (BAROLI, 1967: 58).

The absence of bridges and footbridges in certain regions disrupted trade relations for part of the year and prevented attempts by settlers to penetrate the region. Nothing is more revealing of the importance of the hopes placed in the construction of these structures and the role they played in the process of effective colonization than the growing number of requests for the construction of bridges recorded in the minutes of the general councils and chambers of commerce of the three departments.

5. Road need security and security need roads

During the nineteenth century, the spirit of resistance that continually animated Algerians represented a serious threat to the colonial forces. The insecurity of the roads was one of the aspects that threatened colonial penetration into the interior of the country and the extension of European trade.

As a result, the "Bureaux Arabes" very soon set up a service of road guards chosen from among Algerians under the authority of French officers, with the main aim of ensuring safety on the roads into the interior. Later, the colony's chambers of commerce, aware of the role played by the service of Transport, constantly called for it to be reinforced and for fast, efficient means of transport to be put in place (F. 80 - 756 - Chambre de Commerce d'Alger. Lettre au Gouverneur Général. 5 mai 1853.) Nevertheless, all the efforts made by the Arab offices were unable to halt the attacks on military and commercial convoys. The security situation had become so serious in the 19th century; the word "insecurity" became the term most often used by the colonial administration and press to describe Algerian resistance to colonialism.

Safety of roads became one of the main objectives of colonisation. All the military operations during the period 1836–1866 in the north east of Algeria were essentially aimed at securing the roads linking the departmental capital Constantine to the ports of Philippeville and Bône because of their importance. Strategic for the control of the entire region. The settlement centres had been built along these roads, the army was responsible for the protection of the settlers and their property (SOLAL, 1957: 65).

On another level, the dramatic periods of famine, mainly affecting Algerians, far from slowing down the construction of roads and railways, gave a vigorous boost to the colonial public works policy. Special banks and funds were released, and additional budgets were allocated to "curb the famine." In reality, the economic crisis provided earthworks with an abundance of very cheap, hungry labour. In the same way, the communication routes were responsible for the gradual return of Algerians to the towns, following the disastrous repercussions of the colonial administration's policy of agrarian despoilment. From 1870 the population of inland Algeria gradually declined as the population of the coastal regions increased.

The roads in the early days of colonization had driven Algerians inland, were now being used to bring back to the north a dispossessed and destitute workforce ready to offer themselves for agricultural or public works (GOLDZEIGUER, 1977: 441-547).

6. Roads after 1870:

The rise of the railway seemed to reduce the strategic importance of the road. This change had nothing to do with the volume of trade because road retained its share of goods and passenger traffic; it had to do with the place occupied by the road in colonial policy before 1870. After this date, the road lost its importance to the railways. At the end of the 19th

century, less than 3,000 km of national roads had been built, this network, only a few hundred were paved or gravelled (BELKACEMI, 1987: 104).

The construction of railways than became the main objective of colonisation, and this had the effect of slowing down the extension of the road network. In the colonisation's new strategic option was the fact that most of the roads built after 1875–1876 were intended to link the centres of colonisation and the plains with the railway lines. The role of the road would be to transport goods and passengers to the stations; however, it was intended to connect the centres of production and the marches with the ports thanks to the new means of colonisation that was the train.

Conclusion

The French Colonial Empire was able to penetrate Algeria after occupying the coast, which represented 80% of Algerians' communication with the outside world. The policy of building primary and secondary paved roads from 1830 to 1870 was intensive; however, colonial authorities decided to build the railway, which had been flourishing in Europe continuously since 1845. During half a century of hard and painstaking work, the colonial authorities were able to achieve great strategic objectives, namely the suppression and quelling of all revolts and uprisings that Algerians fought in succession, and then the confiscation of land and granting it to French and European settlers, as well as the construction of roads. The roads also formed a necessary network to connect the areas of economic, agricultural, and mining production to the ports and deliver them to Europe. The paved road became a tool of dominance and a means of entrenching colonisation and exploitation of people and land.

No doubt, that the road-building and paving projects were purely for colonial purposes. The plan was to exploit agricultural lands and various resources such as forests, water, minerals, and mines, in addition to encircling Algerians who resisted valiantly and preventing the French army and European settlers from falling into insecurity. However, there were adverse consequences of the settlement infrastructure projects in Algeria. The project contributed to breaking the isolation of many regions of the country. Social communication increased, cultural phenomena such as the local languages spread, interaction between the colonial cities with their inhabitants; both European and Algerian were connected to the rural areas that were linked to roads and railways network increased too, markets flourished in which local goods and European industrial products were promoted. Despite the deprivation, poverty, disease, and ignorance that Algerians suffered at the time of French colonisation, the ease of communication increased the strength of social ties that soon turned into national militant ties, thus facilitating the communication of activists of parties, associations, clubs, unions, and others with each other, creating a network of militants and revolutionary activists who used the transport network to strengthen the national spirit that continued from the end of the First World War until the outbreak of the liberation war in November 1954. After nearly 8 years of dramatic revolutionary war, the colonialist ear took end, the State of Algeria had been restored, new generations of Algerian people could live in safety, peace, and dignity.

Bibliography

Archives

1. AGG .1E 134-4 - Lettre du 20 Mai 1838. (Les Archives nationales d'outre-mer. Aix-en Provence. France)
2. AGG- L .45 - Lettre du Gouverneur Général au Général commandant de la province d'Oran, 14 juin 1868. (Les Archives nationales d'outre-mer. Aix-en Provence. France)
3. F 80-1757- Travaux Publics, Rapport DUCOS, 31 mars 1870. La Société Générale pris l'engagement de réaliser une somme jusqu'à concurrence de 100 millions pour l'équipement de la colonie, et de mettre à la disposition de l'Etat 100 autres millions destinés aux grands travaux publics. (Les Archives nationales d'outre-mer. Aix-en Provence. France)
4. F. 80 1753. A - Note sur les travaux civils de l'Armée d'Afrique (sans date). (Les Archives nationales d'outre-mer. Aix-en Provence. France)
5. F. 80- 1756 - Chambre de Commerce d'Alger. Lettre au Gouverneur Général. 5 mai 1853. (Les Archives nationales d'outre-mer. Aix-en Provence. France)
6. F. 80-301 - Lettre de Mercier - Lacombe à son ancien secrétaire. 4th of Décembre 1860. (Les Archives nationales d'outre-mer. Aix-en Provence. France)

Sources

7. BAUDICOUR DE, L. (1860). *Histoire de la colonisation de l'Algérie*, Paris.
8. Travaux de la chambre de commerce de Bône 1881.
9. Travaux des établissements français en Algérie 1852-1854.
10. WAHL, MAURICE. (1882). *L'Algérie*. Librairie Germer Baillière & Cie. Paris.

Studies

11. BAROLI, M. (1967). *La vie quotidienne des Français en Algérie 1830-1914*. Paris.
12. BELKACEMI, BOUALEM. Colonialisme et voies de communication en Algérie, au XIX^{eme} Siecle. In *Cahiers Maghribins d'Histoire*, N 1. December 1987. University of Oran. pp 92-107.
13. BOYER, PAUL. (1960). *L'évolution de l'Algérie médiane de 1830 à 1956*. Paris. p. 297.
14. Compte rendu de la chambre de commerce de Bône. 1881.
15. GOLDZEIGUER, REY ANNIE. (1977). *Le royaume Arabe*, Alger.
16. JULIEN, CHARLES-ANDRE. (1994). *Histoire de l'Afrique du Nord : Des origines à 1830*, 2vols, Payot et Rivages. Paris.
17. KADDACHE, MAHFOUD. (1998). *L'Algérie durant la période ottomane*, Office des publications universitaires, Algiers.
18. MARTIN. CLAUDE, (1963). *Histoire de l'Algérie Française 1830-1962*. Paris.
19. MEROUCHE, LEMNOUAR. (2017). Recherches sur l'Algérie à l'époque ottomane Vol I Monnaies, prix et revenus, 1520-1830, Vol II La course, mythes et réalité. Editions Bouchène. Paris.
20. SOLAL, EDOUARD. (1957). *Philippeville et sa région. 1837-1870*. Alger.
21. YACONO, XAVIER. (1955). *La colonisation des plaines du Chelif*. 2 vols. Alger.