

Transport and Accessibility to Tourism Areas

Lebanon scale





Analysis of Threats and Enabling Factors for Sustainable Tourism at Pilot Scale

Transport and accessibility to tourism areas Lebanon scale



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OVERVIEW

The present document was produced in the framework of **Co-Evolve4BG** project “*Co-evolution of coastal human activities & Med natural systems for sustainable tourism & Blue Growth in the Mediterranean*” in relation to Threats and Enabling Factors for maritime and coastal tourism development on a national scale” Co-funded by ENI CBC Med Program (Grant Agreement A_B.4.4_0075).

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REVIEW

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List of abbreviations

BCD	Beirut Central District
GBA	Great Beirut Area
GDP	Gross Domestic Product
LCC	Lebanese Commuting Company
OCFTC	Office des Chemins de Fer et des Transports en Commun
MOT	Ministry Of Tourism
MPWT	Ministry of Public Works and Transport
DGCA	Directorate General of Civil Aviation
BIA	Beirut International Airport
IDAL	Investment Development Authority of Lebanon
WTO	World Trade Organization
LTA	Land Transport Authority
Marina JK	Marina Joseph Khoury
ATCL	Automobile et Touring Club du Liban
TEUs	twenty-foot equivalent units

I. Introduction

The 15-year war that Lebanon witnessed between 1975 and 1990, as well as the 2006 war with Israel, severely damaged the country's infrastructure. As a result, some cities and villages were destroyed, roads were impaired and train operations stopped. Since then, Lebanon has lacked a sustainable and efficient public transport system and infrastructure, causing reliance on private cars and exacerbation of the level of congestion on the roads. On the other hand, despite the high population density and the short distances, which generally disfavor the private car dependency, Lebanon lacks any form of mass transit, or any reliable public transport services. In fact, Lebanon's traffic crisis has turned into the citizens' daily routine. Finally, the lack of strategic plans to enhance public transport has weighed down significantly on the Lebanese economy.

Whilst most of the major businesses and main governmental divisions are centralized in Beirut, the capital is densely populated causing higher demands for infrastructure and services. Due to the lack of an adequate and regulated public transport sector, commuters depend heavily on private vehicles for daily activities and leisure purposes. According to the "Urban Transport Development Project", with 7.36% share vehicles, aircraft, vessels, transport equipment ranked fourth most imported goods, passenger vehicles reached 434 per 1,000 people in 2012, ranking Lebanon in the 17th place worldwide (BlomInvest Bank, 2015). The project conveyed that 50% of the Lebanese households own one car, while 25% own at least 2 vehicles (Figure 1). In fact, Lebanon has around 7,000 km of roads throughout the country, generally in good conditions, and a large network of petrol stations is easy to access.

The road network classification and hierarchy vary between freeways, motorways, main roads and local roads. According to a study done by the Issam Fares Institute for Public Policy and International Affairs on the "Economic Impact of Adopting a Sustainable Transport System in Beirut", roads in Beirut Central District (BCD) experience two peak periods during the weekdays: the first being the morning peak period between 8:00 and 11:00, while the second is the evening peak period between 16:00 and 18:00. The traffic volumes in Great Beirut Area (GBA) main arterials range between 50,000 and 80,000 vehicles/day, reaching 7,000/hour on peak hours at Beirut's Northern entrance. Peak hour speeds vary between 30 km/h on main roads to less than 10 km/h on local streets. Unfortunately, 81.3% of vehicles on the streets consist of private cars, with an average occupancy of 1.6 people/vehicle (BlomInvest Bank, 2015).

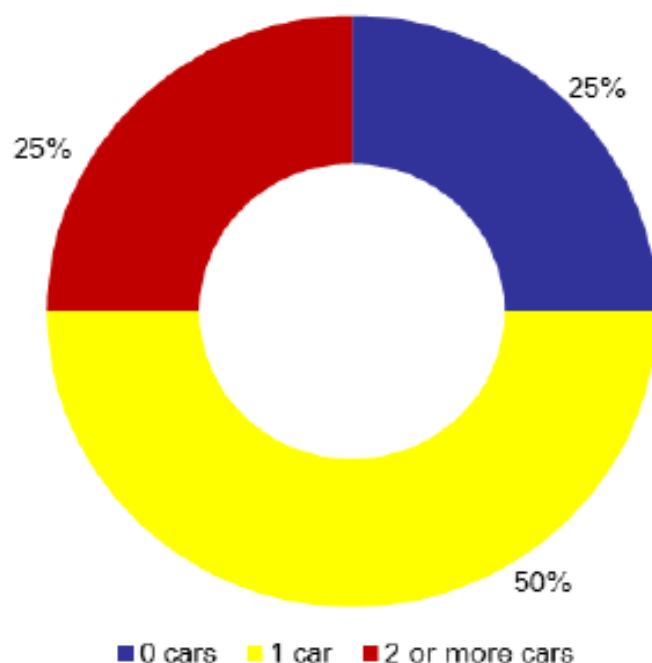


Figure 1. Number of cars owned/household (Urban Transport Development Project).

The cost of Beirut's congestion to the country's economy is extensive. In fact, in 2005, when traffic volumes were lower than today, a study conducted by the Ministry of Environment assigned the cost of urban congestion at around 8% of Lebanon's GDP at the time. As a popular initiative to respond to the high traffic volumes and the caused congestion, carpooling is starting to become common now, where users in proximity tend to share the same car for the same destination.

Since the car rental service is common in Lebanon, owning their private car is not the only available option for users to navigate around the country. While convenient, renting a car is the most expensive mode of transportation in Lebanon. This sector is mainly activated by tourists and travelers who tend to book a car with a local driver able to accompany them through their planned itinerary.

The most common modes of getting around and between cities are shared taxis. They are recognized by their red license plates and can simply be flagged down on the side of the road. The main difference between a "taxi" and a "shared taxi /service" is that the latter is a lot cheaper since the passenger would be sharing the cab unlike the first option where the client would have the cab exclusively for himself. Shared taxis often carry a maximum of five passengers including the driver. Inter-city taxis operate throughout the country and most of them have set-predefined routes. In addition to the traditional taxis, the online services are also an alternative in Lebanon. Uber and Careem are both available and can sometimes be cheaper than traditional taxis. The last type of taxis is the "on-call taxi". In this case, the driver picks up passengers who have pre-booked and does not respond to hail in the street.

Due to the country's political difficulties, the Lebanese Rail System is not currently in use, with ceased services. On the other hand, the bus system is popular for locals and tourists as well. The bus can be stopped anywhere along the route simply by hailing. The Lebanese Commuting Company (LCC) is one of the few brands of public transportations all over Lebanon. On the other hand, the publicly owned buses are managed by the "Office des Chemins de Fer et des Transports en Commun" (OCFTC). Inter-city buses operate throughout the country with no existing route map and their itinerary is a sign attached to the rear window. Usually, the buses traveling North leave from Charles Helou Station, near the Beirut Marine Port and those traveling South depart from Cola Station, located South of Beirut. The Lebanese roads map is presented in [Figure 2](#). Those buses are scarcer outside Beirut and less frequent in remote areas. They are cheap and can be recognized by their white and red colors. While the lack of train lines may be inconvenient, many areas can be navigated by bicycle, but the cyclists need to be aware that Lebanon is not a particularly bike-friendly country. Many hotels offer bikes for rent, but most of the cities do not have dedicated bicycle lanes and can be heavily congested, putting the cyclists at danger.

This unregulated sector of taxis and buses throughout the country arose from the dependency on the private car; therefore, relatively high operational and maintenance costs incurred by the car owners. These costs include fuel consumption, insurance, car services and taxes. Commercial investments in cars as mass transportation system, including the import of vehicles, spare parts, fuel, and any related cost, was estimated to be over 7.5% of the country's GDB ([Transportation Sector: Problems and Solutions](#)).

As for the main infrastructure ports, the national airport is Beirut Rafic Hariri International Airport ([Table 1](#)). BRHIA is in the southern suburb of Beirut. The "Travel and Tourism Competitiveness" report ranked Lebanon 51st in terms of air transport infrastructure. Apart from the international airport, the ports of Beirut and Tripoli are other ports of entry. Lebanon can be reached by ferries from Cyprus, Greece, and Turkey or by road from Damascus and Tartous.

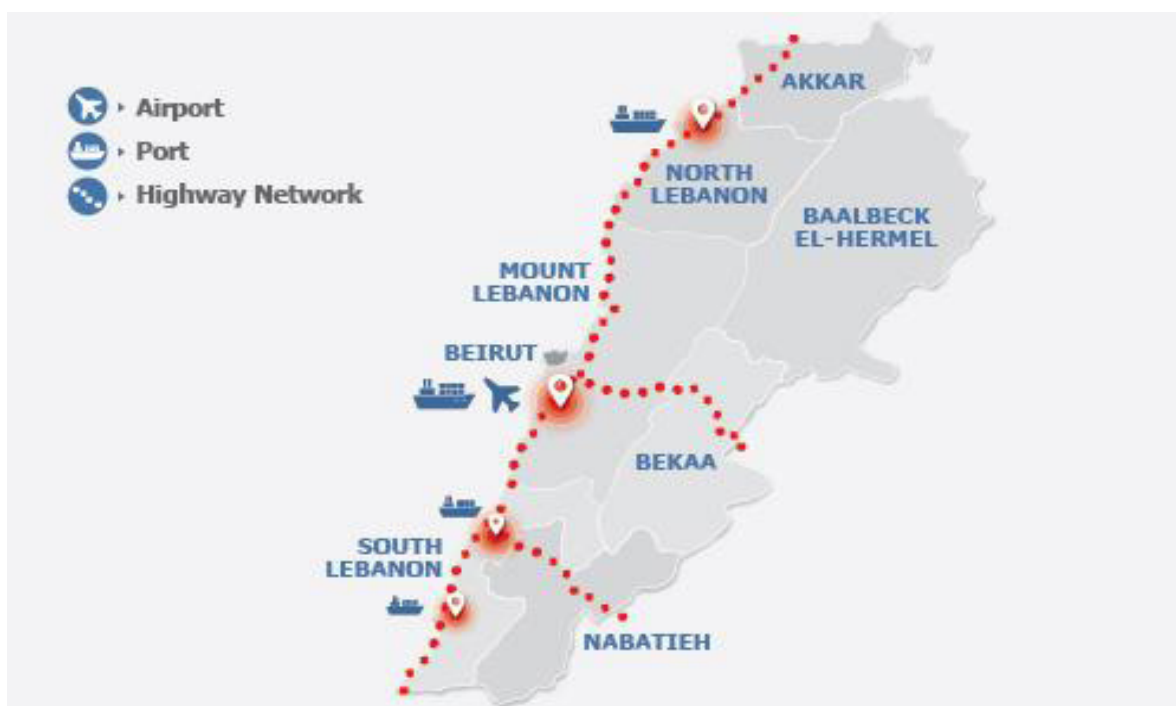


Figure 2. Main transportation infrastructure in Lebanon (IDAL, 2017).

Table 1. Transportation from the Airport to City Centre

 Airport	 Distance	 Taxi	 Bus	 Train	 Car Rental
Beirut Rafic Hariri International Airport	8 km / 5 miles	LBP 30,000 - USD 20	USD 1	-	Available

II. Mechanical relationship: tourism and transport

The infrastructure provision, mainly transport, contributes not only to the overall economic growth, welfare, quality of life and productivity of the Lebanese, but to the tourism industry as well. It is known that both, capacity and quality of access to a destination always influence its selection by tourists and travelers. Lebanon's transport infrastructure consists of a network of paved roads, rural roads, and agricultural tracks; terminal facilities comprising the international airport and the seaports of Beirut, Jounieh, Byblos, Tripoli, Saida and Tyre.

Road transport planning plays a major role in the tourism development industry. In fact, the issues the planner might face with road planning in tourism development are various. First, he needs to provide five-star roads for circulation giving the travelers comfort and quality assurance. Quality improvement of road infrastructure would be an essential element of tourism development. Second, road equipment, including signage and wayfinding, paintings, and curved mirrors is important as well to ensure the traveler's comfort and safety. In 1995, the MOT master plan gave high priority to the guide and directional signage. In addition, scenic road development is important as well. Parking facilities provision is favored with a scenic view. Finally, it is advised that every measure regarding traffic management should aim to preserve the flora and fauna and maintain the social environment of the local community.

II.1. Tourism and land transport

The Current Road network comprises 6,333 km paved roads: 530 km of which being international, 1,654 km primary, 1,338 km secondary and 2,811 km local roads, and a wide network of rural and agricultural tracks (Table 2).

Destination	Tripoli	Saida	Zahle	Baalbek	Bcharre
Mileage (km)	77	45	55	85	105
Required time (min.)	60	40	50	80	120

International roads are currently in service and connect the Lebanese land, sea and airports (Table 3) with the neighboring country (Syria); primary roads are those which connect the capital to the centers of the governorates (Mohafazat), link between international roads, and lead to major touristic destinations, as well as classified archeological sites; secondary roads connect the Qaza centers (administrative department); and finally, local roads link villages as well as unclassified regular archeological and touristic sites.

The tourists and travelers' movement and transportation within the country take place almost exclusively on the road network (Figure 3). It is well developed and distributed throughout the cities with a road density of 0.60 km/km² (MOT/CDR, 2004). However, the road network lacks maintenance.

Table 3. Distribution of the Classified Road Network per Mohafazat (km) (MPWT)

Mohafazat	International	Primary	Secondary	Local	Total
North	84.1	416.5	287.7	709.4	1492.7
Mount	129.9	734.4	422.2	786.4	2072.9
South	136.3	215.5	439.7	704.0	1495.5
Bekaa	179.2	787.4	193.4	611.6	1271.6
Total	529.5	1653.9	1338.0	2811.4	6332.7

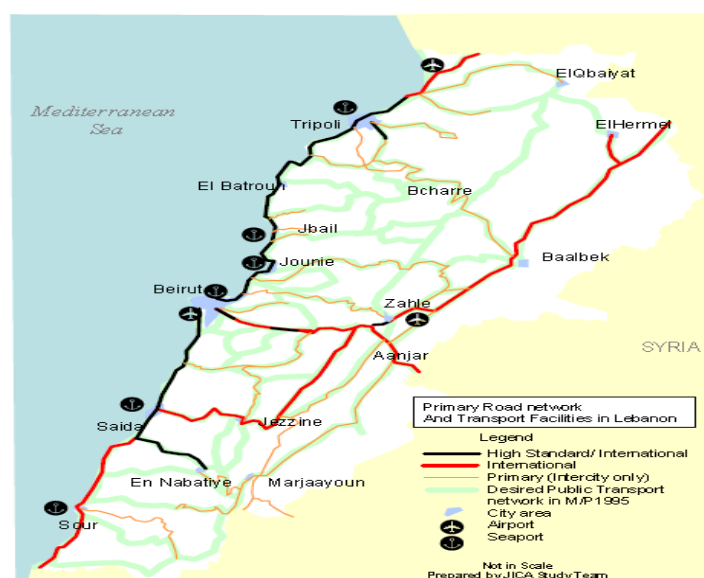


Figure 3. Existing Primary Road Network and Transport Facilities in Lebanon.

II.2. Tourism and air transport

According to the Directorate General of Civil Aviation (DGCA), Beirut International Airport (BIA), the body responsible for aviation development under the Ministry of Public Works and Transport, is considered one of the best airports in the region, which offers its services to about 40 international airlines.

The area covered by the BIA is around 7 million m². It has two runways, 3,800 m and 3,400 m with a width of 60 meters each. Facilities for maintenance services, aviation control stations and terminal facilities are also well developed. There is no transport to access BIA other than road transport. The planned parking capacity is 3,250 vehicles.

III. Tourist mobility: public transport, intelligent system, and sustainability

III.1. Tourism and public transport in search of sustainability

Tourist travel is expected to keep growing and leisure travel has become a key lifestyle ingredient, therefore the increasing availability of rapid low-cost transport has brought enormous benefits to tourists and tourist destinations alike. The global tourism put in place the new mobility trends that target air transport, land transport by car and by high-speed train as well as sea transport. All those modes of transport, when applied sustainably, aim at attracting tourists into previously remote inaccessible peripheral areas around the world (Briedenhann and Wickens, 2004).

Transport, which is one of the activities associated with tourism, is the most polluting. Despite having several economic and social benefits, increasing tourist mobility has raised the impact of developing such a sector with sustainability. The main harmful results of tourist transport include traffic congestion, noise and air pollution, greenhouse gas emissions, accidents, resource depletion and other environmental issues. In fact, tourism contribution to the anthropogenic emissions of greenhouse gasses has attracted increasing attention at high levels (Becken, 2006).

In addition, regarding the natural resources, the political competition for scarce oil resources might impact the airline industries around the world since no workable alternatives to kerosene have yet been identified for the short to medium term. Also, in the last decades, it became clear that car ownership could not increase forever. All those issues raised the flag to find solutions to improve urban mobility and increase accessibility with minimal negative impacts on the city, as the distance between Rafiq Hariri Beirut International Airport and most distant coastal cities by air is less than 30 minutes (Figure 4).

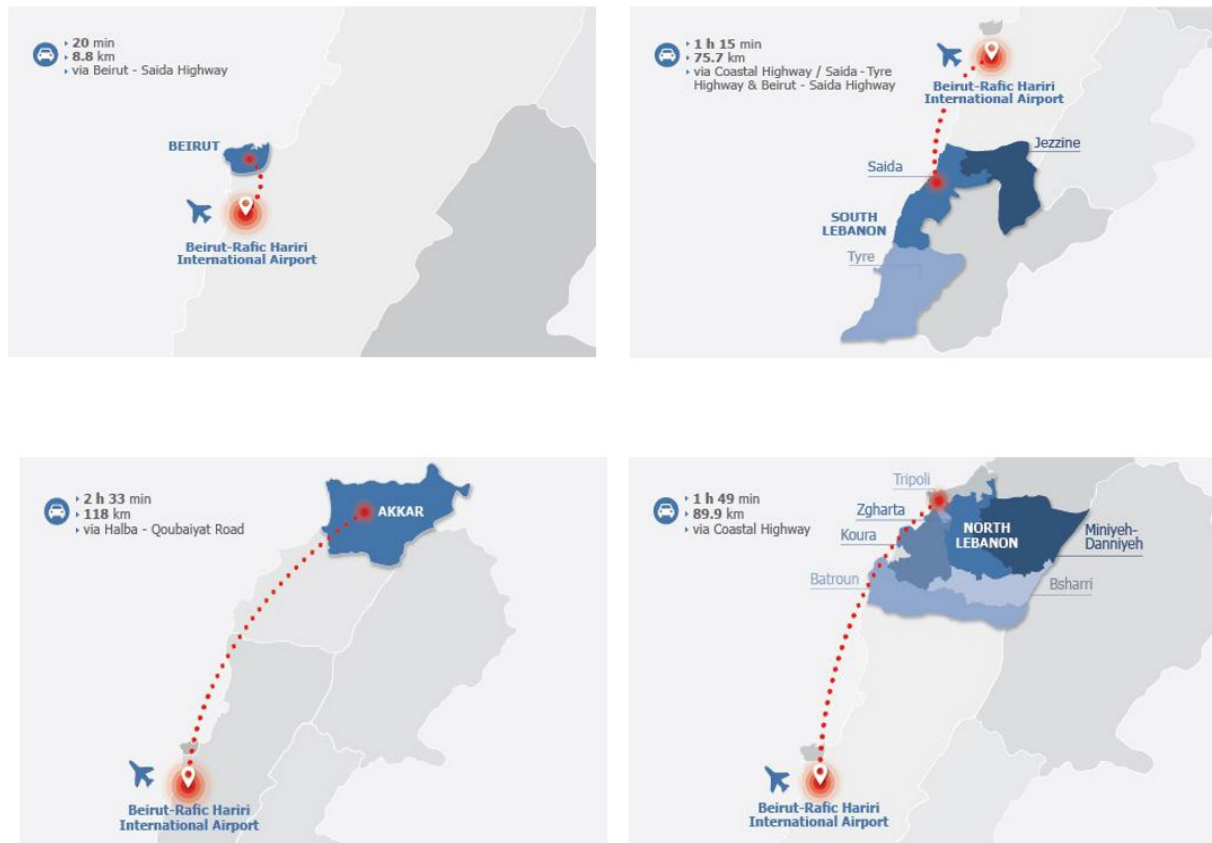


Figure 4. Distance between BIA and the coastal Mouhafazat (IDAL,2017).

As a response to this dilemma, public transport was found to be a key component for building sustainable transport systems, with particular emphasis on urban spaces. The basis of researching public transport sustainability relies on the environmental, social, and economic dimensions of sustainable development as established by the Brundtland Commission's report, "Our Common Future", in 1987 (Jarvie, 2016).

In fact, public transport enhances the citizens' and tourists' mobility as well and contributes to social equity and reduces traffic congestion and air pollution. During the last decades, the mobility patterns in urban areas have changed, mainly driven by socioeconomic growth, urban sprawl, and increased demand for personalized mobility. However, the increasing ownership of private cars decreases the share of public transport in daily commuting. Several strategies and policies were put in place to raise awareness and boost the use of public transport. During this period, on the international scale, the practices aim to improve the quality of the transportation service, the service frequency and capacity of lines, reliability, coverage, comfort, safety, environmental sustainability, and energy efficiency. Urban operators are currently investigating new technologies to develop innovative techniques to improve the urban transport systems. In this stream, several governments are promoting the share of sustainable modes of displacement, often integrated in the public transport network.

The increasing availability of low-cost rapid transport has brought enormous benefits to tourists and tourist destinations alike. Leisure travel has become a key lifestyle ingredient. Tourist travel has registered 1.5 billion worldwide international arrivals in 2019. Despite the uncertainty, an increase was predicted by 4% in 2020 confirming tourism as a leading and resilient economic sector (UNWTO, 2020).

Long-haul air travel between world regions is predicted to grow faster. This means that remote destinations and developing countries can now have their slice of the global tourism cake. Land travel, by car and by high-speed train, is also a vital part of the new mobility equation, bringing tourists into many previously inaccessible peripheral areas (Briedenhann and Wickens, 2004).

The economic and social benefits of increasing tourist mobility have, however, created a major sustainability dilemma. Negative impacts from tourist transport include traffic congestion and noise, accidents, air pollution, greenhouse gas emissions, resource depletion, and other environmental problems. Two global issues are of major concern. First, there are increasing fears about global climate change, for its consequences on tourism and on the future of the planet. Touristic transport and tourism's contribution to the anthropogenic emissions of greenhouse gases has attracted increasing attention at high levels (UNWTO, 2003) and dominates this discussion (Gössling, 2002). Second, growing consideration is being given to the political and practical consequences of the competition for scarce oil resources. This will particularly affect the airline industry as no workable alternatives to kerosene have yet been identified for the short to medium-term. This special issue on tourism transport is an important first step in discussing and addressing this controversial dilemma. It brings together a range of environmental initiatives relating to tourist transport, explores current and future tourism travel patterns and impacts, and, crucially, discusses the societal phenomena that encourage increased mobility.

III.2. Current situation in Lebanon

III.2.1. Existing conditions and current practice

According to the 1995 “Greater Beirut Transportation Plan”, Beirut in 2015 was supposed to be a city with two Metro lines, one regional rail service, three bus lines circulating on dedicated bus lanes, 13 bus lines circulating in mixed traffic, and taxi-service. As for the soft mobility, all the sidewalks would have been cleared and all the obstructions removed in order to allow safe circulation for pedestrians, and the bicycle would be a viable alternative to traveling inside the city (Mehdi, 2010). All these modes would be functioning together in a full multi-modal sustainable system to meet the city's needs for travel, but instead we are in a state of constant gridlock, mainly relying on private car ownership and with inadequate public transport systems.

Today, Lebanon lacks an efficient sustainable transport system responding to the challenge of increased population, expansion of urbanized areas, tourism attraction in different locations and the challenges of biodiversity and air quality protection (Figure 5).

With the population growth and with insufficient related data, according to a 2011 survey, Lebanese people were making an average of 1.5 motorized trips per day, double the number of trips they made in 1994.

Public transport accounts for nearly 12 % of inter-city passenger movements in Lebanon. Organized and modernized transport operations are present among coastal cities and the Bekaa valley (Table 4). The table below shows the number of lines in service. In other areas, shared taxis, and taxis, operating on personal and negotiation bases, serve passengers. The table below shows accessibility from Beirut by public transport. Governmental assistance for organization and operational standards introduction is planned. However, the current regulations are not enough to eliminate the difference in accessibility between coastal and rural areas. In the MOT master plan, ideal routes for public transport development have been suggested.

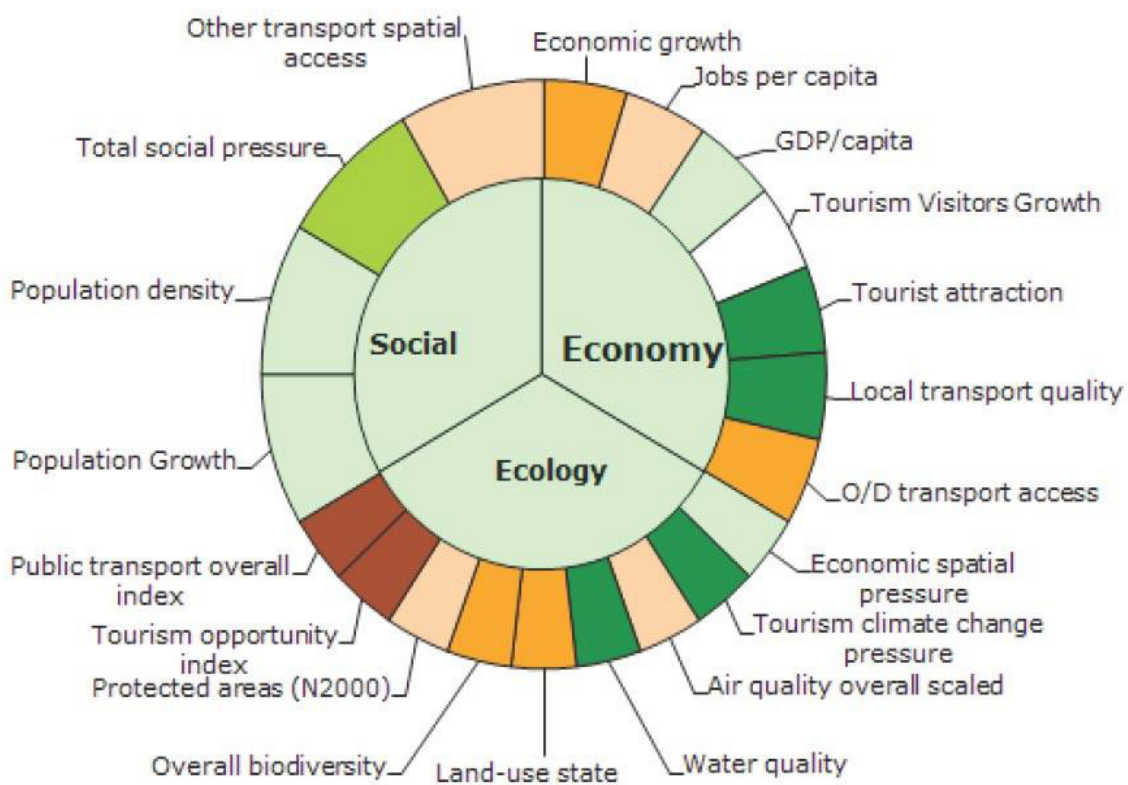


Figure 5. Sustainability Impact Assessment
(Centre for Sustainability Tourism and Transport).

Table 4. Number of public transport operation lines (MPWT).

Localities	1996	1997	1998	1999
Great Beirut	9	27	22	24
Bekaa	0	0	13	15
North Lebanon	0	0	0	12

The share of public transport in Beirut (Table 5) does not exceed 19% of all the trips made, out of which only 1.7% is catered to buy buses. The lack of law enforcement and control of any of the public transport vehicles by the government have led to more security gaps in this sector reducing its use. On the other hand, there is an over-supply of shared-taxi vehicles on some major profitable routes while it is completely missing in other areas of the city. Moreover, constant, and uncontrolled stopping by those vehicles to pick up and drop passengers causes traffic congestion and affects the free flow of cars within the city. Finally, the use of old cars that are poorly maintained negatively affects the environment. All the aforementioned factors ultimately bring about congested streets, high levels of pollution and unregulated public transport.

Table 5. Level of service of public transport originated in Beirut (MPWT).

Destination	Tripoli	Saida	Zahle	Baalbek	Bcharre
Mode	Express bus, Local bus, Service, Taxi		Service, Taxi	Service, Taxi	Taxi *
Operation mileage (km)	77	45	55	85	105
Cheapest cost per person (LL)	1500 for local bus	1500	2-3000	3000-4000	6000-
Fastest time (min.)	60 for express bus, taxi	40 for express bus and Taxi		90 by taxi	120 by Taxi
Capacity	55 seat for express		10-12 seats by Service		4 seats
Frequency and punctuality	Every 15-20 minutes	Every 30 minutes	Depend on passenger density, at most 60 minutes.		Depends on passenger
Quality	A/C and no-smoking for express		Low-safety, depends on drivers schedule, no A/C		

III.2.2. Failure of implementing a sustainable transport system

In May 2009, a “Study for the Revitalization of the Public and Freight Transport Industry in Lebanon” was conducted. It focused on the aspects of the problems of public transport in Lebanon and proposed some recommendations on how to improve the situation. By then, the consultancy group, made up of TEAM International and IBI Group, came up with an implementable and feasible solution to meet the country’s needs. It is inevitable to mention that the problem solution does not reside in building more roads, demolishing buildings, adding more parking spaces, buying state of the art buses and running them, but rather it is in managing the complex transport system and improving the quality of service. For any system to succeed, it must be reliable and quick, which cannot be achieved without public transport privileges while addressing the urban mobility and providing dedicated lanes for them.

While planning is mostly absent at the Metropolitan level, Lebanon has failed to implement a sustainable transport system due to several reasons. The first main reason behind this failure is the lack of coordination between the different jurisdictions of urban and transport planning. In fact, The Greater Beirut Area (Jounieh to Khalde and East to 400-meter altitude) has no planning organization. A metropolitan planning agency is essential to ensure the coordination of land use and transport planning to plan and maintain a resilient public transport network. Second, the lack of real enforcement has led to severe chaos and uncontrollable misuses of fake license plates on public transport plates. In addition, the absence of a regulatory authority urges the necessity of having a Land Transport Authority (LTA), responsible for planning and regulating public transport services. Also, the implementation of a mass transit system imposes costly long-term contracts that require annual budgeting. On the other hand, the parking provision at low prices is favoring the private car over other modes of transportation.

As incentives to favor the public transport, new vehicle-free pedestrian areas in the city should take place like the ones in Central Beirut District and the excessive parking in the city center should be avoided. Furthermore, the city should become more pedestrian and bicycle-friendly to attract sustainable modes of transport.

IV. Cruise tourism in Lebanon

Maritime transport in Lebanon is the most important mode for external trade and plays an important role in tourism mobility. There are four main ports in Lebanon:

IV.1 Port of Beirut

Located in the capital city, it is among the top ten seaports in the Mediterranean Sea and is considered the gateway to the Middle East. It is a Mediterranean cruise port as well. Since the end of the Lebanese civil war, major reconstruction of new infrastructure took place such as the new container terminal, as well as rehabilitation of the previously existing infrastructure. The Port of Beirut was transformed through self-financing from a local port to a regional and a transshipment hub for the region. It plays an important role in transporting goods to Syria, Jordan, Iraq, and the Gulf States (Figure 6). With large capacity for import, the port consists of a total area of 1.2 million m² and has four basins, 16 quays and a new container terminal capable of handling about one million twenty-foot equivalent units (TEUs) every year (Figure 7). Meanwhile, the new Free Zone, which covers an area of 11,200 m², has been re-launched after the civil war and has been successfully operational since then. However, the Beirut Blast that occurred on August 4th, destroyed a significant part of the infrastructure of the Port and affected its activity. Beirut cruise terminal is located on Quay 5 and faces Turning Basin 2. The old building was reconstructed into a modern passenger terminal (sized 600 m² or 6460 ft²). The terminal project was completed in 2018.

IV.2 Port of Tripoli

The Port of Tripoli is the second most important port in Lebanon after the Port of Beirut (Figure 8). It has an approximate area of 3 million m² with a water area of 2.2 million m², a land area of 320,000 m², and a 420,000 m² dump area adjacent to the current port, reserved for the future Container Terminal and Free Market Zone. It receives approximately 450 ships yearly, averaging around 37 ships per month. Most ships carry general goods and dry discharge such as iron, wood, vehicles, and construction material. The Port of Tripoli also contains a Free Zone with an average area of 150,000 m².

IV.3 Port of Sidon

The port of Sidon is an ancient port, mainly used as a fishing port and for accommodating small freighters. About 200 ships enter this port each year from Europe, Africa and Arab countries. While the port can accommodate a larger number of ships, winds and waves prevent ships from docking due to the absence of wave breakers to protect them. The lack of such protection has forced many ships to dock in other ports. Yet, there have been several initiatives in recent years taken towards modernizing the commercial port.

IV.4 Port of Tyre

The Port of Tyre is a small harbor that is in south Lebanon. In this port, the breakwater protects the Marina harboring fishing boats and some private pleasure crafts or sailing boats but does not extend sufficiently to shelter vessels berthing at the main harbor. As such, during the winter season, the port may be inoperable for up to 10 days per month due to swell and waves. During recent years only 2 to 3 vessels call at Tyre per month, mainly smaller RORO's (Roll-On, Roll-Off) discharging passenger cars from Europe. In fact, the Port of Tyre has no cargo handling equipment and warehousing facilities are limited to vehicles.

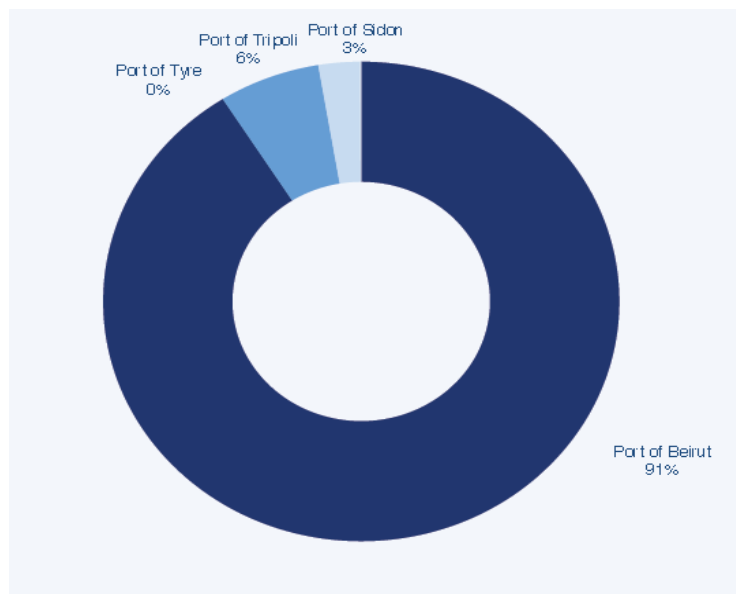


Figure 6. Share of Lebanon's ports of total seaborne exports (2013)

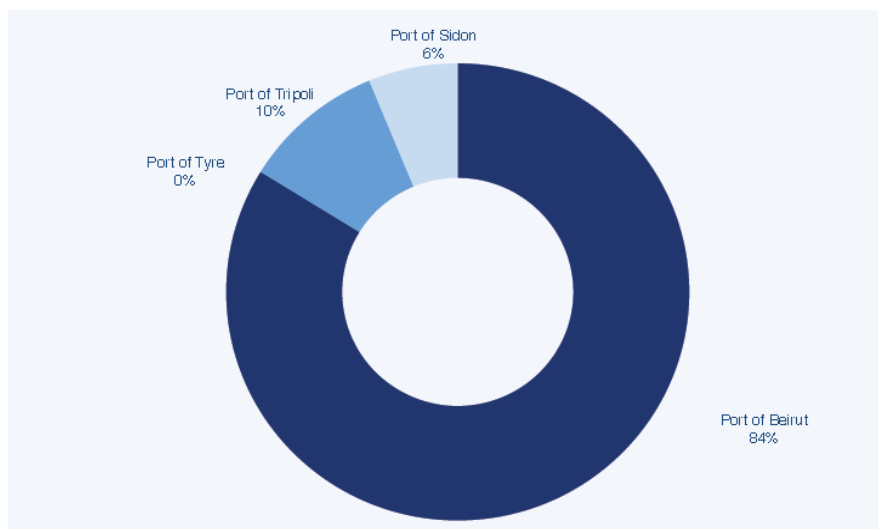


Figure 7. Share of Lebanon's ports of total seaborne imports (2013).



Figure 8. Major ports along the Lebanese Coast
(https://www.researchgate.net/figure/Map-of-Lebanon-showing-the-two-mountain-chains-the-location-of-the-major-cities-the-4_fig1_328116690).

V. Yachting in Lebanon

Mainly the existing marinas along the Lebanese coast such as Aquamarina, Holiday Beach and Movenpick are designed for small residential speedboats and would not take even the smallest visiting yacht. While La Marina JK Dbayyeh (Figure 9), the ATCL Automobile et Touring Club du Liban in Jounieh (Figure 10), the Beirut Marina (Figure 11) are open to visiting yachts – in theory, but in practice, ATCL Jounieh is the only one with a welcoming berth.

ATCL has a fine marina which is part of a large sports resort with a grand swimming pool and endless tennis and baseball courts, a gymnasium, restaurants, and bar. All the required facilities, including WiFi, are available to visiting yachts. The rates are very reasonable. But arrival could hardly be more impressive: one ties up to the Arrivals Quay to port, right beside the refueling station. The ATCL is around 15 to 20 minutes' walk away from the Center of Jounieh city.

La Marina JK Dbayyeh is halfway between Jounieh and Beirut and is another resort complex with a marina attached. The available yachts receive several facilities, but it is relatively more expensive.

Finally, Beirut Marina, known as St. George's or Zeitouna Bay, is Beirut's finest leisure destination, located at the Beirut Marina. It includes various restaurants, cafes, retail shops and activity centers for the users to discover. Accessible to the general public, the upper and lower promenades form an intensely active area, where Lebanese, tourists and Beirut lovers enjoy a wide selection of menus, as well as spaces for events, cultural festivals, concerts, exhibitions and a variety of other celebrations.



Figure 9. La Marina JK, Dbayyeh
(https://desktop.beiruting.com/Touristic_Area/La_Marina).



Figure 10. ATCL, Jounieh (<https://atcl.org/uncategorized/du-vert-dans-la-ville/>).



Figure 11. Beirut Marina, Zeitouna Bay (<http://zaitunaybay.com/about-the-project>).

VI. Conclusion

Lebanon is in urgent need of a sustainable public transport system that aims to improve residents as well as tourists' quality of life and mobility experience throughout the country. Previously proposed projects tackling the transportation sector in Lebanon witnessed several challenges, the major one being the over-reliance on foreign funding. On the other hand, it was witnessed throughout the years that the private sector was able to adapt and move forward despite all the challenges and crises. This situation highlights the importance of encouraging a public-private partnership as a solution towards upgrading the Lebanese transport system. Adopting a sustainable public transport system would generate great benefits. First and foremost, traffic volume would decrease. This reduces stress levels, accidents, air pollution, noise pollution and lost time due to congestion. Moreover, due to the reliance on public transport, company costs would decrease as there would be no need for building underground parking or renting parking spaces. In addition, on a country level, Lebanon's balance of trade would improve due to lower imported cars.

Finally, some of the recommendations that were included in the "Transportation Sector: Problems and Solutions" report by BlomInvest Bank, toll roads could be built and operated by the private sector. Furthermore, the "Beirut Water Taxi" project, which has been awaiting government authorization since 2010, should be initiated. This project was intended to transport passengers all over Lebanon's coast. Another project could be adopting Paris' "Bicycle Taxi", a self-service bike system available 24 hours a day, where commuters take a bike from a bike station, and return it to another bike station close to their destination.

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