

THE ECONOMY & THE BEACH:

Articulating the Value of Public Beaches
to the Cities of Tyre and Kfarabida

FRIEDRICH
EBERT 
STIFTUNG


NAHNOO



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NAHNOO is a research and advocacy platform for participatory policymaking in Lebanon. It works towards an inclusive society through four areas of intervention: promotion and protection of public spaces; promotion of tangible and intangible cultural heritage; advance transparency and good governance in municipal work; and youth empowerment and engagement.

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By law: inalienable public rights to the maritime domain

Seashores played an integral part in shaping the East Mediterranean basin. Lebanon’s history and its political, economic, social, cultural, environmental, and recreational values are molded by the ebbs and flows of seashore development.

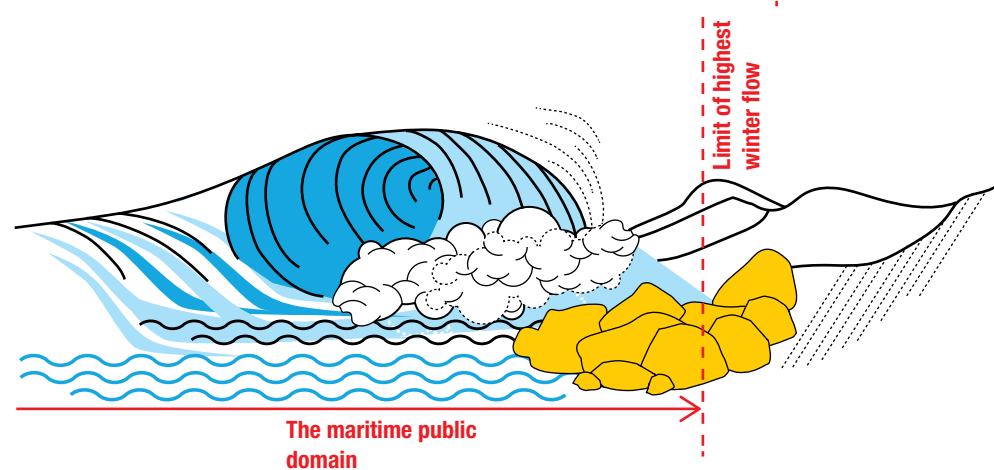
The importance of the seashore is enshrined in Lebanese law. Two principles are consecrated in the order 144/s of 1925¹ which legally defines the maritime public domain in Lebanon as *“the shore till the highest water point (tide marks) during winter, and all sandy and pebble beaches...”* (Article 2, para.1 and 2):

First, the public maritime domain is a “public good” that ought to be preserved, protected and unconditionally put at the service of the public.

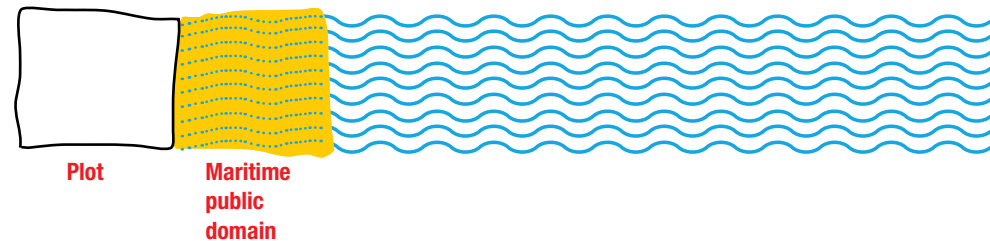
Second, the maritime public domain can neither be sold nor acquired over time (Article 1), meaning that the shore cannot be privatized, even if the sea level falls. And if the tide rises, the limits of the maritime public domain are to be updated to include the new areas. This is why a minimum setback of 25 meters from the boundaries of the public domain is “usually” required by building regulations.

Provided that these rights are respected, the order granted public authorities the power to issue *temporary* occupancy permits of the shore in exchange for a fee, but only if the rights of the public are protected.

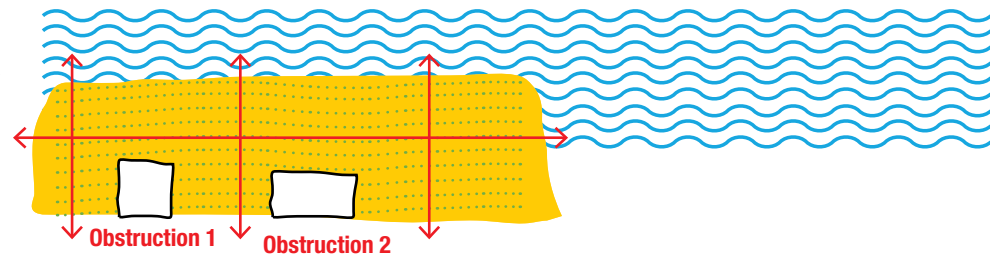
Maritime Public Domain



Maritime Public Domain



Maritime public domain and conditions of occupation



Temporary occupancy



(Figures by Cynthia BouAoun (2018). “MAJAL – Observatoire académique urbain / Alba / Université de Balamand” Presentation).

In reality: seashores are violated, privately occupied or neglected

While this order remains in effect until today, the current state of Lebanese shores reveals a bleak picture. According to a 2012 study by the Ministry of Public Works and Transport (MoPWT), only 20% of the Lebanese shore remains accessible to the public, with over 1068 infringements recorded².

The systematic transformation from public to private shores emerged in the 1960s, when the Lebanese state favored occupation of the coast as a precursor to economic development and boosting tourism. These adopted policies became less organized and more erratic during and following the Lebanese Civil War (1975-1990), leading to permanent buildings and landfilling that deformed the shoreline and denied people their right to access it³. Indeed, even private resorts are legally required to allow anyone access to the stretch of maritime public domain in front of their establishment, without paying the entry fee.

Today, the increasing private occupation of the coast remains a palpable threat, and existing violations are stark reminders of policy failure. Most beach locations suffer from significant shortcomings: they are either neglected or used as dumpsites; legally or illegally occupied by hotels, restaurants, or private. Visitors who attempt to exercise their right to enjoy the beach for free are either harassed by resort security guards or denied entry. Such actions violate the conditions of occupation set by the law, which necessitate that a certain strip of the shore remain open and accessible to all.

In addition to shortcomings in the legal framework, the public beach situation in Lebanon faces organizational and

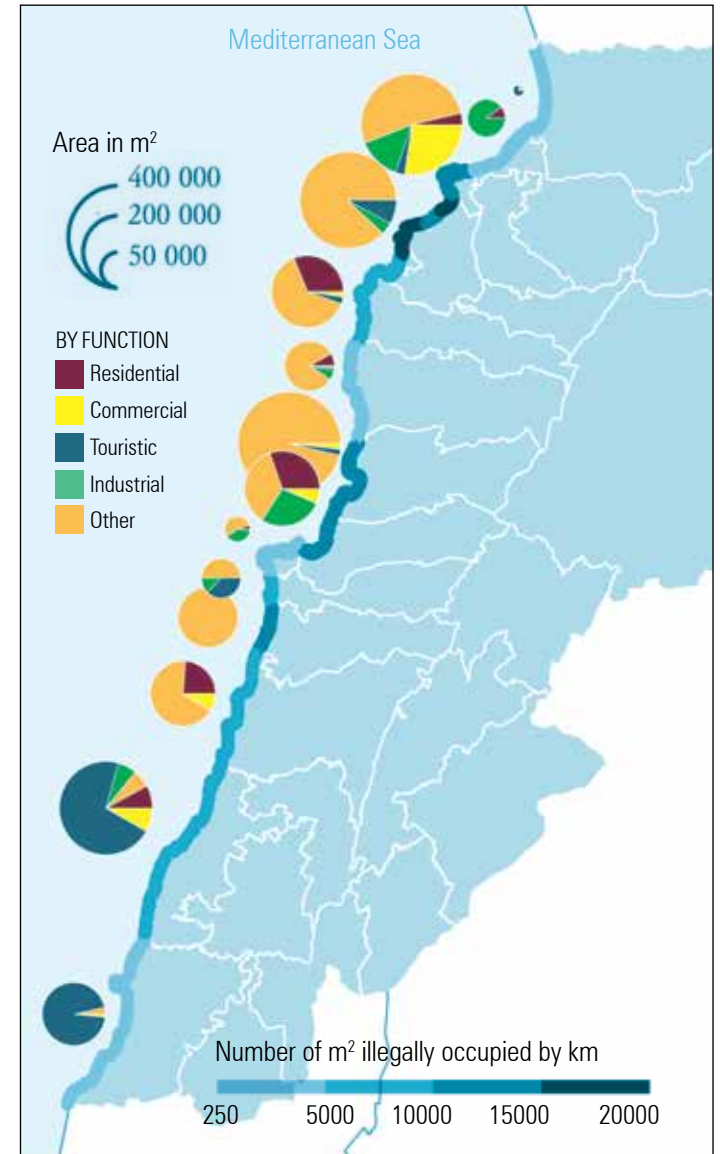
management challenges. The few public beaches that remain operational are either managed by their respective municipalities, or by an organization on behalf of the MoPWT, the legal custodian of Lebanon's coastline. In 2011, the ministry specified fourteen locations to be used and managed as public beaches⁴. It allegedly developed a plan for their management; however, this goal came to a halt after the ministry's budget was reduced.

Consequently, no lifeguards could be hired, cleanliness and maintenance could not be executed, and public toilets could not be constructed.

This brief overview of the situation of public beaches underscores a complex reality. Without enough funding and effective planning, the MoPWT's role as custodian of public beaches is put in question. Should municipalities take on that role, or are there other entities that should be responsible for sustainably running a public beach?



Private occupation (Atlas du Liban, 2016).



Illegal occupation of the coast in 2014, by caza (Atlas du Liban, 2016).

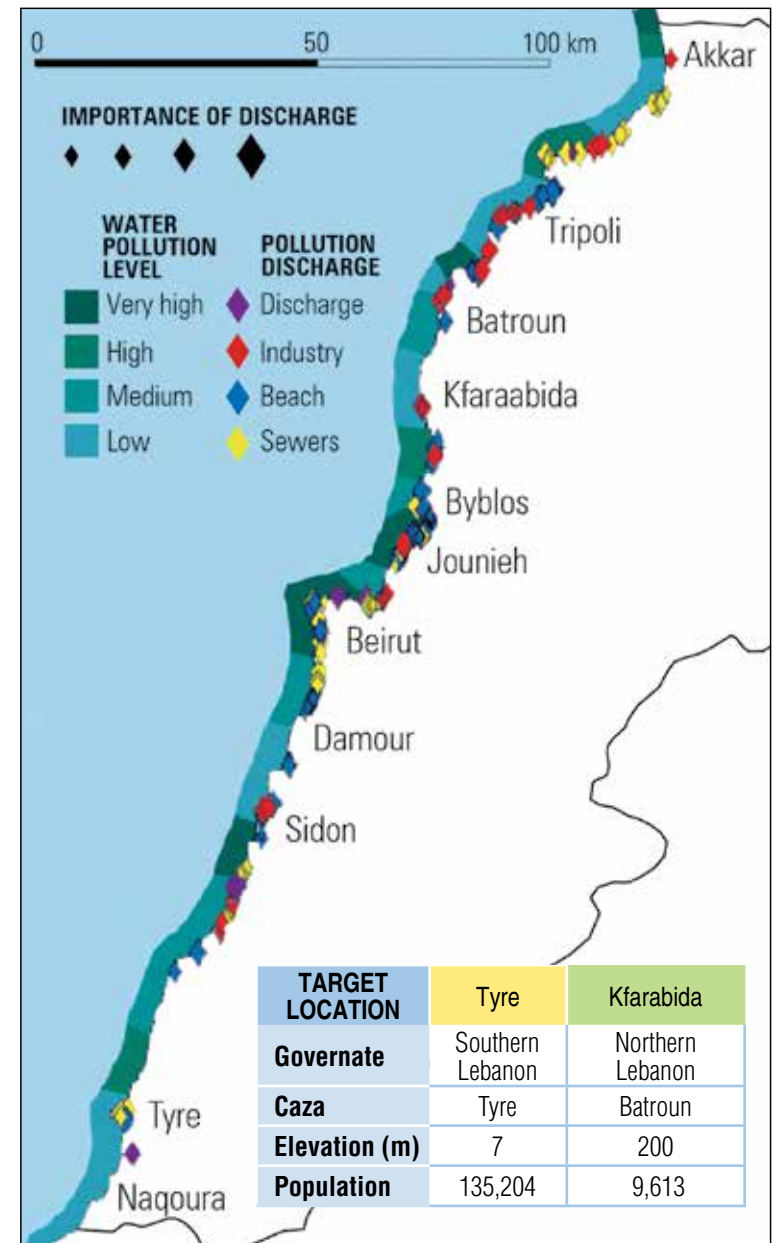
Public rights versus economic development?

In the face of continuing threats of private occupation of the coast, NAHNOO and several other civil society initiatives have initiated campaigns in order to reclaim access to the seashore and to call for the promotion of public beaches. Their rights-based discourse is often confronted by an opposing discourse that equates private occupation of the shore to increased economic value. This discourse dominates official public policy: In 2018, the Ministry of Tourism launched a strategy that plans on increasing luxury beach offerings, along with cleaning up few of the public beaches remaining, to develop the country economically. That same year, the Lebanese government commissioned McKinsey & Company to produce an advisory report for the country's economic strategy. Some of the report's recommendations emphasized the need for fostering "ultra-luxury ecotourism" and investing in coastal tourism hubs to promote economic growth, further solidifying a neoliberal approach adopted during postwar reconstruction, whereby real estate development and the privatization of public areas - including beaches - took precedence⁶.

On one hand, the argument that links private occupation to economic growth reveals a high complicity between decision-makers and private investors. This is seen in the government's non-enforcement of the penal code for officially recognized violations; the unreasonably low taxation rates it

imposes on private investors for the occupation of the maritime domain; and the very low tax collection rates despite the country's economic crisis⁷.

On the other hand, this common misconception undermines the significant value of public spaces for the development of societies' economic and social wellbeing - revealed by a growing international literature. For example, a policy analysis by Cities Alliance in 2018 recommended greater investment in public spaces, noting that this will increase human and economic activities, as well as economic growth⁸. Therefore, the availability of clean, proper, preserved, well- managed public beaches could play a major role in boosting Lebanon's economy.



Pollution levels across the Lebanese shore
(<http://beirut-today.com/26/06/2019/swim-lebanon-pollution/>).

Articulating the economic value of public beaches

This study looks to fill an existing gap in the literature on public spaces in Lebanon, given the dearth of data and data-driven policy on this issue. It represents a starting point for articulating the economic value of Lebanese public beaches, looking to evolve public discourse and dominant narratives that favor privately occupied shores. Using data collected from two public beach locations, Tyre in south Lebanon and Kfarabida in the north, the study looks to understand the economic value of these beaches, focusing on the spillover effects to neighboring businesses.

The two locations, Kfarabida and Tyre, were selected for several key reasons. First, according to a 2019 study by the National Center for Marine Sciences, both locations are among the cleanest in the country and deemed safe to swim⁹:

Second, these two public beaches are considered a popular outlet, presenting affordable and safe alternatives to citizens and tourists who wish to enjoy the sea without being restricted by privately-owned beach entertainment venues.

The study sites

TYRE

The MoPWT decreed Tyre's beach a natural reserve in 1998 through law 708/98. Spread over 380 hectares with an approximate length of 3.5 Kilometers, the widest "shore on Lebanon's coast" stretches from Tyre's Rest house until the Phoenician springs of Ras el Ain and is divided into three zones:

1. *The Tourism zone (public beaches, the old city and Souks, the ancient port)*
2. *The Agricultural and Archaeological zone; and*
3. *The Conservation Zone*

Its impressive fauna and flora diversity is considered an important nesting site of migratory birds and endangered Loggerhead and green sea turtles, among many other species.

The reserve is managed by the Tyre Coast Nature Reserve Committee, constituted of several ministerial representatives and headed by a representative of the Municipality. The Committee is under the supervision of the Ministry of Environment (MoE) and the Municipality must submit a yearly request to manage a section of the public reserve throughout the summer season.

On busy summer days, Tyre's public beach can attract up to 20,000 visitors, which is largely due to its reputation of having clean seawater and proper management. In fact, Tyre's beach is internationally acclaimed by National Geographic as one of the top 10 Middle Eastern beaches¹², helping Lebanon be ranked among the best travel destinations¹³ in the region.



Tyre Beach (Eye in the Skye Photography).

KFARABIDA

Kfarabida is in the Batroun district (caza), 50 km north of Beirut. Its shoreline is 2km long, and is home to beautiful caves, rare fauna, fresh water and huge sea turtles making it a famous destination for deep water soloing, which is also known as bouldering. Subterranean streams of fresh water flow directly into the cove, rendering it - despite being neglected by public authorities - exceptionally cool, clean, low in salt levels, and transparent.

In addition to its ecological value, the quality of seafood in Kfarabida is renowned across the country for being fresh and clean, taken out daily by local fishermen, and served by several family owned restaurants. The area features around a dozen restaurants, resorts and venues with each being able to host around 400 people on a busy day..

Kfarabida made headlines in 2016, when the Lebanese Cabinet approved the construction of a resort on its rocky shores¹⁰, which will reportedly result in mounds of concrete by the seaside that replace the current naturally formed rocky façade¹¹.



Kfarabida Beach (www.lebanonuntravelled.com).

Methodology

Economists and other scholars have long believed that informed policy choices can be made by balancing the costs of public goods against their benefits to society. However, it remains challenging to place a dollar value on a public good such as cleaner air or water as well as other goods that are not sold on the marketplace. This study considers public beaches as public goods, because they are both non-rivalrous (their consumption by one person does not prevent simultaneous consumption by another) and non-excludable (it is impossible to prevent consumers who have not paid to enter the beach from using it).

In this light, the study aims to understand how much people value public beaches, and whether they bring economic benefit to their surrounding area. The team employed contingent valuation methodology from applied welfare economics to measure or value the welfare of public goods¹⁴; and Cost Benefit Analysis (CBA) to understand its benefit to the area.

To measure how much people valorize the public beach, the team computed the value that visitors to the public beaches and private resorts, as well as business owners in both Tyre and Kfarabida place on public beaches from a scale of 1 (minimum valorization of the public beach) to 10 (maximum valorization). This data was used to compute valorization indices for both locations.

To articulate the benefit of public beaches, the team carried out a Cost Benefit Analysis (CBA), which compares the costs and benefits to society of providing a public good. In order to decide whether to provide a public good or not,

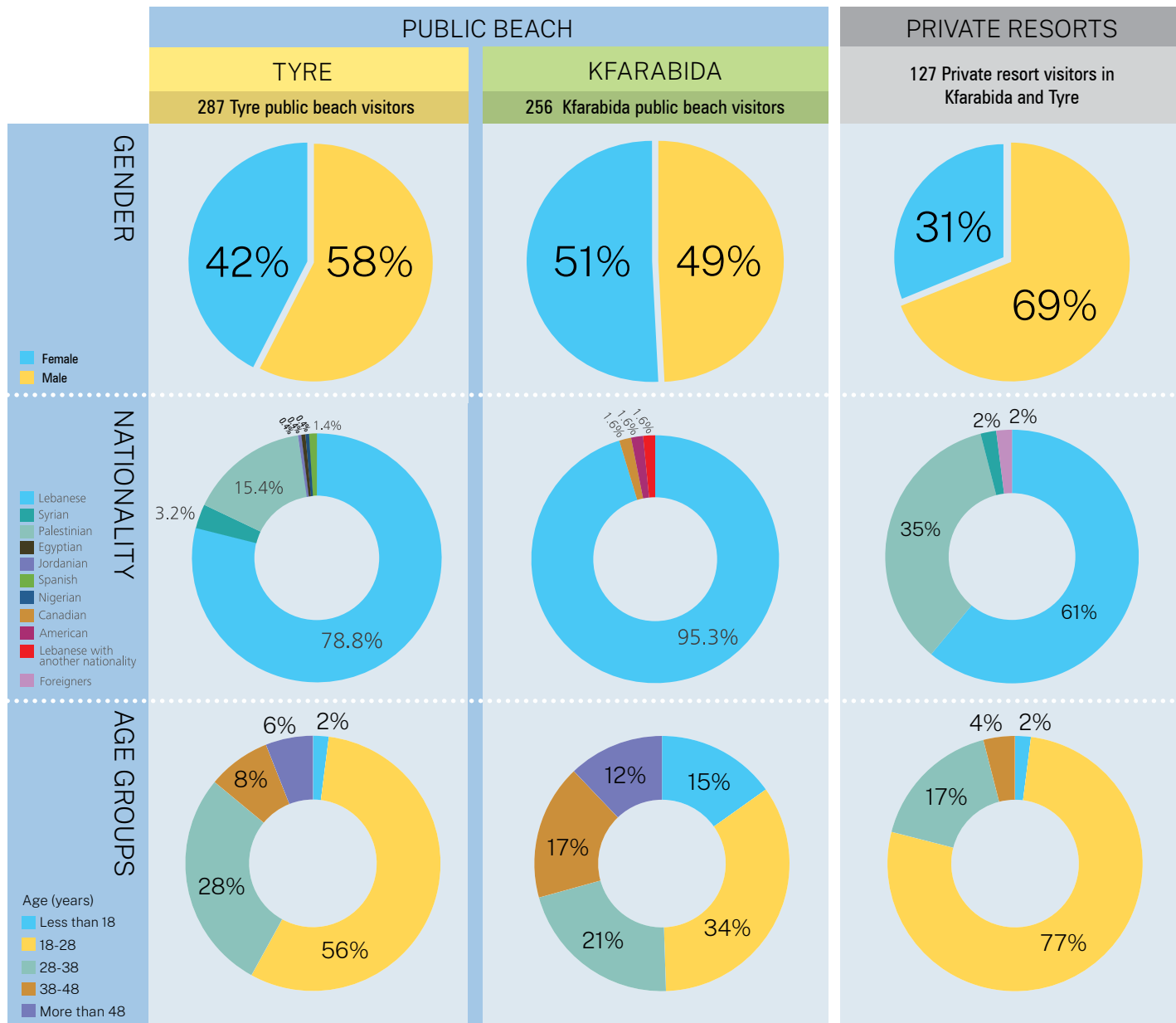
the total benefits of all those who use the good must be compared to the costs of providing and maintaining the public good¹⁵.

In this regard, the team analyzed the value generated by public beaches and private resorts for their surrounding ecosystem, which included nearby stores, restaurants, and seasonal employees who help maintain the beaches. It then estimated the value of the public beach in Tyre to the city by comparing the net present value of the public beach to the net present value of one private resort (Tyre Rest House).

- A triangulated data collection method was adopted, featuring:
 - *Key Informant Interviews (KII's) with resort owners, influential persons, and representatives of the civil society community;*
 - *Survey Questionnaires with the public: including those who visit private resorts; those who visit public beaches; and business owners in both areas.*
- Documents and similar research studies were also examined and analyzed.

Overall, it was challenging to speak to guests at private resorts, as owners were reluctant to allow the team to interview users. This resulted in a smaller sample size than desired; however, the team expanded the scope of randomly selected respondents as much as possible, ensuring equal sample sizes of visitors at private resorts in Kfarabida and Tyre.

Sample size.	Kfarabida	Tyre
Visitors to public beaches	256	285
Visitors of private resorts	63	64
Foreigners	NA	40
Hotels & private resorts	3	20
Small businesses	14	37
Key informant interview (KII)	15	
Actual Total	797	
Targeted Total	747	



Overview of public and private beach goes in Tyre and Kfarabida.

Who goes to the beach?

The study found that most people who frequented the beach during the data collection phase are Lebanese. Both Tyre and Kfarabida public beaches attract men and women on an almost equal footing, reflecting the important role that such spaces can play in fostering inclusivity. All age groups are also represented, with an over representation of people under the age of 38.

In terms of visit times, peak times for both Kfarabida and Tyre are between 9-10 am and 5-6pm. Interestingly, the beach in Tyre continues to receive visitors late in the evening. This is rather common in the area, especially during weekdays, where most of the visitors are locals (76.5%) that frequent the beach at night to relax and enjoy their time with family and friends.

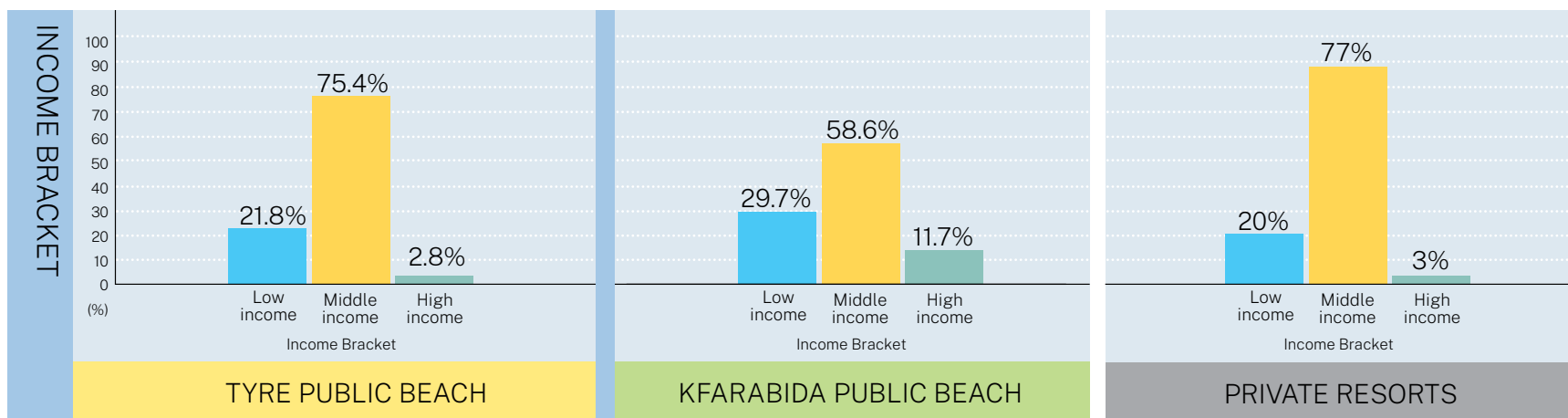
According to the study, Kfarabida beach attracts both youth and single individuals (69%) who come in groups as well as in families (31%) to sit, swim and

relax. In addition to the statistics collected from the field, interviews with social activists in Kfarabida confirmed that most beach visitors, who are middle-income (58.6%) to low-income (29.7%) earners from different educational backgrounds, come to the beach to practice various activities. Families, students, lovers of water activities, nature lovers, and eager readers who wish to “read in peace” as stated by one of the visitors, come to enjoy the beach in Kfarabida. Thus, this natural public resource is a sanctuary and an escape for many locals and tourists.

In comparison, Tyre has a lower concentration of high income users who frequent the beach. Visitors are split between 37.89% married and 62.11% single, while the remainder are either separated, divorced or widowed. Many of the visitors have high school degrees (42.1%) and a Bachelor degree (53.3%), few have a masters degree (3.2%) or no college degree (1.4%).

Regarding private resort users in both Kfarabida and Tyre, the study showed that the majority are also middle-income users (77%). This suggests that the reasons for choosing private resorts over public beaches is perhaps less related to income level, and more linked to other socioeconomic factors like levels of pollution; safety; perceived social status; among others, which requires further research.

On the one hand, most visitors to Kfarabida beach are from the area, with a small percentage commuting from nearby locations to enjoy the space. On the other hand, Tyre public beach attracts users from the city and from remote areas (Beirut and beyond). This is perhaps due to the size of Tyre’s beach, which is among the largest stretches of sandy shores in Lebanon and can therefore accommodate a sizeable number of users. This may also be due to the beach’s growing reputation among the public, its clean water, the city’s existing popularity as a touristic location home to important



Income bracket of public beachgoers in Tyre and Kfarabida, as well as private resort visitors in both locations.

archaeological sites, as well as the relatively organized environment and the diversity of services and activities on offer at the beach and within the city. In comparison, Kfarabida is located near Batroun, which is a well-known city for its beaches and nightlife; thus, it is likely that users prefer to visit Batroun instead. Additionally, Kfarabida public

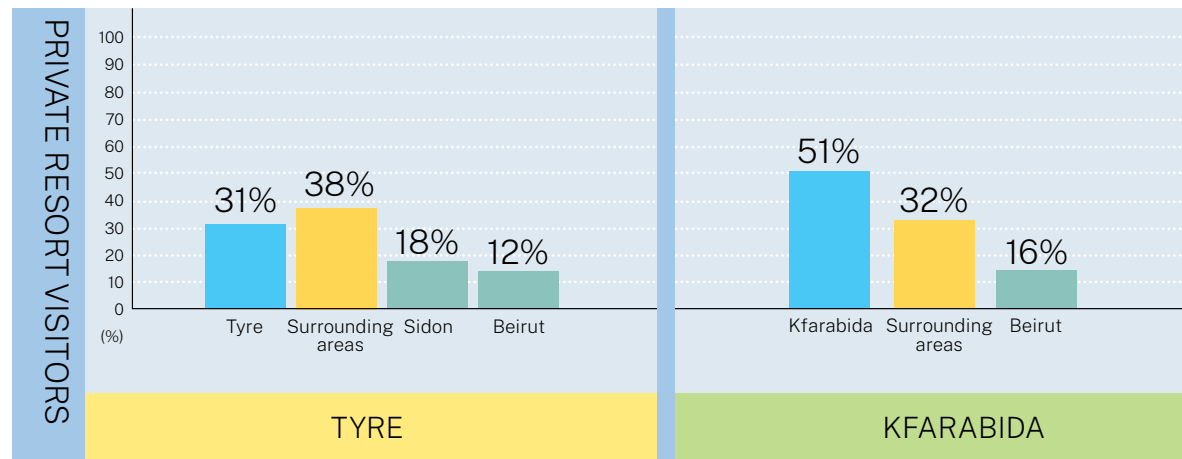
beach remains unknown to people outside the area, largely a result of insufficient exposure about its beauty and cleanliness. More importantly, the municipality has neglected safety and management upkeep in Kfarabida, despite its ecological importance, which may deter individuals and families from visiting.

How do public beaches impact nearby businesses?

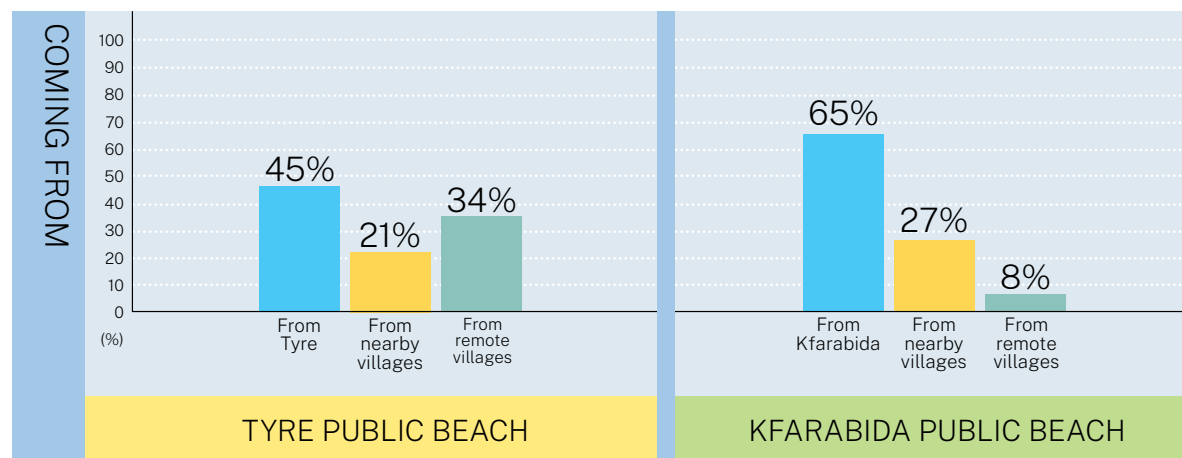
The study also looked at nearby businesses –shops, restaurants, etc...-to gauge the impact that public beaches have on their work, particularly during summer. In Kfarabida, there is no direct monetary inflow from the public beaches, yet there is indirect economic benefit through the growth experienced by local nearby businesses during summer. Similarly, in Tyre, there is a significant increase in revenues for nearby businesses as a result of the public beach’s operation, ranging between 10-70% on average.

The tables on page 12 show results from shop owners interviewed in Kfarabida, who noted that their profit increases in summer, as a result of the public beach, between 35% and up to 100%. Indeed, food outlets’ and snacks’ income doubles during summer time from visitors to public beaches as they purchase their sandwiches and fast food before, during or after their visits. In contrast the beauty salon and restaurant did not see any change in their income. This indicates the importance of encouraging the opening of relevant businesses to beach goers in the direct neighborhood of the beach.

In Tyre, the team interviewed various businesses to gauge the impact of the public beach on their profits. On average, supermarkets owners experience an average increase in revenues of 70%, while restaurants (nearby the beach) experienced 54.23% average increase in revenues. Overall, all types of businesses noted that the public beach has a positive effect on their work.



Which areas do private beachgoers in Tyre and Kfarabida come from?



Which areas do public beachgoers in Tyre and Kfarabida come from?

Increase in average revenues according to different business owners in Kfarabida.

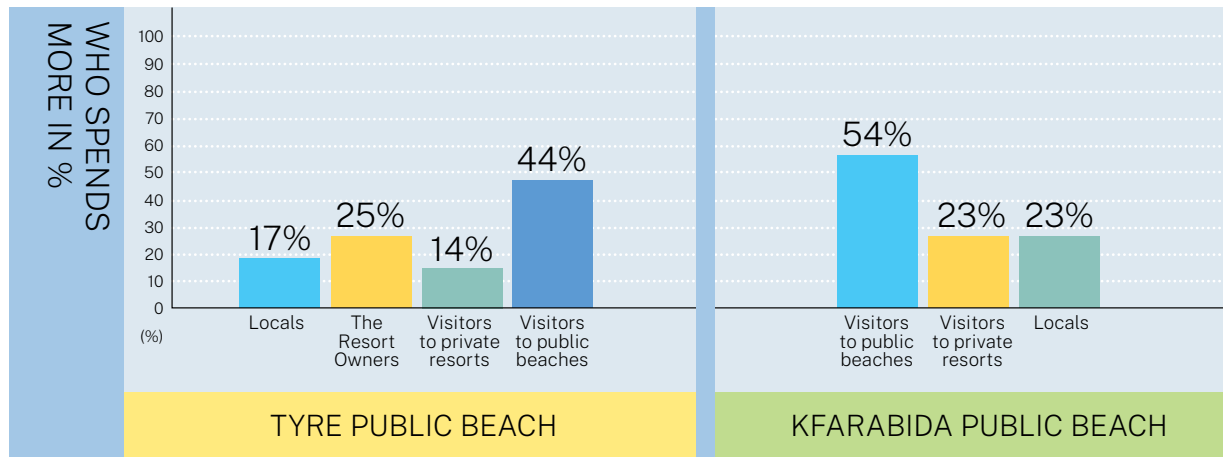
Business	Does your profit increase during summer? By how much in %?
Pharmacy	Yes around 35%
Restaurant	No
Mini market	Yes more 50%
Gas station	Yes around 10%
Beauty salon	Same
Bakery	Yes 50%
Snack resto	Yes 100%
Gadgets	Yes more than 50%

While most respondents report that they visit nearby shops (59% in Kfarabida, 74% in Tyre, and 74% of private resort visitors), the spending behavior of public and private resort visitors is different. The public beach visitors spend in nearby shops during their visit to the beach, in contrast to the private resort visitors who visit nearby shops but not during their beach visit.

The business owners interviewed noted that, on average, visitors to public beaches in both locations spend more in the city than visitors to private resorts. Visitors to private resorts noted that they can purchase everything they need at the resort; however, this is usually expensive. Furthermore, another factor may be the private resort policies, which forbid bringing in food and drink from outside. As such, revenues are concentrated within the private resort's ecosystem.

Increase in average revenues according to different business owners in Tyre.

Business	Average
Supermarket	70%
Sports Gear	60%
Restaurants	54.23%
Rentals (chalets, apartments, hotels)	50%
Jewellery	50%
Fast Food	50%
Aluminium shop	45%
Pharmacies	32.50%
Coffee shop	30%
Auto paint	30%
Sweets shops	27.50%
Mechanic & car repair	25.50%
Hometools	20%
Barber	20%
Cloth shops	10%



Which groups spend more in local shops in Tyre and Kfarabida, according to the businesses interviewed.

Everyone values public beaches

The study showed that 52.3% of respondents in Kfarabida do not go to private resorts since they consider them very expensive and overvalued for some of the services they receive. 60.2 % of the respondents feel unsatisfied with the value of services they receive at private resorts. In Tyre, 58.6% of the participants noted that they do not go to private resorts for the same reasons (overpriced).

Visitors to Kfarabida public beach, locals, and visitors to the private resorts showed very high preference (72.7%) to the public beach over private resorts. Many suggested that there is no harm if both coexist in case resorts are located at a distance from the beach, and public access to the beach is preserved and these resorts properly manage their waste away from the sea.

In Tyre, 62.8% of respondents noted that they prefer public beaches to private establishments. In general, the people interviewed in Tyre noted that they do not mind the presence of private resorts.

91% of the total sample would go to public beaches if there were no private resorts. 64.8% of the people expressed their need for better facilities at the public beach.

In terms of valorization of the public beaches and private resorts among the public, an overwhelming 87.5% of respondents in Kfarabida believe that public beaches add value to their city, while a significantly less percentage believes private resorts do. In fact, when asked

to place a value on their public beach from 1-10, 86.5% of respondents answered with a value greater than 5. Furthermore, 99.92% of the businesses interviewed value the beach at more than 5 points out of a 10-point scale. Additionally, 77% of the business interviewees believe that people need public beaches for economic reasons, social and recreational activities. 69% indicated that private resorts are depriving people of their right to free access to the sea.

In Tyre, an overwhelming majority noted that public beaches and private resorts add value to their city (96.5% and 93%, respectively). This is largely because only one such establishment exists adjacent to Tyre public beach,

and does not disrupt the operation of the public beach nor does it hinder access to it. Similarly, in Tyre, 92.6% of the people value the beach at higher than 5 points, on a scale from 1-10.

In terms of businesses interviewed, 50% of respondents in Tyre believe that they will be better off without private resorts, due to reduced garbage and sewage disposal and prevention to free access to the shore. On a further note, private resorts are perceived to affect the fishermen negatively (56%) by limiting their access to the sea (61%). In terms of placing a value on the public beach, on a scale of 1-10, 80% of business respondents showed high valorization of the public beach.

Percentage of respondents in both areas who answered 'yes' to the following questions.

Comparative Analysis Table	Kfarabida Public Beach Visitors	Tyre Public Beach Visitors	Private Resort Visitors	Total Sample
% Yes				
Willingness to substitute private with public beach	92	91	92	91
Private Resorts prevent access	75	15	76	55
Private Resorts block the view	73	87	87	82
Private resorts pollute	61	25	22	36
Willingness to preserve the public beach	79	69	94	81
Public beaches add value	88	97	81	89
Private resorts add value	62	93	93	83

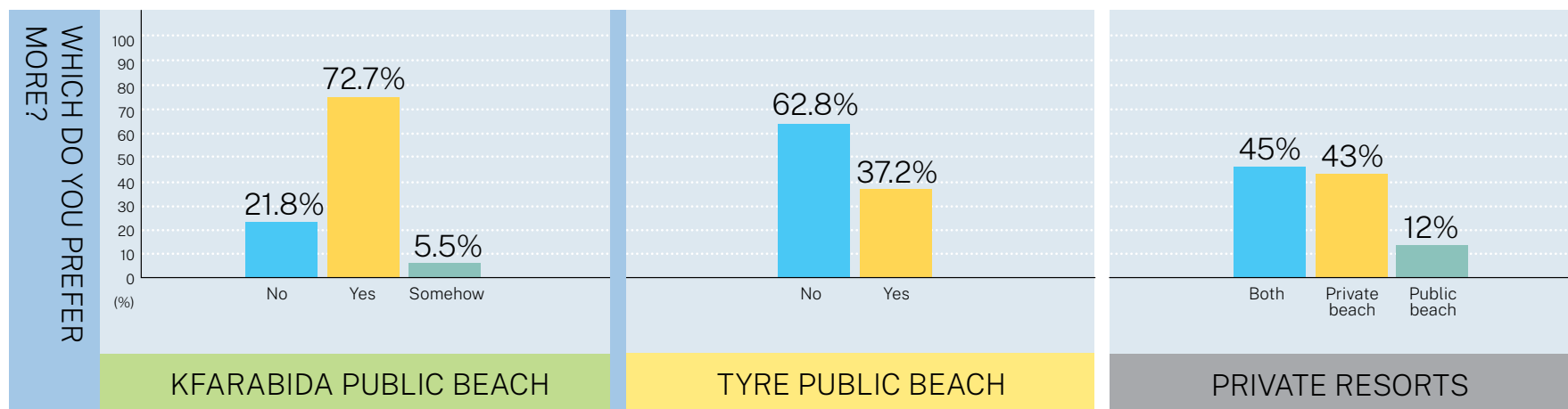
As such, the team computed valorization indices based on the weighted average of the public's and businesses responses to how much they value the public beach, on a scale ranging from 1 to 10, where 1 is the minimal value and 10 being maximum or ultimate valorization. The values are all above 5, reflecting a high valorization of public beaches in both locations. The valorization index for Tyre public beach for all participants in this study (visitors to public beaches, to private resorts and small business owners) is 7.65 compared to 7.94 in Kfarabida. Statistical findings indicate that there is no significant difference between the two means. Hence, both beaches are valued equally, when working within a 95% confidence interval with a 5% marginal error.

Furthermore, when respondents in Kfarabida and Tyre had to choose between public beaches and private resorts if the latter did not exist, statistics showed 92.25% willingness to substitute private resorts for public beaches in Kfarabida and 91.2% in Tyre.

Compared to other areas in Lebanon, people are relatively satisfied with the available services at Tyre public beach including cleanliness, facilities, safety and security. Some respondents expressed their need for better sanitary facilities and enhanced garbage disposal rounds to insure cleaner beach and a certain level of acceptable hygiene.

Valorization indices for Tyre and Kfarabida public beach for all participants in this study.

KFARABIDA		
People's value of public beach	Business value of public beach	Private resort visitors
7.99	8.23	7.87
TYRE		
People's value of public beach	Business value of public beach	Private resort visitors
7.74	7.44	7.43



Respondents' answers to whether they prefer public beaches over private resorts, and which they prefer more.

The public beach is profitable to the city

This section is a proof of concept that takes Tyre as a case study, estimating the numerical value of the public beach's economic benefits during peak summer seasons ($V2C_{Public\ Beach}$). The team's estimates are based on the survey results, expert interviews, as well as interviews with Tyre's Mayor (for the public beach), and the manager of Tyre Rest House (a private resort), as they could not gain access to official financial documents and statements. Furthermore, Tyre Rest House was the only private resort interviewed for this section, given that it is within the city's direct jurisdiction and agreed to speak to the research team.

As per the KII with Mayor Dbouk, during the summer season, Tyre's public beach hosts approximately 20,000 people on Sundays, 15,000 visitors on Saturdays, and approximately 10,000 on weekdays. A typical Season spreads over 18 weeks; hence, the average monthly number of visitors is estimated at 375,000 people.

$$V2C_{Public\ Beach} = 4,205,544,650 \text{ LBP/Month}$$

This value indicates that the public beach generates an extra 4,205,544,650 LBP/month (approximately 2,798,340 USD¹⁶) per month to the economy of Tyre, during the active summer season.

The study calculated the economic value of the public beach to the city using the following formula:

$$V2C_{Public\ Beach} = NPV_{Public\ Beach} - (NPV_{Private\ Resorts} + OC_{Resort\ guests} + Seclusion\ Cost_{Private\ Resorts})$$

The value looks at how important the public beach is to the city, by comparing the returns to public beaches and private resorts in Tyre. It is adjusted for the opportunity cost of having private resorts, as well as the different surface areas of the public and private beach occupations. If the $V2C_{Public\ Beach}$ is positive, it indicates that the public beach is economically valuable to the city.

GLOSSARY OF TERMS

NPV_{Public Beach}:

The Net Present value of the Public Beach is the difference between the present value of cash inflows and cash outflows over a period of time. The first step to estimating the value is to calculate the direct source of money inflow (revenue streams), followed by the distribution of this inflow to the beneficiaries, and then the direct costs of maintaining the beach.

NPV_{Private Resorts}:

The Net Present value of the Private Resort (Tyre Guest House), indicating the difference between the present value of cash inflows and cash outflows over a period of time.

OC_{Resort guests}:

The Opportunity Cost of the Private Resort. This estimates how much the city of Tyre gives up in revenue when visitors choose private resorts over the public beach.

Seclusion Cost_{Private Resorts} (**SC**):

The Seclusion Cost of the Private Resort. Since Tyre Rest House is adjacent to the public beach, this value adjusts for the occupation rate of the public beach by Tyre Rest House.

More detailed calculations:

A. THE NPV OF THE PUBLIC BEACH:

$$\text{NPV}_{\text{Public Beach}} = \text{Monthly Gross revenue} - \text{Monthly Direct Costs}$$

$$= 4,426,875,000 \text{ LBP / Month during summer Season}$$

Monthly Gross revenue:

a) Total visitors' spending = 4.125 billion LBP

A range of 2,000 LBP - 20,000 LBP (USD 1.3 to USD 13) per day.

b) Total Parking fees = 281,250,000 LBP

This is approximately LBP 3,000 (USD 2) per car, assuming that each 4 individuals use one vehicle to arrive to Tyre, it is estimated that 93,750 cars use the municipal parking lots when visiting Tyre.

c) Municipal spending and job creation: the total wage bill by the municipality can reach LBP 50,625,000 each month during the high season for additional employees hired¹⁷.

75 workers are hired seasonally to cater for the needs of the public beach in Tyre. Assuming that they are paid only the minimum wage (LBP 675,000 / capita)

d) Wooden tents rental: 45,570,000 LBP / month

There are 49 tents spread across Tyre's public beach, which fall under three categories (big, medium and small tents). They are rented out by the municipality for a fee that depends on their size.

Monthly Direct Costs:

e) The total cost of cleaning the beach during high season is approximately 30,000,000 LBP for garbage disposal¹⁸.

Given that there are no clear data pertaining to the size of the local market in Tyre, an estimation of the indirect revenue streams could not be taken into consideration.

Returns to the city as a result of the public beach.

Stakeholder resulting from	Estimated # of beneficiaries	Returns (In LBP)	Nationalities
Returns to tent owners and other food providers (market)	49 Tent owners	3,860,055,000	Mainly Lebanese
Tents' workers	300-350	219,375,000	Lebanese & Syrians
Personnel hired by municipality	75	50,625,000	Lebanese
Returns to municipality (55% of parking and rental fees)	25	179,751,000	Lebanese
Returns to Tyre coast nature reserve including salaries (45% of parking and rental fees)	6	147,069,000	Lebanese
Total in LBP per month during a High Season		4,456,875,000	

Distribution of wealth in Tyre's private resort.

Money Distribution	
Employees: all lebanese	
Wage range (in LBP)	500,000 - 2,000,000
# Of seasonal employees	20
Mean monthly wage (in LBP)	1,250,000
Approximated additional wages per month during high season	25,000,000

B. THE NPV OF RESORTS IS APPROXIMATELY:

$$\begin{aligned}
 NPV_{\text{Private Resort}} &= \text{gross revenue} - \text{gross profits} \\
 &= \mathbf{96,610,000 \text{ LBP / Month during the summer season}}
 \end{aligned}$$

This value was determined by looking at the approximate inflow of revenues to Tyre rest house as per the estimates provided to us by the Manager.

Monthly Gross revenue:

- a) Total visitor spending: 81,375,000 LBP, 750 visitors per month. The average visitor would spend LBP 108,500 LBP per day.
- b) Additional wages of new hires: (25,000,000 LBP) per month;

Monthly Direct Costs:

- c) Gross profit to the owners (9,765,000 LBP): profit margins in this industry vary between 6% and 18% depending on the several factors such as stability, festivities and attractions to the country. We will assume the mean profit margin for the following calculation, knowing that the past few years weren't the most profitable.
- d) Direct costs the resort incurs as a tourist location (4,068,750 LBP), As per the decree no 117/1994 by the Ministry of Tourism, the hotel shall transfer 5% of its gross revenues to the Ministry. Here, the research team assumed that the paid taxes will not result in better services to the city, and therefore are lost.

C. THE OPPORTUNITY COST OF PRIVATE RESORTS IS DETERMINED USING THE FOLLOWING FORMULA:

$$\begin{aligned}
 OC_{\text{Resort guests}} &= \text{Number of Visitors/month}_{\text{Private Resorts}} * (\text{Average Spending}_{\text{Private Resort}}/\text{day} + \text{Revenue Generated}_{\text{Public Beach}}/\text{Capital}) \\
 &= \mathbf{750 * (108,500 \text{ LBP} + 11,885 \text{ LBP})} \\
 &= \mathbf{\text{LBP } 90,288,750 / \text{month revenue that the public beach loses to the private resorts in summer}}
 \end{aligned}$$

The opportunity cost formula looks at how much revenue the public beach and Tyre city lose, when users opt for private resorts. The manager at Tyre Rest House noted that users spend around 108,500 LBP per day at the resort. Additionally, based on information given by Mayor Dbouk, the team estimated that the public beach's daily revenue per capita is approximately 11,885 LBP. Thus, during peak summer season, the city of Tyre and its public beach lose the above revenue per month when users choose the private resort over the public beach.

D. THE SECLUSION COST IS CALCULATED USING THE FOLLOWING FORMULA:

$$\begin{aligned}
 SC_{\text{esort area}} &= \text{Beach Surface Area}_{\text{Private Resorts}} * \text{Return per sqm}_{\text{Public Beach}} \\
 &= \mathbf{30,000 * 1,147.72 \text{ LBP /sqm}} \\
 &= \mathbf{34,431,600 \text{ LBP / Month during summer Season}}
 \end{aligned}$$

The Seclusion Cost is determined by multiplying the total surface area (in sqm) that the private resort manages by the return that the public Beach generates per square meters. They are considered lost revenues cause by the secluding of the beach by the Resthouse.

Conclusion

This pilot study aimed at collecting quantitative evidence about the public beach’s potential contribution to a city’s local economy as well as to its well-being which is harder to define quantitatively. Given the scope of the study, as well as the difficulty of acquiring all the necessary official data (e.g. related to collection of taxes, environmental bills, etc.), we are not able to make generalizations on a national level; however, it is a first step towards understanding the significance of public beaches along Lebanon’s seashore, which increasingly crowded by private occupation. The study revealed a number of interesting findings:

- *Public beaches can indeed bring economic benefit to the city, as compared to private investment in resorts. Tyre public beach is an example of a successful public beach in Lebanon. As the study’s proof of concept estimations demonstrate, it generates more than 4 billion LBP which are returned to the city in terms of seasonal job creation, visitor spending, tent rental and*

parking fees that go to the municipality. While we cannot claim that Tyre’s municipal beach governance model is the most efficient, the presence of the public beach in the city –particularly during the busy, summer months –brings in local and international tourists, revenue to the municipality, and revitalizes nearby businesses.

- *The demographic characteristics of people going to the public beaches and the private resorts are very similar. The vast majority of people value public beaches and consider private resorts overpriced, and they are willing to substitute private resorts with public beaches, provided that the minimum safety, cleanliness and comfort services are available. In both Tyre and Kfarabida, people are willing to participate in cleaning public beaches and taking care of them. Some people are even willing to pay a fee in exchange for better services in public beaches. This indicates that with a simple governance model involving volunteers, municipalities could start offering better public beaches.*

- *The analysis showed that people believe both public beaches and private resorts can coexist, if private resort owners are responsible and allow people to exercise their right to access the beach freely. Moreover, coexistence is accepted if the environment is protected and private resorts ensure their sewage and garbage are treated before their release into the sea.*

- *Public beach visitors are perceived to spend more in the city than private resort visitors, according to most interviewed people, in particular the benefitting businesses. This might be because private resorts force their visitors to buy their food at the resort. This is a promising finding that can be built on to increase the spillover effect even further: If the attractiveness of public beaches is increased and more tourism is encouraged, visitors would be likely to visit nearby shops and may choose to explore the city if they feel it is welcoming enough.*

The willingness to protect and promote the public beach in Kfarabida according to respondents from the city

KFARABIDA			
	Are you willing to clean up after your visit to a public beach?	Will you take part to protect the public beach in your area in case of infringements?	Are you willing to participate in awareness campaigns to save and protect the public beach in your area?
No	1.6%	15.6%	32.8%
Yes	98.4%	82.8%	67.2%
Maybe	0%	1.6%	0%

The willingness to protect and promote the public beach in Tyre according to respondents from the city

TYRE			
	Are you willing to clean up after your visit to a public beach?	Will you take part to protect the public beach in your area in case of infringements?	Are you willing to participate in awareness campaigns to save and protect the public beach in your area?
No	10.2%	12.6%	19.3%
Yes	89.8%	87.4%	80.7%

ENDNOTES

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⁸ Cities Alliance (2018). "Public Space as a Driver of Equitable Economic Growth: Policy and Practice to Leverage a Key Asset for Vibrant City Economies" Policy Paper. [https://www.citiesalliance.org/sites/default/files/Cities_WUF_FinalWeb2%20\(1\).pdf](https://www.citiesalliance.org/sites/default/files/Cities_WUF_FinalWeb2%20(1).pdf)

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¹⁴ R. Mitchell & R.T. Carson (2005). Using Surveys to Value Public Goods: The Contingent Valuation Method - Fourth Edition, NY: Resources for the Future.

¹⁵ R. Turvey (2019). Economic Analysis and Public Enterprises, London: Routledge

¹⁶ Exchange rate calculated at 1 USD = 1512.67 LBP

¹⁷ The cost of hiring seasonal workers is considered additional cost into the economy rather than a cost to the municipality, as they consider the workers as seasonal job creation and thus an added value to the city.

¹⁸ The cost of disposing garbage is in excess of 200,000 LBP per ton. Noting that the disposal rate per person per day is approximately 650 g per day in urban areas and a maximum of 500 g in rural areas (Andrea, A et al, 2015).



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NAHNOO is a research and advocacy platform for participatory policymaking in Lebanon. It works towards an inclusive society through four areas of intervention: promotion and protection of public spaces; promotion of tangible and intangible cultural heritage; advance transparency and good governance in municipal work; and youth empowerment and engagement.

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