

BEIRUT URBAN LAB 2020-2022

# AN URBAN RECOVERY STRATEGY FOR POST-BLAST KARANTINA

## RESEARCH PROJECT TEAM

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Coordinator: Batoul Yassine

Research Team: Mariam Bazzi, Abir Cheaitli, Mohamad El Chamaa, Ali Ghaddar, Wiaam Haddad

GIS Support Team: Chaza El-Jazzar, Sharif Tarhini

Research Interns: Cristina Gosen, Rami Shayya

### Citizen Scientists:

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Mohammad Al-Sattouf, Mohammad Amsha, Watfa El-Chehade, Carmen Jabboury,  
Danielle Khadra, Michelle Khadra, George Tatarian

### Editor:

Abir El-Tayeb



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# INTRODUCTION

On the 4th of August 2020, Beirut experienced one of the largest non-nuclear explosions, whose epicenter was at the Port of Beirut. 2,750 tons of high-grade ammonium nitrate which were stored in warehouse number 12 since 2013, exploded, killing around 200 people and leaving more than 6,500 people injured. Approximately 300,000 people were also displaced from the neighborhoods that were impacted by the blast, including Gemmayze, Mar Mikhael, Geitawi, and Karantina.

These neighborhoods suffered extensive damage and a substantial loss of both tangible and intangible heritage. Shared community spaces and sites of collective memory were crippled, thus, causing a rupture in the socio-cultural practices of the residents.

It was clear from the outset that Lebanon was not prepared for such a disaster. This is due to the absence of a holistic strategy for urban recovery, the shortage of data, ad-hoc decision making, and lack of coordination between different actors on the ground. Informal mechanisms for the restoration of demolished houses and businesses were based on individual negotiations and were not guided by technical standards. Many stakeholders mobilized to respond to the urgent needs of people after the port blast, including local and international Non-governmental Organizations (NGOs), humanitarian agencies, public institutions, professional groups, civil society organizations, and diasporic actors. While it was immediate and engaged, the work of these stakeholders was not properly coordinated, thus, overlapped at many instances. Real-estate profiteers were also looking to invest in the impacted neighborhoods, projecting a future of private-led developments that cater to an exclusive class of wealthy people at the expense of returning the displaced residents.

Most of the stakeholders adopted a short-term emergency response to reconstruction. This approach did not acknowledge the challenges that were posed by the absence of a state as a custodian of the public shared good nor the need for a long-term holistic urban recovery; one that goes beyond the physical to offer a multilayered participatory process that addresses social, cultural, and economic factors.



**2020  
Beirut  
explosion**

**200**  
people  
killed

**6,500**  
and more  
injured people

**300,000**  
people displaced from  
neighborhoods

## The Position of The Beirut Urban Lab on Urban Recovery

The Beirut Urban Lab (BUL) at the American University of Beirut mobilized to advocate for and to propose a long-term, holistic, and participatory recovery. The BUL conceives of urban recovery as a process that is triggered by different acts of rupture and erasure. Such acts impact both the tangible and the intangible elements of the city and include occupation, unjust development planning, economic decline, conflicts, and natural disasters. Urban recovery is therefore neither a post-conflict or disaster condition nor a physically bounded process. It is intertwined with processes of displacement, politics, and power relations across temporal and geographic moments. In its extreme form, it is a process of reconfiguration that responds to all urban vulnerabilities and injustices.

Building on its previous experiences and research on urban recovery, the BUL is well-positioned to challenge government frameworks for post-blast reconstruction by proposing a more holistic and inclusive approach to urban recovery that is people-centered, participatory, socially-just, and heritage-led. Urban recovery, in this case, is understood as a process that restores social and economic networks and recovers spaces of shared memories and social significance to reconstitute both the built and the socio-cultural fabrics of neighborhoods.

## Urban Recovery at the Scale of the Neighborhood: Karantina

Part of the efforts of BUL in response to the blast was to propose an urban recovery strategy for Karantina. Karantina is the area in Beirut that is bounded by three infrastructural and natural elements: the Port of Beirut from the north and west, the Beirut River from the east, and the Charles Helou Highway from the south. Administratively, it is part of the Medawar neighborhood and includes parts of three administrative sectors: Mar Mikhael, Khodor, and Jiser (Figure 1).

It is a particularly vulnerable area and the site of multiple traumas that is now struggling to cope with the aftermath of the port blast. It has an approximate population of 2500 people and a total area of less than one square kilometer. It has a long history of welcoming low-income residents and vulnerable groups of people like refugees and migrant workers.

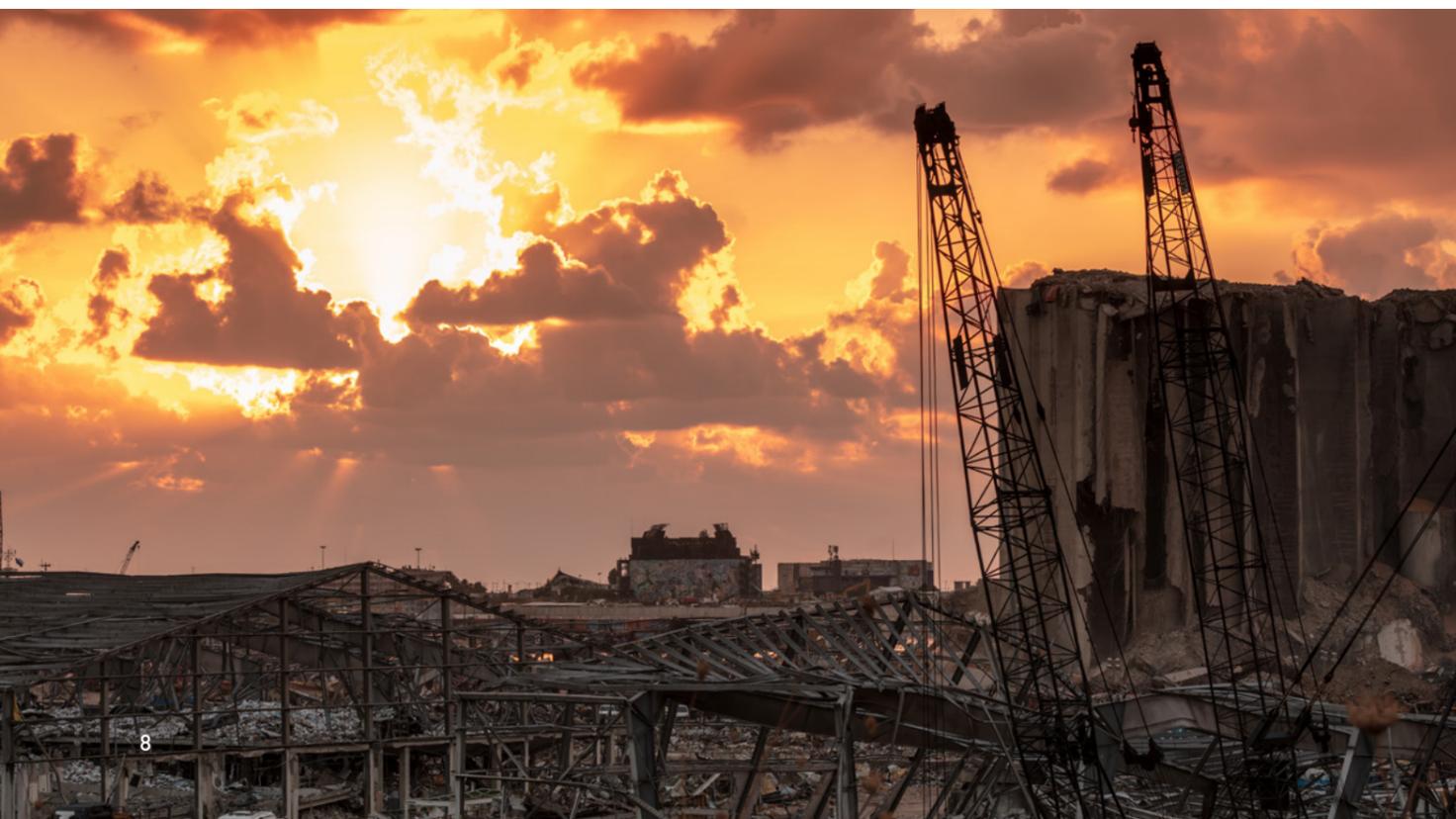


**Karantina**

600ms from the epicenter of the blast

approximate population of 2500 people

total area of less than 1 km<sup>2</sup>



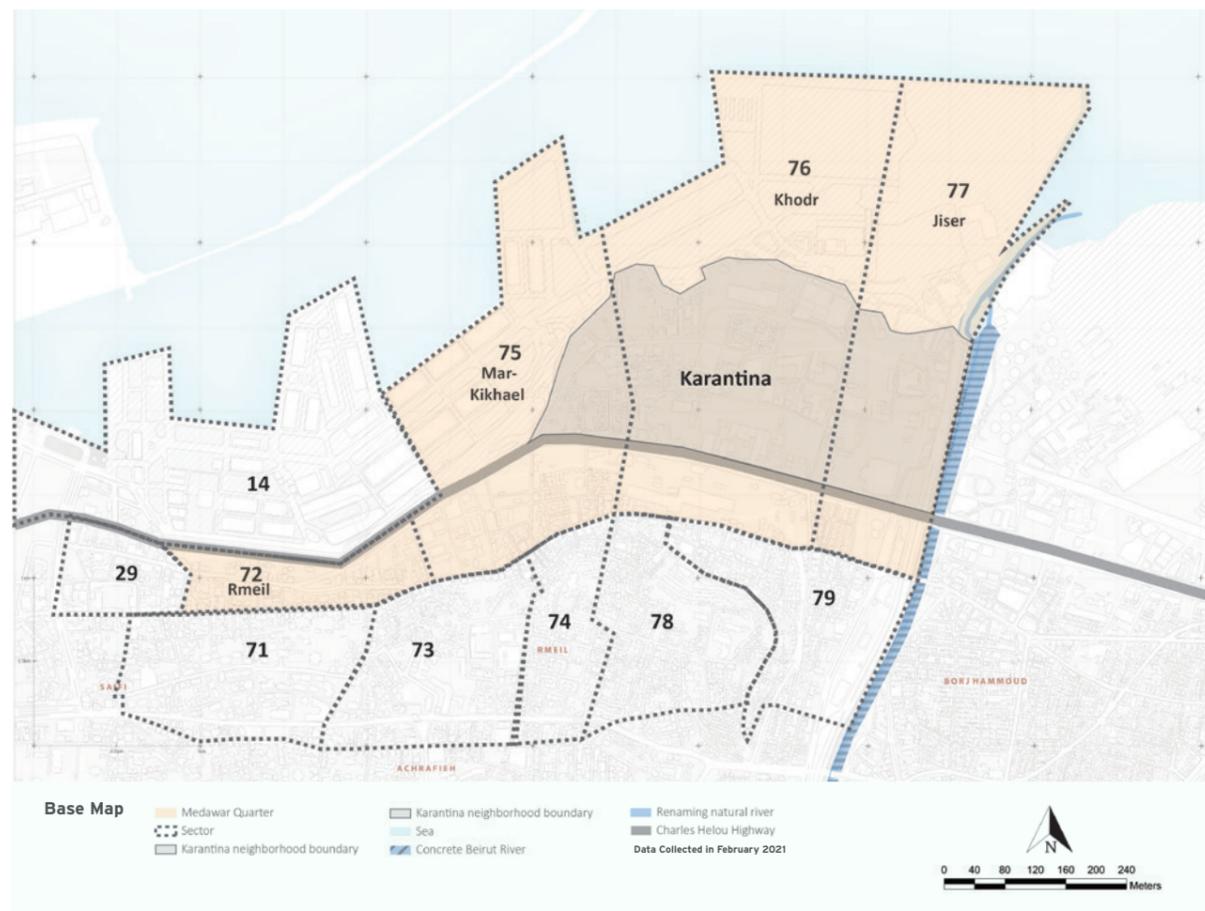


Figure 1: A map that shows the boundaries of Karantina. Source: The Beirut Urban Lab, 2021.

Karantina, which is approximately 600 meters away from the port, was heavily damaged by the blast. Most NGOs, INGOs, civil society initiatives, and media outlets initially focused their efforts and resources on Gemmayze and Mar Mikhael. Therefore, the BUL prioritized Karantina when it mobilized to assist in the urban recovery of the areas that were impacted by the port blast. Karantina is considered the most neglected and marginalized area in Beirut and received little aid and exposure during the first days following the port blast.

Immediately after the port blast, the urban recovery team at the BUL initiated its field reconnaissance phase in Karantina to assess the level of damage (Figures 2 and 3), identify the actors on the ground, record early impressions, and conduct informal conversations with the inhabitants. The team further sought to coordinate with the involved actors on the ground to set a plan that ensures the fair and equal distribution of aid and efforts across Karantina and discuss data sharing and tools of coordination. For that purpose, the team organized the first coordination meeting on 17 August 2020 at the Karantina Public Park and invited the active actors in Karantina. The meeting was then managed by the different actors (Figures 4 and 5). The team identified 73 active actors in Karantina and classified their efforts into short- to long-term interventions that are categorized into four sectors: 1) shelter and reconstruction, 2) cash assistance, 3) food distribution, and 4) medical and mental health aid. In parallel, the team sought to identify entry points to the community to establish a solid network of key community members and representatives. The aim was to build trust with the different community groups, facilitate data collection, and pave the way for potential design interventions in Karantina.



Figure 2. Rescue efforts in a collapsed building in Karantina. Source: Hayfaa Abou Ibrahim, 2020.



Figure 3. A damaged building in Karantina. Source: Batoul Yassine, 2020.



Figure 4. The first coordination meeting in Karantina hosted by The Beirut Urban Lab on 17 August 2020. Source: Mona Fawaz, 2020.



Figure 5. Discussions among the actors during the coordination meeting. Source: Batoul Yassine, 2020.

## Project Approach And Methodology

The BUL team approached urban recovery in Karantina as a holistic and participatory process that can redress socio-economic inequalities and contribute to the creation of a more inclusive, just, and viable neighborhood for the people.

This approach to urban recovery was conceptualized and advanced through empowering local communities, driving and disseminating knowledge on local and global scales, building local capacities, providing consultations, and implementing localized design interventions. Ultimately, the aim was to develop a strategy for urban recovery that is people centered, socially just, and place specific.

Toward that end of the research process, the BUL team adopted the CDS model (City Development Strategy), also known as USDS (Urban Sustainable Development Strategy), and adapted it to the scale of the neighborhood in Karantina and to the context of post-blast Lebanon. Furthermore, the BUL team combined the CDS with the Citizen Scientist (CS) model. Both models were selected because they are participatory in nature and can create multi-faceted community engagement. The citizen scientist model aims to train members of the local community and to empower them with the relevant data, research methods, and skills. The result was an active partnership between the BUL team and the different community groups across the different stages of the urban recovery strategy.

The CDS model has five methodological steps, from profiling to designing action plans and indicator systems. Although sequential, the research team kept the process cyclical and reflective.

**THIS REPORT ELABORATES ON THE 5 STEPS OF THE URBAN RECOVERY STRATEGY FOR POST-BLAST KARANTINA.**

**1. BUILD THE NEIGHBORHOOD PROFILE (DESCRIPTIVE MEMORY)**

towards identifying the key transversal issues across spatial, social, economic, and cultural factors.

**2. CONDUCT A STRATEGIC DIAGNOSIS**

and develop a comprehensive analysis of the identified transversal issues that are generated from the descriptive memory of Karantina and craft a vision with the community towards setting strategic goals.

**3. DEVELOP THE STRATEGIC FRAMEWORK**

based on the results of the diagnosis and the vision statement to propose a set of strategies. The strategies will inform the content of the action plans. The cross-cutting approach to the diagnosis allows the research team to consider each strategy within one comprehensive framework and pursue value-adding and complementary objectives that are related to the different sectors in Karantina.

**4. ARTICULATE ACTION PLANS**

that lead to the implementation of interventions on different levels and identify key partners.

**5. DESIGN THE INDICATOR SYSTEM**

to monitor, assess, adjust, and update the framework as necessary by reflecting on the process that is iterative; and handover to delegated community groups in partnership with public authorities and private actors as needed.



Figure 6. Phases of the City Development Strategy model. Source: The Beirut Urban Lab, 2021.



Report 01

# DESCRIPTIVE MEMORY

The descriptive memory report was the first step in initiating the urban recovery strategy for Karantina. It provided a general profile of Karantina that informed the next phase of the research; it also identified five key transversal issues in Karantina for diagnosis and analysis. The next phase of the research required collecting detailed data for the analysis of the transversal issues, and the data was verified as the research process unfolded. The research team at The Beirut Urban Lab approached the work as a cyclical process that can integrate new findings as data emerges; the cyclical process also allowed the research team to update the objectives, positions, and initial readings of the study to respond to the new data. The data was also validated by the observations of the research team on the ground and the input from local experts, residents, and citizen scientists.

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# INTRODUCTION

On 4 August 2020, the Port area of Beirut was rocked by a massive explosion, killing over 200 people and wounding more than 6,000<sup>1</sup>. Buildings were destroyed or damaged within a 10 km area around the port, including an estimated 70,000 apartments and nearly 40,000 residential or commercial spaces.

UNHCR partnered with four international organizations (MEDAIR, ACTED, Save the Children, and Intersos) to rehabilitate shelters, restore shared spaces, and introduce the upgrading of selected neighborhood-level communal spaces in six neighborhoods that were severely affected by the blast: Karantina, Mar Mikhael, Geitawi, Badawi, Bachoura, and Karm el-Zeitoun (Figure 1).

In this framework, ACTED and the Beirut Urban Lab at the Maroun Semaan Faculty of Engineering and Architecture (MSFEA) at the American University of Beirut (AUB), partnered to develop an assessment meant to support the effort of locating the recovery efforts within an urban-scale approach in each of the above-mentioned neighborhoods.

This report is one of the six Urban Snapshots conceived by The Beirut Urban Lab (BUL) in partnership with ACTED and funded by UNHCR in Fall/Winter 2020-2021.

## The reports are designed to:

- a) Inform the understanding of each of the four INGOs and UNHCR about the urban processes underway in each of the neighborhood prior to the port blast, focusing on those processes that are likely to slow-down or threaten the return of residents and the recovery of the neighborhood
- b) Whenever possible, point the INGOs in each of the neighborhood towards potential communal projects of important social relevance.

Further, the Urban Snapshots have the potential to support the work of the community of social workers, city planners, urban designers, researchers, activists, and others who are intervening with relief, repair, and recovery in short, medium, or long term development in Beirut in response to the 4 August 2020 port blast.

The assessment built on the knowledge and research of The Beirut Urban Lab about each of the six neighborhood's history and urban conditions. Additional fieldwork was conducted by a team of field researchers to gather the needed information from neighborhood-level interviews and discussions with residents, NGOs, etc.

Each of the reports locates the effects of the explosion within the larger urban trends that have influenced the studied neighborhood over the past three decades. It does so by providing a preliminary urban documentation and analysis of the neighborhood conditions, including a brief historical overview, insights about contextual urban trends, profiles of influential stakeholders, and a brief review of socio-spatial conditions. To the extent possible, the reports thus cover both urban trends and recovery efforts at the household (e.g., resident, business-owner), building, and neighborhood scales (e.g., shared space, road, recycling).

Each report further unravels some of the critical threats that are likely to undermine the recovery of each neighborhood, including dwellers' return, the rehabilitation of shared spaces and amenities, the reignition of economic activities, and the restoration of tangible and intangible heritage.

The reports are not conceived as exhaustive surveys. Rather, they are snapshots, taken at a specific moment (i.e. November-December 2020), yet located within a solid understanding of the economic, social, and political forces that influence Beirut's ongoing urbanization. Indeed, they build, as outlined thoroughly in the methodological section, on pre-existing knowledge of the neighborhood developed at the BUL and complemented by data gathered during November and December 2020 directly in the neighborhoods.

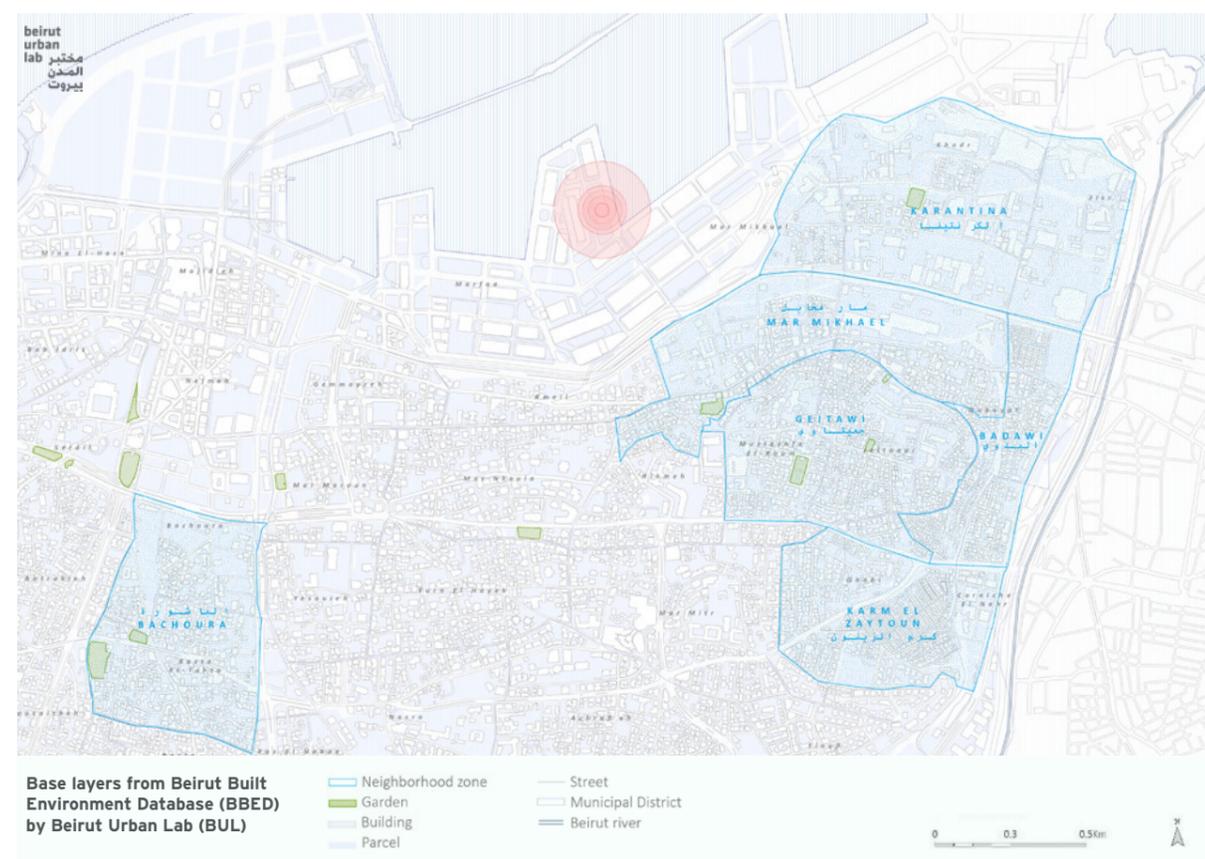


Figure 1: Zone Limits in Selected Neighborhoods. Source: The Beirut Urban Lab, 2020.

<sup>1</sup> Lebanon Reform, Recovery and Reconstruction Framework 3RF

# METHODOLOGY

The selection of neighborhoods and the delineation of their boundaries were proposed by UNHCR, reflecting its areas of intervention. In order to improve the coherence of the study and its recommendations, the BUL research team introduced mild modifications in delineating neighborhoods to account for the internal characteristics of the neighborhood, particularly lot morphologies, building typologies, and population profiles. Neighborhood boundaries do not coincide to official administrative boundaries.

The reports are the result of the work of six field researchers, one reporting officer and one research team coordinator hired by ACTED who were trained by The Beirut Urban Lab (BUL) team and worked under its supervision from October to December 2020. The positions were filled through a transparent and competitive process that put the emphasis on previous experience and methodological trainings; three of the six fieldworkers had worked for The Beirut Urban Lab before, and another was a recent graduate of the Master in Urban Design program at AUB.

The production of this report relied on case-study research methods of data collection as defined by Yin.<sup>2</sup> In essence, Yin sees the goal of case studies as understanding complex social phenomena, relating data to propositions and aiming at analytical generalization as if they were an experiment. By nature, case-study research is qualitative as it seeks to provide in-depth evidence in lieu of quantitative data. Case-study research typically uses multiple methods to collect different kinds of evidence (e.g. documents and archival records; interviews; direct and participant observation; physical artifacts; surveys), as this insures the triangulation and cross-checking of evidence, and hence more rigorous and valid data analysis.

## For this report, BUL relied on five data sources collected through:

- (i) desk reviews of available publications, technical reports, records and other documents;
- (ii) field observations (direct and participant)
- (iii) qualitative semi-structured interviews with key informants (e.g. mukhtar(a), NGOs' representatives) according to protocols described below, as well as informal conversations with residents and business-owners;
- (iv) data from the shelter technical assessment collected by INGOs intervening in the area and provided by UNHCR in December 2020;
- (v) surveys and maps compiled by the BUL's researchers about Beirut's built environment in the context of the Beirut Built Environment Database (BBED)<sup>3</sup>.

## (i) Documents and Records (Desk review)

Data analysis relies on the review of several gray reports<sup>4</sup>, academic research, and references available about the neighborhood. They are listed as footnotes throughout each report whenever they were used as evidence for the documentation and analysis of some of the neighborhood's urban trends.

## (ii) Field Observations

The researchers conducted fieldwork for about 12 full days in the neighborhood (1.5 day per week for a duration of 8 weeks, on the average), observing directly the built environment, documenting damaged constructions and processes of physical repair in residences and businesses, as well as noting the following: shops' activity/closure; buildings' quality and condition; abandoned/dilapidated buildings; clusters of impoverishment; construction activity; heritage buildings; the use of open/public spaces by the community and presence of greenery; infrastructure conditions (access to water and electricity, traffic congestion, conditions of streets, sidewalks and stairs); options for waste disposal.

The researchers also observed social interactions in the neighborhood, when they occurred and documented them, including groups of migrant workers and refugees. They were tasked to also document key landmarks in the neighborhood (educational, religious, cultural, corporate), and to report visible political sites and signs (flags, icons, posters, markings on walls). These observations were recorded as field notes and mapped, when relevant, serving as evidence that substantiates several claims made in this report, as indicated in the text.

## (iii) Qualitative semi-structured Interviews and Conversations with key informants

The field researchers were trained to conduct semi-structured qualitative interviews with key actors in the neighborhood they were able to reach out to amidst the difficult working conditions posed by the COVID-19 pandemic. In each of the neighborhoods, researchers interviewed the elected: local representative (mukhtar(a)), NGOs' representatives, as well as dwellers and business-owners who stayed and are engaged in the repair process. The interviews' questions were organized in three broad categories: (a) Awareness about the actors in charge of repair (do they know who is in charge, who visited them, who returned, what support were they provided with thus far); (b) Respondent's tenure status (do they own or do they rent, do they pay in real or Lebanese dollars or in LBP, how precarious is their tenure situation, do they get any support from family abroad, what are their future plans: are they staying or leaving, and why?); (c) Processes of repair (did they receive support, for what, from who, where is the process at, what is still to be done, are damaged common spaces fixed?). In addition to formal interviews, researchers also held informal conversations with residents and business-owners, on selected sections of the interview guide.

All interviews and conversations were conducted after securing verbal consent and according to ethical standards of social research. Cited interviews and conversations have been anonymized and personal identifiers removed to protect interlocutors.

Field observations and qualitative interviews were documented by field researchers through pictures and detailed notes, geo-referencing the location wherever possible. They then reported the interviews and developed fact sheets that were discussed with the rest of the team.

<sup>2</sup> See Yin R.K, Case-Study Research: Design and Methods (2014) London: Sage.

<sup>3</sup> The Beirut Built Environment database is an online GIS platform developed by The Beirut Urban Lab at the American University of Beirut. The initiative brings together a collection of maps, documents, and surveyed indicators about actors as well as spatial and environmental characteristics that can inform ongoing research, public policy making, and advocacy about the city. It also relies on a database of building permits dating back to 1996.

<sup>4</sup> Gray literature is produced outside of the traditional commercial or academic publishing and distribution channels and typically includes reports, working papers, government documents, white papers and evaluations. Organizations that produce grey literature include government departments and agencies, civil society or non-governmental organizations, academic centres and departments, and private companies and consultants.

#### (iv) Quantitative Technical Assessment Data collected by INGOs operating in the area under UNHCR funding

Qualitative findings are complemented by an analysis of technical assessment data shared by UNHCR, providing technical assessment of a prioritized number of damaged houses in the six neighborhoods (according to criteria set by UNHCR), conducted in Fall/Winter 2020 by its INGO implementing partners (one per neighborhood). BUL researchers analyzed this dataset and extracted statistical information from it, which is referred to in the other six reports. It should be noted that the technical assessments were conducted in specific targeted areas of each neighborhood as part of the shelter response implementation, therefore not resorting to any type of probability sampling.

Furthermore, the data used as part of this research originates from UNHCR partners only, thereby not taking into account any other technical assessment data that may potentially have been collected by other actors in the area. As such, corresponding findings may not be extrapolated to the entire neighborhood, but rather interpreted as a useful triangulation source for the findings deriving from qualitative data sources. The total number of surveyed units in the 6 neighborhoods amount to 5316, including only 3 in Karantina. Given the very small number of assessments led in Karantina, quantitative data was deemed not statistically representative nor informative, and thus not used in the present report.

#### (v) Spatial Data and Mapping

The report relies largely on spatial data compiled within the framework of the BUL's Beirut Built Environment Database (BBED), which has been made available thanks to the MoU agreed upon between ACTED and BUL. This includes data regarding: population size; density; damage assessment; building age; building height; real-estate developers' profiles; vacancy rates; number of loans acquired from the Public Corporation for Housing (PCH); open public spaces and unbuildable lots. Data listed in the BBED is based on official records of filed building permits at the Lebanese Order of Engineers and Architects, official property records from the Land Registry, comprehensive field surveys, and registration records. This information is reported within the text itself, in related sections. It is used as a main source of evidence in the "Urbanization Trends," "Socio-Demographic Profile," "Housing Conditions," and "Quality of Public Spaces" sections of the report.

Readers should acknowledge the fact that the Urban Snapshots were not designed following a Neighborhood Profile approach, which would have required more time and resources. The Urban Snapshots were developed in the aftermath of the Beirut explosions, during the Fall/winter 2020-2021. BUL relied on the most relevant and up-to-date available data from the sources listed above, while more generally coordinating with the Forward Emergency Room (FER). Figures that relate to emergency response actors' achievements reflect information as collected during the research period. As such, they are not meant to provide an up-to-date nor comprehensive overview of all achievements as of end of December 2020. No systematic and comprehensive surveys of damaged housing and business units were made available, with detailed datasets regarding associated tenure, socio-economic, infrastructure and other variables, which would have allowed us to derive more precise patterns and urban trends associated to the Blast.

The health situation in the country also constrained BUL from conducting a larger number of interviews with dwellers, business-owners, and stakeholders to profile in more depth and with more rigor the modalities of repair in the neighborhood, the governance of actors, and inscribe recommendations for community-based projects in a sound analysis of power groups and opportunities and challenges for intervention. Yet, BUL believes this report successfully points towards potential communal projects of important social relevance, paves the way for this work to be further developed out by actors working on the Post Blast recovery, and presents productive avenues for future research projects and community-level initiatives.

## What is unique about Karantina?

This report covers the neighborhood of Karantina (Figure 2). Of the six neighborhoods included in this project, Karantina stands out as being "outside" the city. Indeed, the neighborhood historically the city's quarantine. This position was exacerbated over the years by the development of the main Beirut-Tripoli highway that separated the neighborhood from the rest of Beirut and placed it in a permanent state of exception. This state of exception is rendered acute by the legacy of the civil war and the continued militarization of the neighborhood.

Due to the close proximity of Karantina to the blast's epicenter and the deteriorated physical conditions of its residential fabric, the area suffered severe damage. Repair is also slow in areas where structural damage was induced since NGOs have been unable to address this category of damage.

Fieldwork for Karantina was conducted as part of the larger team of The Beirut Urban Lab that has established a bottom-up research unit in the neighborhood in partnership with UNDP. Field Researcher Abir Cheaitli joined the team to collect information needed for this report and bridge between the ACTED-UNHCR team and the BUL-UNDP teams. It is noteworthy that the structure of this report defers a little from the other five reports due to the choice that was made to participate with the team on the ground from the BUL for the study.

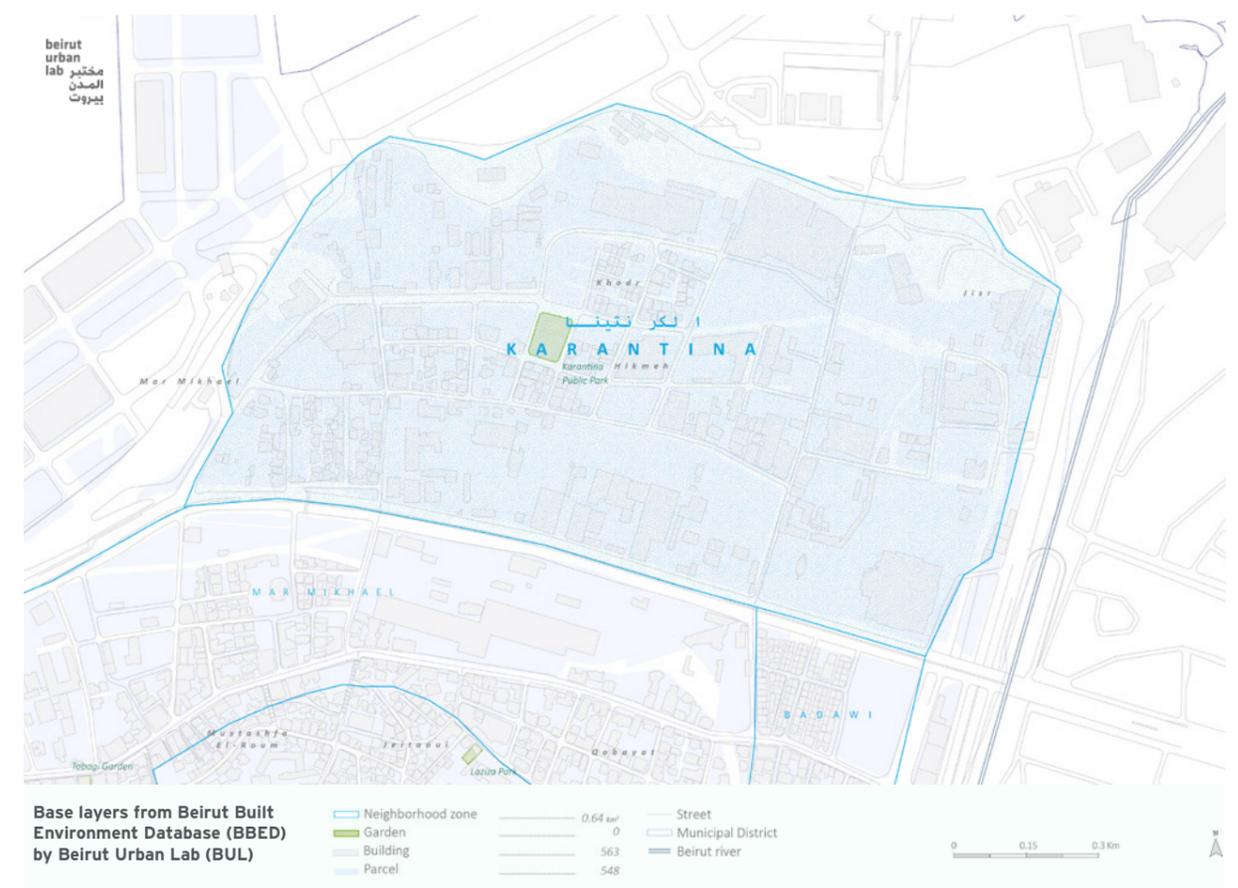


Figure 2. Boundaries of Karantina. Source: The Beirut Urban Lab, 2020.

# I. NEIGHBORHOOD CHARACTERISTICS

## 01. Area of Study

### A. Geographic context Neighborhood Definition

For this study, the BUL defined the neighborhood of Karantina as extending over the entire area of Municipal Beirut that falls North of the Charles Helou highway and east of the port, within the Medawar neighborhood. As such, the neighborhood is confined by hard borders that separate it from the rest of the city. These include natural edges, like the Beirut River and physical infrastructure, like port and highway.

One could assume that this entire area is one neighborhood. However, Karantina includes many different zones, as will be described in the Land Use, Zoning, and Density section. It also holds heavy burdens that stand powerfully in the way of making this area a livable neighborhood, as will be described fully in the report.

These include militarization, the close proximity to the port, large-scale infrastructure causing pollution, as well as the legacy of the Lebanese Civil War that made the area largely undesirable for residential functions and increased the attraction of small and medium-sized industries.

As a result, rupture, religious/political divisions, isolation, and severe disconnection from the rest of the city are characteristics that describe this neighborhood; and recent processes of reconstruction and recovery exacerbated on those patterns.

## 2. Historical Overview

Historically, the neighborhood was the site of the city's quarantine. Built in 1834-5 during the brief period of Egyptian rule by Mohamad Ali Pasha through his son Ibrahim Pasha, the quarantine would serve for decades as the site of isolation that protected the city from diseases brought by outsiders. At the turn of the 20<sup>th</sup> century, Karantina began to consistently house impoverished communities, beginning with Armenian refugees fleeing the massacres in Anatolia and extending eventually to include Kurdish refugees, Palestinian refugees, and poor rural migrants from Lebanon's most deprived neighborhoods (Kassir, 2003 and Fawaz & Peillin, 2003) (Figure 3). As such, population displacements have always had significant historical, political, social, and cultural effects on Karantina's population. The neighborhood served eventually as a reservoir of cheap labor for the nearby port and industries, but also as a hotbed of mobilization in the early years of the Lebanese Civil War in 1975 (Massabni, 1977)(Figure 4).

Aside from the poverty of its dwellers and its consistently deficient infrastructure, the neighborhood's isolation was exacerbated by the passage of the Charles Helou highway in the late 1950s, which severed it from nearby Mar Mikhael, effectively shaping it physically as the backyard of the city. As such, although the quarantine was closed around a century ago, the neighborhood's name continues to reflect, and rightfully so, its isolated condition.<sup>5</sup>

In 1972, a study of the neighborhood estimated the population of Karantina at about 12,600 living in about 2,540 houses with an assumed average of 5.5 persons per household (Take, 1974). At the time, Lebanese nationals constituted 29.6% of the population while Syrian, Palestinian, Iraqi, and Armenians constituted 70.6%. Shortly after, the neighborhood witnessed one of the worst massacres and entirely changed the population of the neighborhood.

In 1976, during the Lebanese Civil War, Karantina was a site of notorious massacres that decimated much of its Muslim population (Massabni, 1977). Since the end of the Lebanese Civil War (1990), Karantina has gradually housed waves of poor families, including Lebanese and Syrian. Karantina is also the site of numerous public infrastructures, including the city's (now-closed) slaughterhouse, flour mills and the main headquarters of the waste management facilities. In the few years before the blast, Karantina witnessed an influx of higher-end economic activities as well, as will be outlined in the trends below.



Figure 3. Refugee camp in Karantina in the 1920s. Source: George Grantham Bain Collection, Library of Congress.



Figure 4. Photograph by Françoise Demulder during the Karantina eviction of Palestinian occupants (1976). Source: <https://www.worldpressphoto.org/collection/photo-contest/1977/francoise-demulder/1>.

### Karantina History

Built in 1834-5 during the brief period of Egyptian rule

the quarantine served for decades as the site of isolation that protected the city from diseases

### 1972

estimated population of 12,600 people living in about 2,540 houses

Lebanese Nationals: 29.6% of the population

Syrian, Palestinian, Iraqi, and Armenians: 70.6% of the population

### 1975

Notorious massacres decimated much of its Muslim population

<sup>5</sup> It is noteworthy that there is no study of the impacts of the highway. It is however sufficient to look at aerial photographs to assess it.

### 03. Planning Parameters

#### Neighborhood Reading

Karantina includes several zones and functions. Field visits, interviews, and gray literature reviews show complex land use patterns in the area (Figure 5). These uses include residential (of multiple national and religious denominations), industrial, recreational (e.g., bars, nightclub), cultural, military, public (e.g., municipal parking areas, hospital) as well as an industrial zone and a cluster of businesses.

Based on the history of settlements and political and religious alliances, the residential neighborhoods of Karantina can roughly be described as three: Al-Saydeh sub-neighborhood (west), Al-Khodor sub-neighborhood (upper northeastern side), and Al-Senegal sub-neighborhood that lies between the two. It is noteworthy that some of the poorest residential settlements of the pre-civil war era have never been rebuilt.

The three residential neighborhoods differ considerably. Aerial photographs indicate that Al-Saydeh sub-neighborhood was historically directly connected to Mar Mikhael, a reality confirmed by residents of the neighborhoods.<sup>6</sup> Named after Al-Saydeh Church, the neighborhood maintains some of the historical/religious and social allegiances with the area including its predominantly Christian population and an affiliation to the Lebanese Forces and Kataeb, two Lebanese Christian parties.<sup>7</sup> Al-Senegal sub-neighborhood serves as the transition between the two other sub-neighborhoods.

The passage of the highway severed the neighborhood and created a separate entity. However, the urban fabric maintains a relatively similar quality of consolidated physical structures, residential buildings, etc. Conversely, Al-Khodor sub-neighborhood is a mixture of Lebanese and Syrian Sunni Muslims.<sup>8</sup> In line with Al-Saydeh sub-neighborhood, the cluster owes its name to Al-Khodor mosque nearby, on the other side of the highway, from which they were severed in the 1950s. However, given their historical nomadic trajectory and their old settlement by the nearby slaughterhouse, they are often referred to as “Arab al-Maslakh” (Arabs of the Slaughterhouse) – a term they consider derogatory.

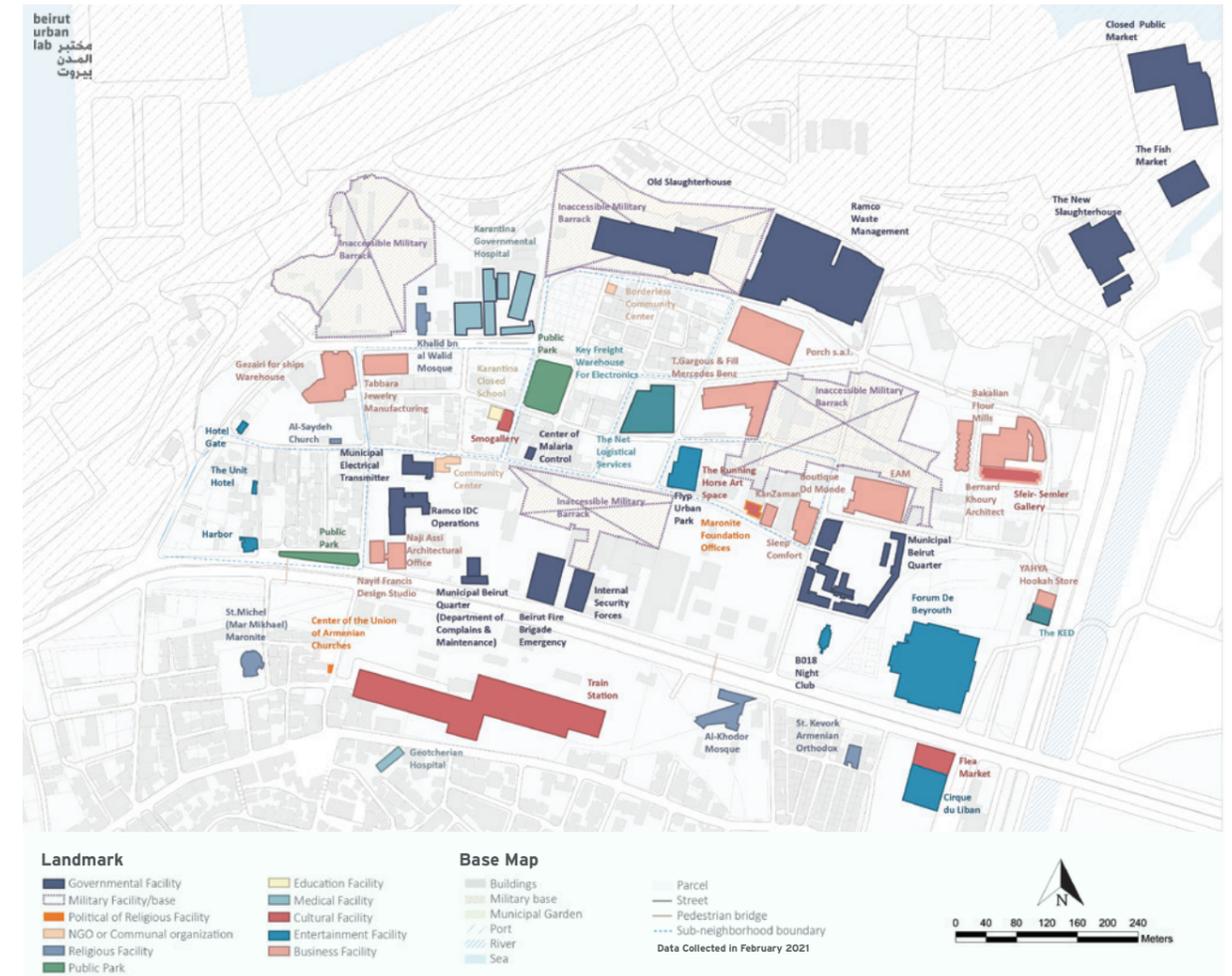


Figure 5. Neighborhood Landmarks in Karantina. Source: the Beirut Urban Lab, 2020

<sup>6</sup> Aerial photographs from the personal collections of researchers in The Beirut Urban Lab.

<sup>7</sup> Information about the naming of the neighborhood was widely reported among its current residents and confirmed by the existence of the church in the neighborhood. The two parties have offices in the neighborhood.

<sup>8</sup> Based on a full survey of the neighborhood conducted by the BUL-UNDP joint teams. For more, please see [www.beiruturbanlab.com](http://www.beiruturbanlab.com)

### Land Use, Zoning, and Density

A figure ground map (Figure 6) revealed interesting information about the physical environment of Karantina. The map shows that the physical built-up area in Karantina is approximately 30%. According to data gathered from the BBED, Karantina has an area of 645,126 sq. m, and holds 364 buildings with a total footprint of 160,817 sq. m. This is likely the lowest density in Beirut after Downtown. The relationship between the built and unbuilt spaces, which imposes low density, is mainly due to the history of the area, the local zoning, land-use regulations, and the militarization of the area.

Furthermore, this scattered configuration is the result of Karantina's complex historical patterns. The Civil War brought Karantina's informal settlements to the ground on 18 January 1976, leaving most of its inhabitants displaced. After the war was over, many residents came back. Some were able to rebuild what was destroyed while others were surprised to find their land occupied by the military (ARIJ, 2013).

### ArcGIS Web Map

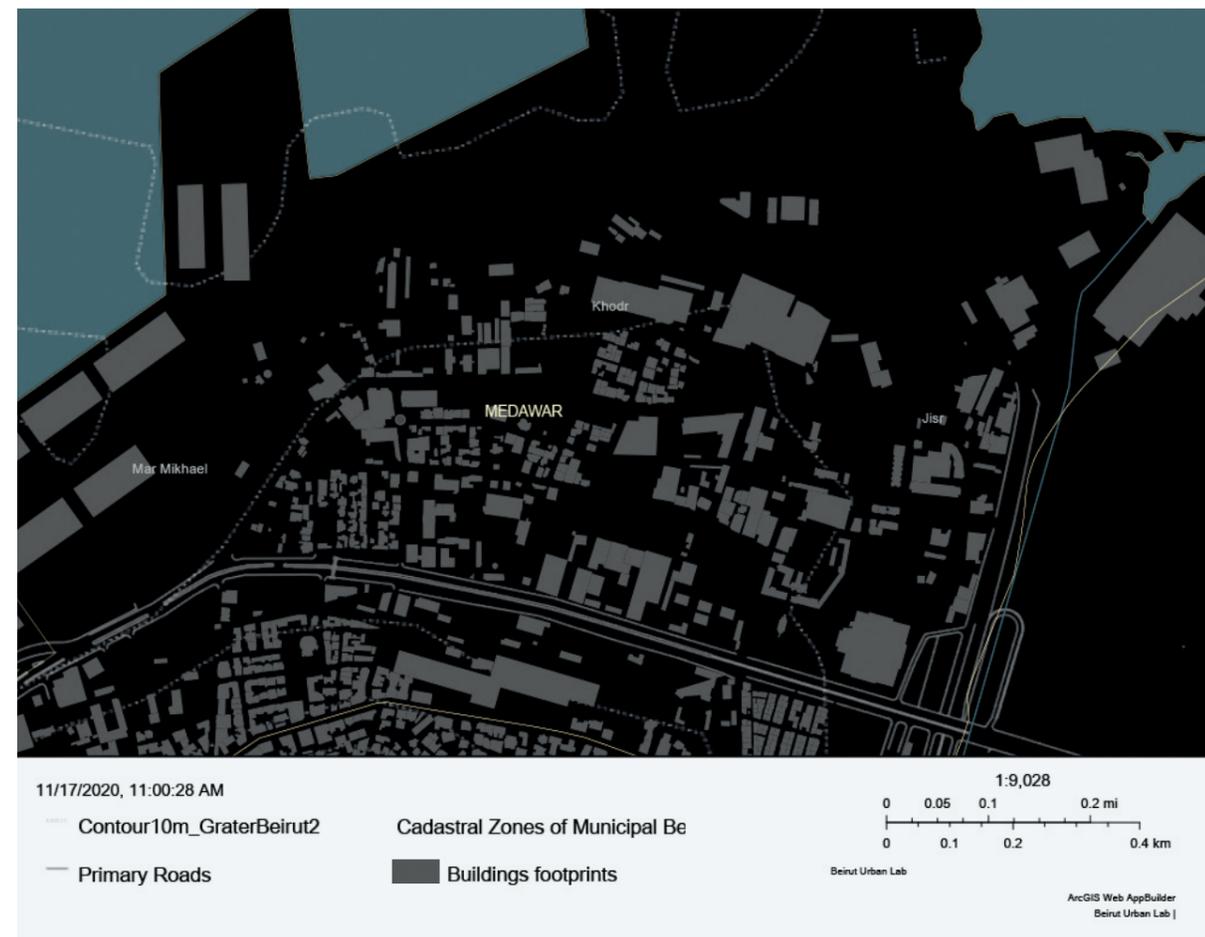


Figure 6. Figure ground map of Karantina, Medawar (built-up area vs. empty spaces). Source: BBED, Beirut Urban Lab, 2020

## 04. Main Urbanization Trends Influencing the Neighborhood at the Time of the Blast

The analysis of the socio-spatial and socio-economic patterns of development revealed trends of urbanization in Karantina. The aim of this analysis was to understand the urban fabric and highlight current challenges that impact connectivity, inclusivity, and livability of its residents and Karantina as whole neighborhood. These trends, in turn, should inform the approach of repair and reconstruction.

### A. MILITARIZATION

Militarized security is a defining aspect of Beirut's public and shared spaces. A 2010 study conducted by Mona Fawaz, Mona Harb, and Ahmad Gharbieh shows that this security substantially influences everyday life, reorganizes the city's multiple publics, and enforces numerous forms of restrictions on some of the city's users, while facilitating the fluid circulation of others.

If Beirut is heavily militarized, Karantina presents an extreme case. Military security elements are observed everywhere during fieldwork in Fall 2020: on the streets, sidewalks, and in open public spaces. Many sidewalks and streets have been encroached on by physical security elements, such as cement barriers, metal meshes, signs, and speed bumps. In many places, sidewalks and streets are completely blocked and the flow of public circulation is interrupted. Some of these physical elements seem to be laid out haphazardly and forgotten (Figure 7).

The history of militarization of Karantina dates back to at least 1975 and the beginning of the Lebanese Civil War. As noted above, the neighborhood was a site of intense fighting and was identified by powerful militias at the time as a site of threat housing undesirable populations. The area was then bulldozed (Battah, 2016). Eventually, the Lebanese Army replaced the militias' headquarters and militarized the area completely. This militarization was further reinforced post-9/11 when security around main infrastructures, such as the port, was globally enhanced.<sup>9</sup> As a result, to-date, four military bases are distributed at the peripheries of Karantina. During interviews with residents, several claimed that one of the military bases, Site #2 shown in (Figure 5), is situated on private lots still claimed by their owners who had fled their homes during the Civil War.<sup>10</sup>

Some of the residents interviewed about the heavy presence of the Army in the area showed resentment. Among them, a few claimed that they were the owners of properties squatted by the Army and currently live in Karantina in rental houses. They expressed strong frustration and mentioned that they would be able to address their current financial distress only if their properties were returned to them so that they could sell them. Other resident-interviewees claimed that the existence of military bases keeps the area safe from potential security threats.



Figure 7. Encroachments of military security elements on public spaces (sidewalks and streets). Source: Abir Cheaitli, 2020.

<sup>9</sup> For rising port security globally, see, for example, Faist, T. (2004) The migration-security nexus. International migration and security before and after 9/11. Malmö University Electronic Publishing

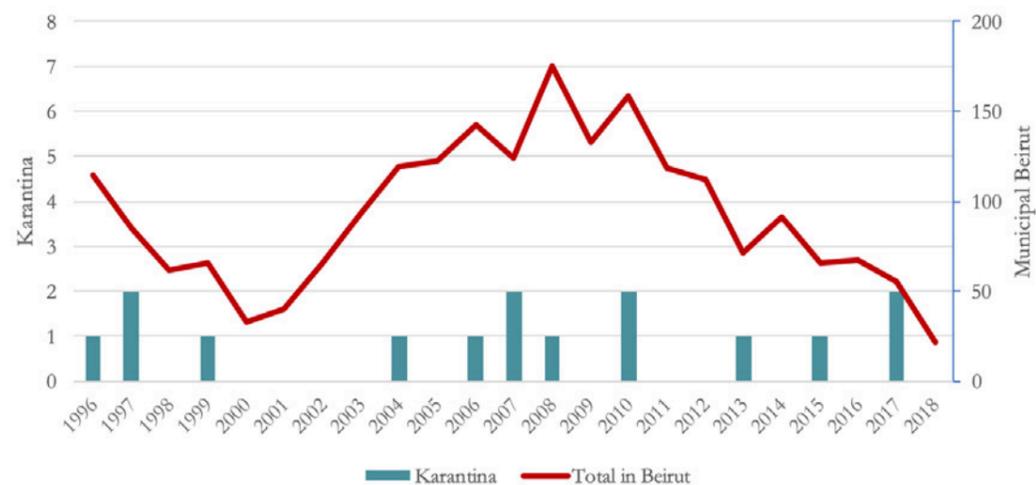
<sup>10</sup> Researchers from The Beirut Urban Lab were able to verify the private ownership of the lot but not the trajectory of the residents.

## B. INCREASING TYPE OF FUNCTIONS (POTENTIAL GENTRIFICATION)

Establishment of various industrial and cultural activities along the eastern edge of the neighborhood were showing their very early marks at the time of the blast. They were denounced by a few journalists and researchers who noted the arrival of artists, designers, and club owners, many of whom were attracted by the low rent market (Stoughton, 2019). Much of these activities were commercial. Some saw these movements as part of a positive trend since it brought a new wave of youth and engagements of younger generations into the area. Yet, the movement was also seen as a threat to existing locals and their family businesses who saw this as potentially a first wave of displacement and gentrification similar to what has occurred in nearby neighborhoods such as Gemmayzeh and Mar Mikhael.

Nevertheless, in recent times, the once known “isolated Karantina” was revived by the overflow of locals with distinct identities and specialties, introducing a new dimension of land use and user groups. For example, high-end venues opened in old warehouses and factories, such as Forum de Beyrouth, followed by places like Flyp Urban Park, Grand Factory, which was designed to “resemble an abandoned factory being reclaimed by nature,” and Ballroom Blitz, housed in a former Harley Davidson showroom (ibid). Artists were also attracted to the area and opened their own galleries and ateliers, such as the SMO, Karen Chekerdjian, Art Factum, and Sfeir-Semler galleries (Figure 5). These trends had led a few researchers to suspect that some of the trends documented in nearby Mar Mikhael could be repeated here.<sup>11</sup>

Conversely, Karantina has not experienced the type of building development as in all other neighborhoods of the city. As shown in the graph in figure 8, new residential permits and developments have been consistently a small number of the city's total, keeping the influx of new residents to a very low level.<sup>12</sup>



**Figure 8:** Graph of building permits filed in Karantina and Municipal Beirut. Source: Beirut Built Environment Database (BBED), Beirut Urban Lab, 2020. Source: The Beirut Urban Lab, 2020

<sup>11</sup> For a review of property and gentrification in Mar Mikhael, see Fawaz, M., Krijnen, M., & El Samad, D. (2018). A property framework for understanding gentrification: Ownership patterns and the transformations of Mar Mikhael, Beirut. *City*, 22(3), 358-374. For a broader reading of gentrification in Beirut, see Tonkiss, F. (2018). Other gentrifications: Law, capital, and spatial politics in Beirut. *City*, 22(3). <https://doi-org.ezproxy.aub.edu.lb/10.1080/13604813.2018.1484638>. For a broader theorization of the threats of gentrification, see Smith, N. (1987). Gentrification and the Rent Gap. *Annals of the Association of American Geographers*, 77(3), 462-465. JSTOR. <http://www.jstor.org/stable/2563279>

<sup>12</sup> Data about building permits was obtained by The Beirut Urban Lab from the Order of Engineers and Architects in Lebanon in 2019 and all data points were surveyed to double-check their validity. Please check the Methodology section. in the beginning of this report or visit the BBED website for the detailed methodology used to collect and analyze the data.

## C. PUTTING KARANTINA UNDER STUDY AFTER THE PORT BLAST

Some of the buildings in Karantina display elements of the so-called traditional Lebanese houses: high ceilings and arcades, three windows in the shape of arches, and sandstone. Others have a simple modern façade and reflect another important architectural moment<sup>13</sup> (Figure 9).

Unfortunately, many of the buildings identified during fieldwork were either abandoned or deteriorated. They seemed uninhabited since the end of the Civil War. Researchers detected during field visits that many of the buildings' exterior facades were riddled with bullet holes and still bore battle scars (Figure 10). After the blast, some of these buildings were further damaged. A few are in danger of collapsing<sup>14</sup> (Figure 11).

Ironically, this deterioration was sometimes perceived as positive by some of the landlords who were interviewed by the researchers on the team. Some confessed that it was a welcome sign to evict tenants on old rent control. Others also celebrated the collapse of buildings, which they saw as an opportunity to sell the property and gain profit.<sup>15</sup>

In an attempt to minimize the aforementioned risks and threats, the neighborhoods impacted by the port's explosion were put under study by the Directorate General of Urbanism (DGU) to freeze development (selling and demolishing buildings). This will protect the area temporarily for one year.<sup>16</sup>

It is noteworthy that the Directorate General of Antiquity (DGA) underwent a detailed damage assessment of buildings with heritage value in the impacted neighborhoods, one of which is Karantina. In this regard, the DGA had a say in the restoration of some of the damaged buildings especially in Al-Saydeh neighborhood where the main actor (Offre Joie) had to coordinate with them on the details of the restoration process, such as building materials and finishing.<sup>17</sup>



**Figure 9.** Two distinct building typologies. Source: Abir Cheaitli, 2020.



**Figure 10.** Traces of bullets on buildings. Source: Abir Cheaitli, 2020.



**Figure 11.** Abandoned and deteriorated buildings. Source: Abir Cheaitli, 2020

<sup>13</sup> Evaluations of the architectural value of these buildings was conducted by the BUL team, among whom we count a renown architectural historian, Dr. Howayda al-Harithy. Unfortunately, we were unable to obtain any correlation of the classification of building from official sources and/or UNHCR technical assessments in this area.

<sup>14</sup> Assessment based on the structural evaluations of the Order of Engineers and Architects in Beirut. The survey was obtained through the partnership between the DEA and the BUL.

<sup>15</sup> For more on the effects of heritage and the tense relations between landlords and tenants, please refer to: Kanafani, S. (2016), *Made to Fall Apart, An Ethnography of Old Houses and Urban Renewal in Beirut*. Ph.D. dissertation in Social Anthropology at the University of Manchester. For more on the issue of the rent gap and the incentives for landlords to demolish their buildings, please see Krijnen, M. (2018), "Gentrification and the creation and formation of rent gaps", *City* 22(3): 437-446.

## D. A RENTAL MARKET TARGETING A VULNERABLE POPULATION

### Loss of Livability & Increased Fragility

Since the end of the Lebanese Civil War, Karantina has hosted a vibrant rental market. Of particular interest is the segment of the market targeting refugees and migrant workers, an expanding informal rental market where tenants suffer from high levels of vulnerability. The expansion of the market is particularly remarkable in Al-Khodor sub-neighborhood. In addition to this flexible market, the neighborhood includes another stable residential rental market that was, until recently, legally protected by the rent control law.<sup>16</sup>

### A Rental Market for Migrant Workers and Refugees

In this market, contractual agreements are oral, flexible, and largely unregulated. The housing units are also flexible, sometimes re-subdivided, rooms are added on roofs, etc. Housing units often accommodate more than one family at a time, allowing households to share rent in times of difficult financial conditions.<sup>19</sup>

Several interviews conducted in Al-Khodor sub-neighborhood showed that many of the apartments are inhabited by two to three Syrian families. One interview showed that there are three families of 12 members in total who are living in a single apartment that consists of one bedroom, one living room, one small kitchen, and one bathroom.

The change in the rental market has triggered a modification in the population profile of Karantina as it increased the presence of Syrian refugees. This change resulted in the influx of foreigners from different nationalities into the area, to the chagrin of Lebanese residents.<sup>20</sup> During interviews conducted in Fall 2020, many long-term residents complained that they have lost the sense of the tight-knit neighborhood, village, or place where everybody knows each other's name. Adding to that, they noted that the current situation has increased a sense of fear and insecurity, while it decreased a sense of belonging and livability. Several Lebanese interviewees pointed out that they are willing to move out of Karantina once it is possible for them, while others stated that they need to stay alert and keep their neighborhood safe.

Another scenario of increasing vulnerability is presented by residents with old rental contracts. Until 2014, residents under rent control were protected by law. However, the lifting of the rent control at the time placed residents in vulnerable conditions.<sup>21</sup> While the law included provisions for a transition, public authorities failed to set it in place, leaving tenants and landlords to contest entitlement in courts. The current legal provision passed in September 2020 to freeze eviction for a year may help the tenants.<sup>22</sup> In practice, however, several tenants face daily pressure by landlords who are delaying or rejecting repair in an attempt to push them away. During interviews, these tenants explained that landlords are using numerous methods to displace them, such as neglecting the buildings' infrastructure, blocking water irrigation systems, and neglecting the building's aesthetic qualities. The purpose is to displace them so they can replace them with tenants signing new rental contracts.

<sup>16</sup> For more information, check: <https://legal-agenda.com/قانون-لحماية-المناطق-المتضررة-بنتيجة/>

<sup>17</sup> Information collected through NGO volunteers with Offre Joie.

<sup>18</sup> Old renters are tenants who rented under the rent control law. For more, see Public Works (2016). Mapping Beirut Through its Tenants' Stories. Public Works. <https://publicworksstudio.com/en/projects/mapping-beirut-through-its-tenants-stories>

<sup>19</sup> A similar study showing the modality of such markets and their development can be found in: Fawaz, M., Saghieh, N. and Nammour, K. (2014) "Housing, Land and Property, Critical Issues in the Current Syrian Refugee Crisis", co-published by UNHCR and UN-Habitat.

<sup>20</sup> Some community members identify and refer to them as "ghourabah" meaning "stranger" or "outsider" in Arabic. They are perceived as such in their "territory."

## 05. Socio-Economic Population Profile

Karantina has historically attracted various vulnerable population groups (Lteif, 2020). Today, residents are typically classified as Lebanese-Armenians, Arab el-Maslakh (Lebanese Sunni Muslim), Lebanese Christian families (mainly Maronites and Catholics), in addition to Syrian and Iraqi refugees (UNHCR, 2020).

According to the interviews with residents and neighborhood actors, Syrian refugees are concentrated in Al-Khodor sub-neighborhood while Lebanese Christians and a very small number of Armenians are concentrated in Al-Saydeh sub-neighborhood. A report by ACTED estimated that there are 4,638 inhabitants in all of Karantina (Acaps, 2020). However, based on preliminary findings by the BUL research team as well as interviews with community members and the mukhtar between August and October 2020, the total population was estimated to be around 2,500.<sup>23</sup>

### Karantina Population

 ACTED: 4,638 inhabitants in all Karantina.

BUL (preliminary findings): 2,500 inhabitants between August and October

### According to the survey of all population conducted by BUL in Fall 2020, the following population groups were noted in Karantina:

- 01** Karantina is still dense with Syrian refugees. An interview with a Syrian refugee in Al-Khodor neighborhood estimated that there are approximately 120 Syrian families in Karantina. However, field visits and interviews revealed that the number might have increased after the blast. If BUL assumes that the average household consists of five individuals, this averages to roughly 600 Syrian individuals in Karantina.
- 02** As for Lebanese families, informal conversations with key community members in Al-Khodor neighborhood estimated that there are 179 Lebanese families present. Meanwhile, an Armenian community member from Al-Saydeh neighborhood and former partisan of the Lebanese Forces political party mentioned that there are 200 Lebanese families living in his neighborhood. These numbers were retrieved from the voting lists by the political parties (Future Movement and Lebanese Forces). If BUL assumes that the average household consists of five individuals, this averages to 1,895 Lebanese individuals in Karantina.
- 03** Migrant workers, mostly Ethiopian, also reside in Karantina but their number is more limited. Interviews conducted by the BUL urban recovery team working on Karantina mentioned that there are around 15-20 migrant worker residents who live primarily in Al-Saydeh neighborhood.

<sup>21</sup> For more on rent control, see See Public Works Studio (2016). Mapping Beirut Through its Tenants' Stories. Public Works.

<https://publicworksstudio.com/en/projects/mapping-beirut-through-its-tenants-stories>. For residential vulnerability in Karantina, see Star, N. (n.d.). Ruined homes and eviction notices in Beirut's Karantina. The Daily Star. <http://www.dailystar.com.lb/News/Lebanon-News/2020/Sep-11/511542-ruined-homes-and-eviction-notice-in-beirut-karantina.aspx>

<sup>22</sup> Law 194 was passed in September 2020 to organize the post-disaster recovery and included a one-year protection. For more, see [www.legalagenda.com](http://www.legalagenda.com)

<sup>23</sup> BUL's recovery team is still undergoing fieldwork and research and have not published their findings yet.

## 06. Housing Conditions

### A. QUALITY AND CONDITION OF THE HOUSING STOCK

Assessing Karantina revealed a diversity of building typologies. Central hall houses and modern apartment buildings are mainly the typologies found. Most apartment buildings range between one to three floors, and few range between four to seven (Figures 12 and 13), and the area doesn't have residential tower buildings like nearby Mar Mikhael.

Nevertheless, the quality of buildings in Karantina is generally flimsy, reflecting the poverty of the population. Before the blast, most buildings' structure had signs of deterioration reflecting poor maintenance and neglect. Floors, roofs, internal and external walls needed maintenance either through total rebuilding or substantial repair (UN-habitat, 2012).

Several interviews showed that before the blast, houses suffered from humidity and water leakages. These conditions were considerably worsened by the impacts of the August 4 blast. Now, most of the old buildings stand structurally damaged, with internal and external walls and ceilings affected.<sup>24</sup>

The poor conditions of the residential houses are not a surprise since most residential buildings date back to the 40s and 50s (Figure 14), and maintenance of building conditions was not an option for the low-income inhabitants who are mostly renters.



Figure 12. New buildings constructed in Karantina. Source: Abir Cheaitli, 2020.

At the beginning of the reconstruction processes after the blast, a new layer of distinction between the sub-neighborhoods (Al-Saydeh and Al-Khodor) was added due to the quality of building upgrades. Living conditions were either upgraded or downgraded according to the reconstruction processes. Al-Saydeh was being built in a consolidated housing typology; the exterior and interior structures and materials are durable and of solid quality. While in Al-Khodor sub-neighborhood, which hosts more vulnerable groups, reconstruction was slower, more ad-hoc, and frailer. In-between, around Senegal Street (Figure 5), a pattern of self-repair and private actors' funds were visible.

However, as of December 2020, many housing facilities on Al-Khodor and Senegal are being re-worked and repaired by the Norwegian Refugee Council (NRC) and the United Nations Development Programme (UNDP), who are repeating poor work already done by other NGOs. The NRC and UNDP began physically rehabilitating homes roughly three months after the blast as they were doing a very detailed assessment of the damages.



Figure 13. Number of floors per building in Karantina. Source: The Beirut Urban Lab, 2020.

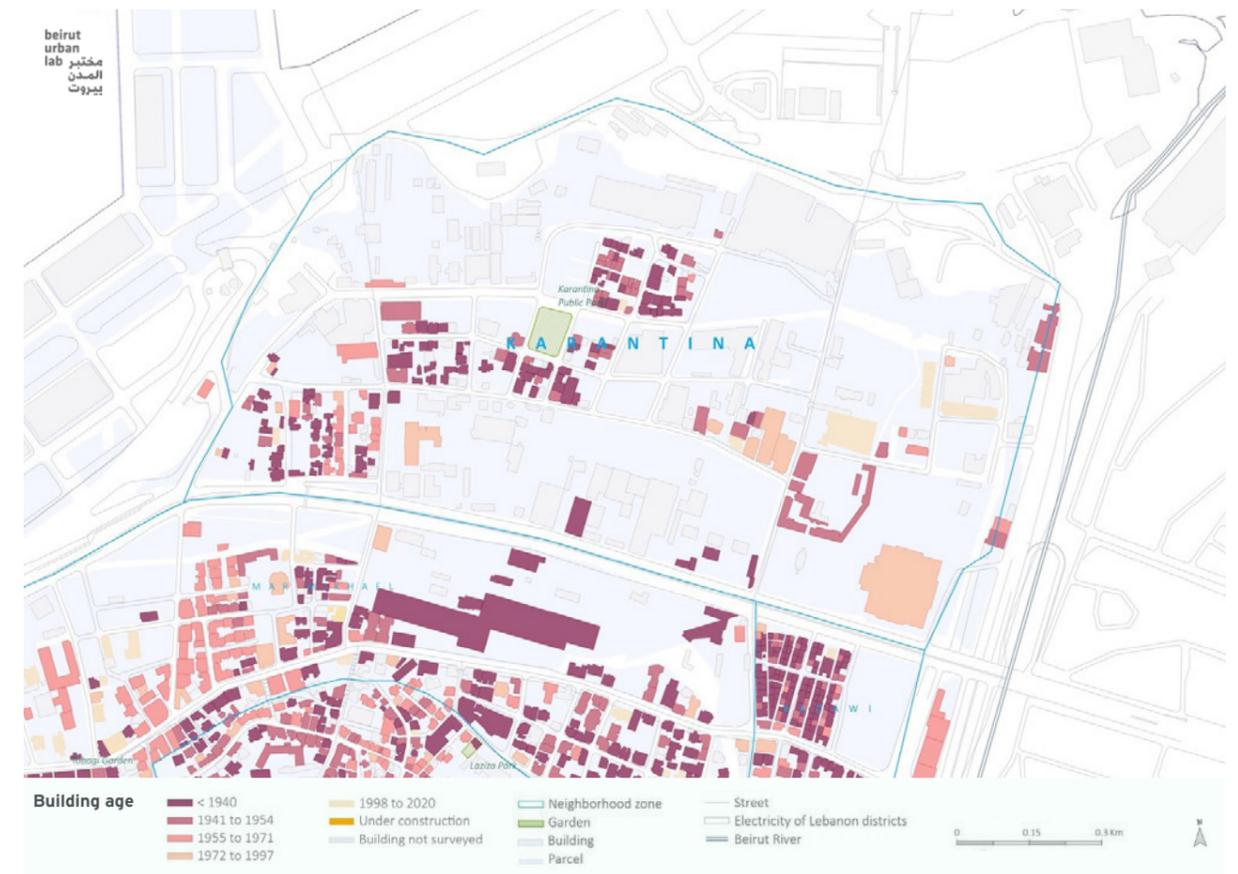


Figure 14. Building age in Karantina. Source: The Beirut Urban Lab, 2020.

<sup>24</sup> OEA Survey.

## B. TENANCY ARRANGEMENTS

Interviews conducted by BUL recovery team with approximately 60 residents in Karantina between August and November 2020 indicated that access to housing was commonly happening through rentals. These interviews showed the following types of rental arrangements:

- 01 Old rental contracts held by Lebanese families, particularly in the sub-neighborhood of Al-Saydeh, are inhabited mostly by elderly residents;
- 02 New rental contracts;
- 03 Informal temporary agreements typically govern access to housing for Syrian refugees and Ethiopian migrant workers in a compacted crowded condition.

The interviews also showed that there are still old rental contracts in the neighborhood, but new contracts are more frequent. Old tenants' monthly payments range between 500,000 LBP to 1,500,000 LBP per year. Households are typically constituted of nuclear families. However, refugees whose financial means are limited sometimes share the same apartment as mentioned above.

Interviews with residents as well as a review of about 10 property titles from Karantina revealed the multiplicity of ownership as a common pattern in this area. This is an important challenge as many apartments are held in shares by numerous stakeholders, typically multiple heirs. This often entangles building development and/or replacement with conflict among multiple heirs. More generally, land sales are slow in the area with land and apartment prices varying considerably from one area to another: between Al-Saydeh, Al-Khodor, and the Senegal Street stretch.<sup>25</sup>

## C. HOUSING MARKET CONDITIONS

Karantina does not have an active market of housing and/or property units. Since 1998, very few buildings were constructed. Figure 15 shows that only three construction permits were filed between 1996 till 2018.<sup>26</sup> It is expected that the post-blast classification of buildings undertaken by the Directorate General of Antiquities (DGA) in August and September 2020 will increase restrictions on selling property or developing new buildings. Nonetheless, the area is desirable for developers given the area's strategic location.

To date, property speculation remains limited in the area. The BUL survey showed low vacancy rates: no vacant apartments were detected in the neighborhood, in strong contrast with other areas.<sup>27</sup> On the contrary, overcrowding was observed in several housing units with a large number of occupants/rooms. Another indicator of the slow housing market is the low number of publicly subsidized loans that the BUL allocated in the neighborhood.<sup>28</sup> Only five apartments in three buildings in Al-Saydeh have benefited from the subsidized public loan of the Public Corporation for Housing (PCH) in this neighborhood (Figure 16) since 1997, indicating that few housing transactions are actually occurring on the ownership level.

<sup>25</sup> A resident from Al-Saydeh owns an apartment in a lot that holds two buildings, and the two buildings are owned by 12 individuals related to one family. Each building consists of three apartments. He mentioned that before the blast, there was a plan to sell the lot for 12,000 USD per m<sup>2</sup> and regretted that the contract was canceled after the blast. The buyers changed their mind. Meanwhile, an interview with a resident from Al-Khodor neighborhood mentioned that his parents own an apartment in a three-story building, and the other two floors are owned by his uncles. One month after the blast, a land purchaser offered to buy the parcel for 3,000 USD per m<sup>2</sup>, but the owners refused because they were unwilling to sell at what they deemed a low price.

<sup>26</sup> Data about building permits was obtained by The Beirut Urban Lab from the Order of Engineers and Architects in Lebanon in 2019 and all data points were surveyed to double-check their validity. Please check the Methodology section in the beginning of this report or visit the BBED website for the detailed methodology used to collect and analyze the data.

<sup>27</sup> Measured by the 2018 BBED survey for all constructions after 1996.

<sup>28</sup> Estimate based on the BBED mapping of the publicly subsidized loans of the PCH, Beirut Urban Lab records.



Figure 15. Construction permits issued from 1996 to 2018 in Karantina. Source: The Beirut Urban Lab, 2020.



Figure 16. State-subsidized Public Corporation of Housing (PCH) loans in Karantina. Source: The Beirut Urban Lab, 2020.

## 07. Local Economy

Karantina plays a central role as a “backyard” of the city’s economy. Historically and now, the neighborhood serves as a reservoir of labor that supports the nearby port and industries.

Karantina continues to play this role, as well as housing numerous refugees and migrant workers who also conduct domestic work. Karantina also provides the land needed to serve the city. This includes the now-closed slaughterhouse and RAMCO, a waste management treatment facility, parking for the municipal vehicles, the public hospital, Beirut fire brigade, and a flour mill. As mentioned above, the relatively lower price of land has also rendered it desirable for some of the cultural industries and emerging economy that spilled over to Karantina from the Mar Mikhael neighborhood (Figure 17).

Nevertheless, developments in the economy characterized patterns of Karantina did not modify the social status in this community. Karantina’s waves of refugees stigmatized the area as a low-income working-class neighborhood that provides cheap labor to local industries. The interviews conducted in the neighborhood revealed that many residents work in unskilled jobs such as taxi drivers, valet parking attendants, or delivery drivers. Many among them worked in the nearby slaughterhouse, which was closed down in 2014 due to severe health threats posed by the minimal health and hygiene conditions.<sup>29</sup> It is worth remembering that unskilled workers suffer disproportionately from the ongoing financial crisis.

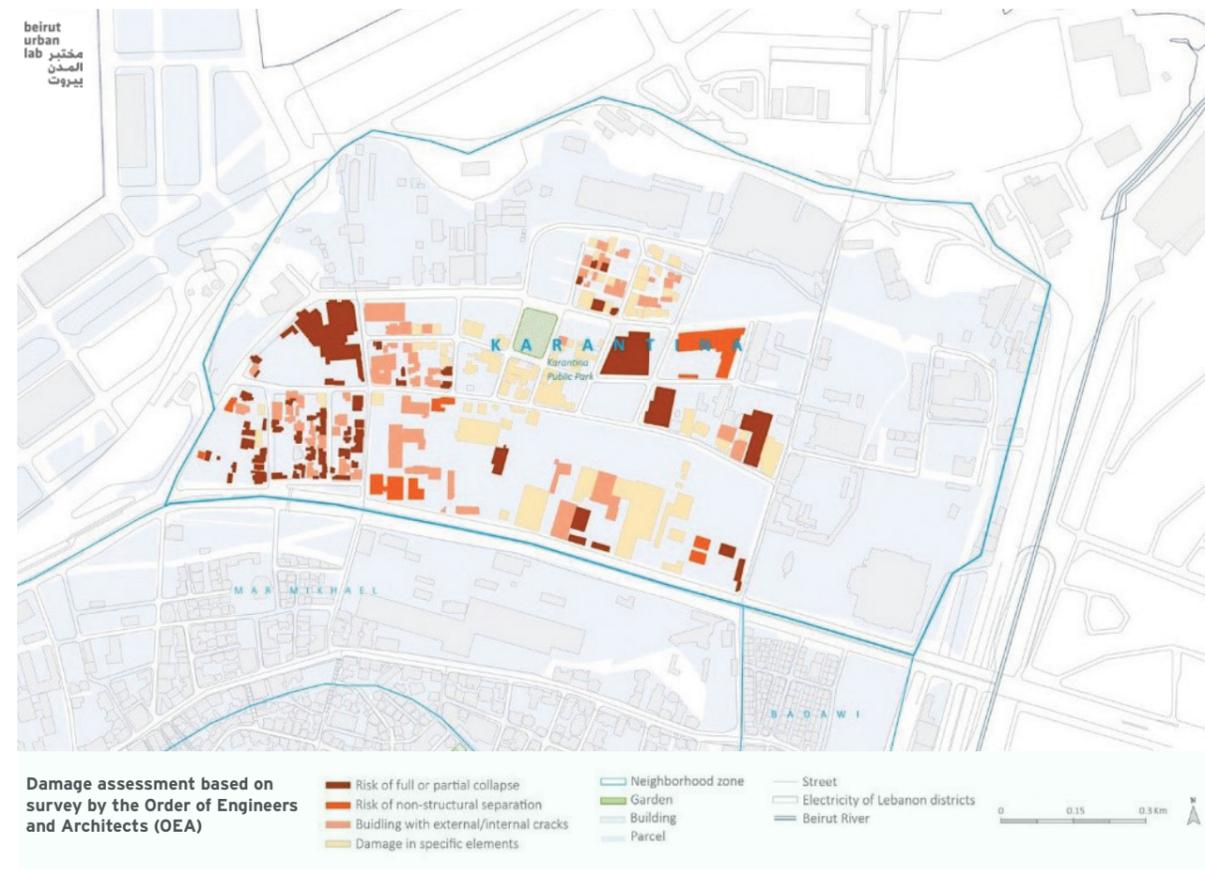


Figure 17: Damage assessment in Karantina based on survey by the Order of Engineers and Architects. Source: The Beirut Urban Lab, 2020.

<sup>29</sup> See “The disaster that is the Karantina slaughterhouse”, <https://ecocentra.wordpress.com/2015/01/21/the-disaster-that-is-the-karantina-slaughterhouse/>

## 08. Public Spaces

Unless specified otherwise, all information in this section is based on direct observations in fieldwork conducted in Fall 2020.

### A Municipal Park

Property records indicate that the Karantina park was created in 1956 through the expropriation of a private lot and earmarked as a public park for the community (Figure 18). The Park is strategically located in the middle of the neighborhood. It was rehabilitated in December 2016 after the municipality approached landscapers “Greener on the other side” in 2011. Two landscape architects Zeina Kronfol and Pamela Haydamous redesigned the old Karantina public garden into a place of encounter, and simply named it ‘Karantina play garden’. Greener on the other side also teamed up with “Tandemworks” to launch an open call for artist to develop conceptual proposals for a playful and interactive installation. The winners of the design development and execution of the play items under the bridge were “CatalyticAction”.

CatalyticAction also organized community engagement workshops in collaboration with “The Chain Effect”, “Recycle Lebanon” and “Urban Pins” (Figure 19). A resident mentioned that each Sunday, the priest of Al-Saydeh Church invites children from both neighborhoods to the Karantina garden, to gather, play, and participate in activities. But according to interviews, some Lebanese families avoid sending their kids to play when they know there are Syrian children at the park.

The Park has been closed due to the COVID-19 pandemic. The municipality took this decision because many children had been gathering in the park after school closures, exacerbating the risk of contamination during the pandemic.

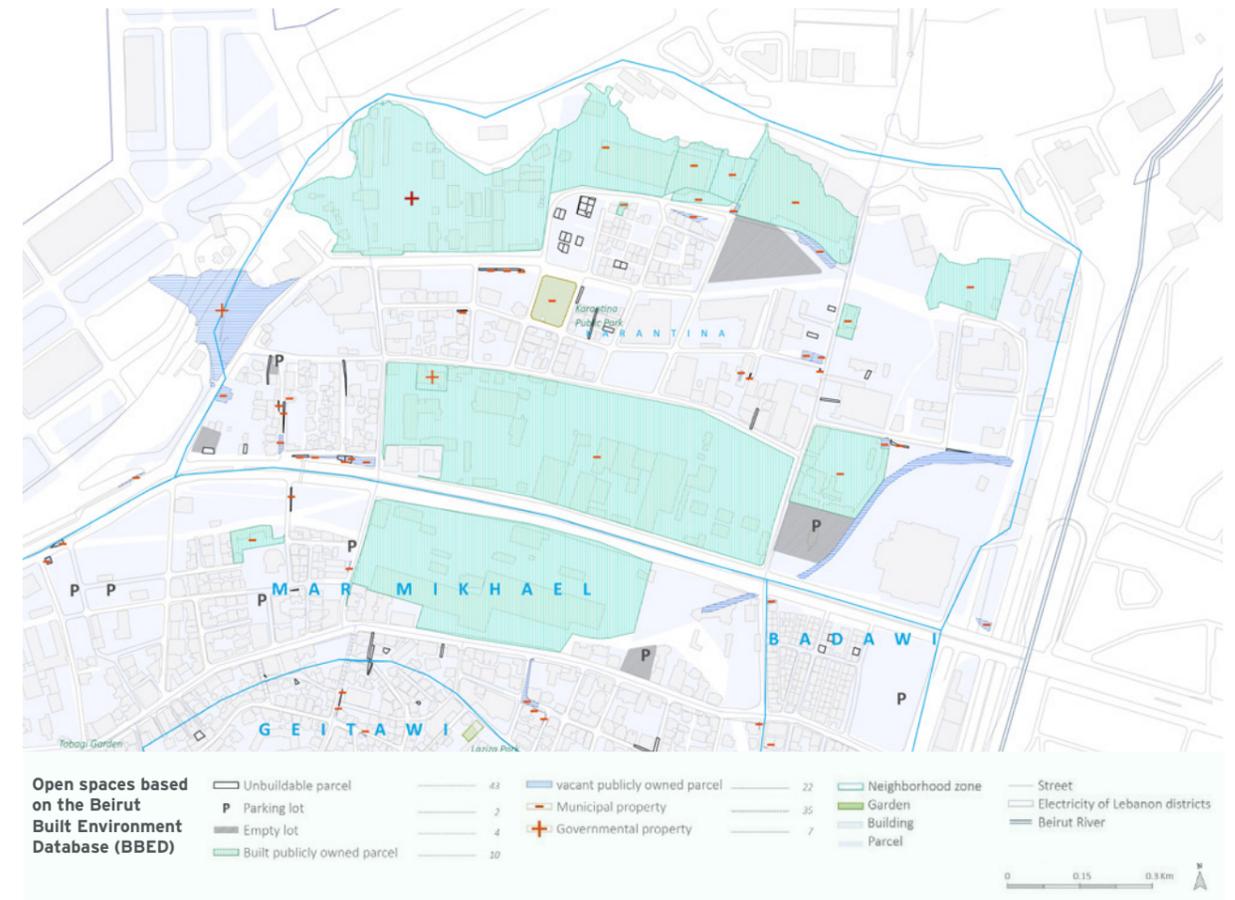


Figure 18: Open spaces in Karantina. Source: The Beirut Urban Lab, 2020.



## 09. Infrastructure and Environment

### Water

On average, almost all household dwellings in Karantina have access to basic sanitary facilities and the area does not suffer from daily shortage of water. Interviews with residents confirmed earlier findings by the BUL research that showed the location of the neighborhood in the city in relation to public networks such as water and electricity. They indicated that water comes almost daily in pipes reaching their houses, and residents do not need to purchase water. They pay a yearly fee of 350,000 LBP to the municipality. In the Medawar region, sewerage and road infrastructures are present but need maintenance (UN-habitat, 2012). Residents from Al-Khodor mentioned that during the winter, the neighborhood is commonly flooded with wastewater. As for electricity, daily power cuts were as common as in any other city in Lebanon. However, as of December 2020, the neighborhood had been receiving continuous service till the time of writing this report.

### Waste Management

In line with the rest of the city, waste management in Karantina is performed by RAMCO company, which is responsible for garbage collection and street cleaning. Sidewalks and streets are partially clean, and residents mentioned that every three days a group of employees wearing RAMCO uniforms come to sweep the streets and collect the garbage, which was indeed observed during fieldwork (Figure 23).

After the blast, local NGO Arcenciel facilitated the collection of all the broken glass from the blast, which has been collected in a vacant lot owned by the Municipality of Beirut in Karantina. The glass is now being relocated to another lot owned by the Port of Beirut, in coordination with the city's governor. As of November 2020, Arcenciel was awaiting the delivery of a glass crusher which will facilitate recycling and reusing the glass.

### Public Transport

The area is not connected to the rest of Beirut through the public transportation system; even informal transportation systems do not go inside the neighborhood. These services pass along the Charles Helou highway which bounds Karantina from the South. Public transports pick up or drop off passengers along their routes of transport.

### Social Facilities

The area hosts the Karantina governmental hospital, but it lacks affordable medical clinics; and residents are not able to benefit from the hospital's services due to their financial situations. Additionally, there are no educational facilities such as a school or learning centers.



Figure 23: An employee wearing a RAMCO uniform and cleaning one of the streets in Karantina. Figure 14b. Waste collection bins. Source: Abir Cheaitli, 2020.

## 10. Environmental Conditions

In general, the Medawar area faces severe environmental pollution related to air, noise, and odor. A study by Greenpeace International that dates back to 2004 showed that Karantina was among the most polluted neighborhoods in Beirut and the major factors were the old slaughterhouse, the port, and the solid waste management plant (Chahine, 2004). It is likely that things have improved with the slaughterhouse closed.

Another poor environmental factor is the stench generated by the Beirut River that borders Karantina to the East. The river passes across several municipalities and no public institution has taken any action to protect the river area from encroachments and pollution.

According to a 2004 study, once the water reaches the city limits of Greater Beirut, it brings sources of pollution such as industrial waste from various factories along the strip, and is then contaminated from sewage and waste from the slaughterhouses across the river (Youssef & Abou Ali, 2017). During summer, due to low water levels in the river, certain kinds of organic waste decomposes, thus intensifying the putrid smell and negatively affecting the levels of environmental air quality.

The absence of wastewater management and sewage runoff on the river surface decreases the environmental air quality of the surrounding areas (Figure 24). According to Maged Youssef and Bashir Abou Ali, altering the natural morphology of the river, removing green areas, diminishing natural spaces, and transforming it into a concrete block in 1968, created an abnormal air quality causing serious health problems (Baaklini, 2019).

Moreover, the landfill in Bourj Hammoud has major consequences on the environmental air quality of Bourj Hammoud and consequently Karantina. Hydrogen Sulfide is a dangerous gas that emanates from landfills and its heavy concentrations near Bourj Hammoud can reach 51 micrograms per cubic meter which is a relatively dangerous rate. This results in a weakened immunity and deterioration of respiratory function among residents in the surrounding area.

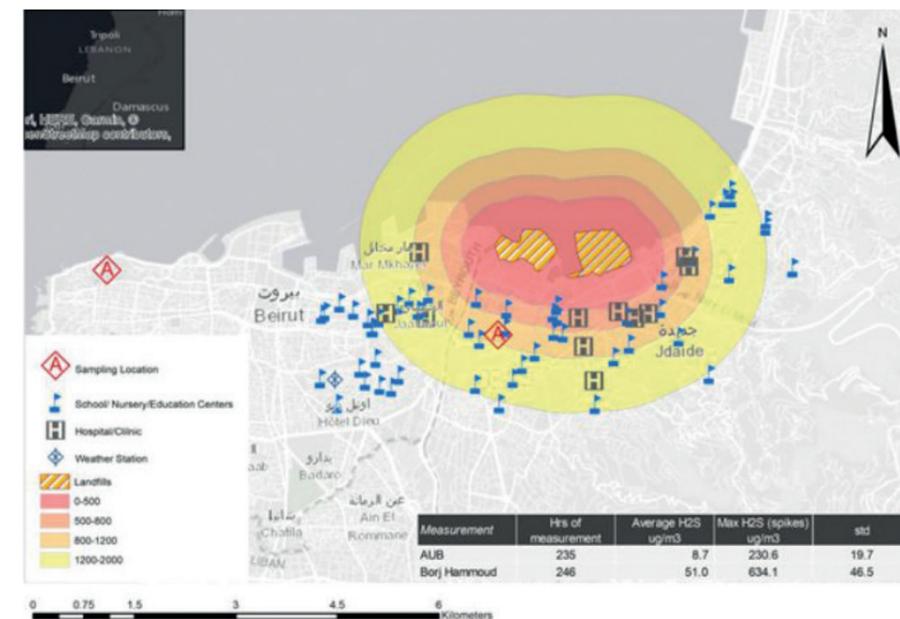


Figure 24. Map by the Center for Nature Conservation at the American University of Beirut, showing the number of schools and hospitals exposed to Hydrogen Sulfide in Bourj Hammoud-Jdiedeh. Source: L'Orient le Jour, 2019.

## II. STAKEHOLDERS IN THE NEIGHBORHOOD

Unlike most other areas of Beirut, the heavy presence of the Army in the neighborhood has rendered the presence of other actors more subdued. This includes public agencies, such as the Municipality of Beirut, publicly elected officials as the mukhtar, or others.

Political parties are also relatively subdued despite the presence of offices and popular support. Thus, walking the streets of Karantina, one does not sense the typical territorialization of other urban sectors materialized in flags, posters, or banners. Only the Kataeb party's political headquarters is seen in Al-Saydeh.

Major landowners in Karantina include the Maronite Waqf, municipal and governmental where several military zones are placed. The Maronite monasteries are considered important landowners, and key players in the area. The army is also a strong and visible actor.

### Political Actors

Two political parties have visible presence in the neighborhood, namely the Lebanese Forces and the Future Movement. Both were visible in the immediate aftermath of the blast, distributing services and cleaning streets. Each party's local jurisdiction extends over one neighborhood, as pointed above, in line with religious and sectarian affiliations. Thus, Al-Saydeh is mostly affiliated with the Lebanese Forces while Al-Khodor is mostly affiliated with the Future Movement. Al-Saydeh also counts as a local office for Kataeb. The area in between, surrounding the Senegal Street stretch, is a mixed composition that combines patterns from the two neighborhoods (religion, nationality, political affiliations).

### Religious Institutions

The religious division of the neighborhood is paralleled in institutions and religious organizations whereby one can speak of two areas: the church and the mosque. Karantina holds one church called Al-Saydeh Maronite Church, one mosque inside Karantina called Khaled Ibn al-Walid mosque, and one on its outer peripheries called Al-Khodor mosque. As mentioned before, some residential clusters and streets have been named after the religious institutions. On one hand, this indicates the religious representation of the cluster, and on the other hand, the political.

### Religious-based NGOs

The Mar Mansour Association and Mar Mikhael NGO provide necessary social, health, and educational services to Christian residents primarily, including migrant workers (Ethiopians). They provide social services such as organizing recreational activities for children and elderly, free health examinations, and low-cost medication (UN-habitat, 2012).

In Al-Khodor, interviews with community members indicated that they get support, food aid, and donations from NGOs related to the Future Movement such as Ahlak w Nasak, Beirut for Social Development, and al-Itihad al-Islami, all of which are Muslim-Sunni charitable organizations. During a field visit in Al-Khodor neighborhood, a group of men wearing Al-Itihad Al-Islami slogan, were distributing t-shirts holding Al-Etihad Al-Islami slogan, candies, and chocolates to children.



Figure 25. The previous tent for the Borderless NGO before moving to their new headquarters. Source: Abir Cheaitli, 2020.

### NGOs establishing headquarters after the blast

In Zone 7, there has been enforcement on providing psycho-social support for kids and women affected by the port blast. Tents for the Borderless and International Doctor Corps NGOs are also located in Zone 7, Al-Khodor sub-neighborhood (Figure 25). An interview with an active member from Borderless mentioned that they started with the intention to repair 16 houses, but after realizing the number of children in Karantina, they changed their strategy from fixing homes to providing psycho-social support and organizing activities. The NGO reached out to 300 children (60% Syrian and 40% Lebanese). Borderless started with a temporary plan to stay in Karantina, but after recognizing the urgent need for the foundation's services in the area, they decided to stay permanently. With the help of an anonymous donor, the NGO got funds to rent an apartment with a three-year contract, and the apartment is being renovated to function as a community center. The UNDP also recently opened a headquarter in Al-Khodor neighborhood as well as Médecins du Monde on Senegal street.

### Landowners

The neighborhood has one operating community space owned by the Municipality of Beirut, the Karantina public park. The municipality also owns a significant number of lots that include facilities such as the Karantina governmental hospital, previous Sukleen and Sukomi, and military bases. The Maronite Waqf owns a fair number of properties.

Some properties have buildings inhabited by residents with old rent contracts, and other properties that are vacant/abandoned. Meanwhile, lots that hold private developments and industries did not show a pattern of domination by singular shareholders as typically seen in nearby neighborhoods.

# III. RECOVERY STATUS

## 1. Overview of the Damage Assessment in Karantina

Damage from the blast was equally visible in all three zones (Figure 26). Nevertheless, the rebuilding work appeared to be unevenly distributed between the different zones initially. This was confirmed by fieldwork and qualitative interviews with Karantina residents from both communities: Al-Saydeh, Al-Khodor, and the areas in between. Some streets were full of volunteers and NGOs working intensely on repairing homes, while other streets appeared empty.

Narratives collected among residents indicated that numerous NGOs came to the area immediately after the blast. Some offered fast emergency repairs (windows and doors), and their names were largely forgotten by the residents. The Lebanese Army was among the remembered organizations who distributed food aid, undertook damage assessment, and provided 400,000 LBP compensation for urgent repairs to all the residents. Other NGO names such as Offre Joie were remembered vividly due to the high quality of their work. Offre Joie, Association for Collaboration Unified Aids (ACUA) (Zone 8), Ahlak w Nasak, and Loyac (Zone 7) immediately began reconstruction processes in Karantina per zone divisions. Others formed partnerships, including the NRC and UNDP, who joined the reconstruction processes at a later stage (Figure 26).

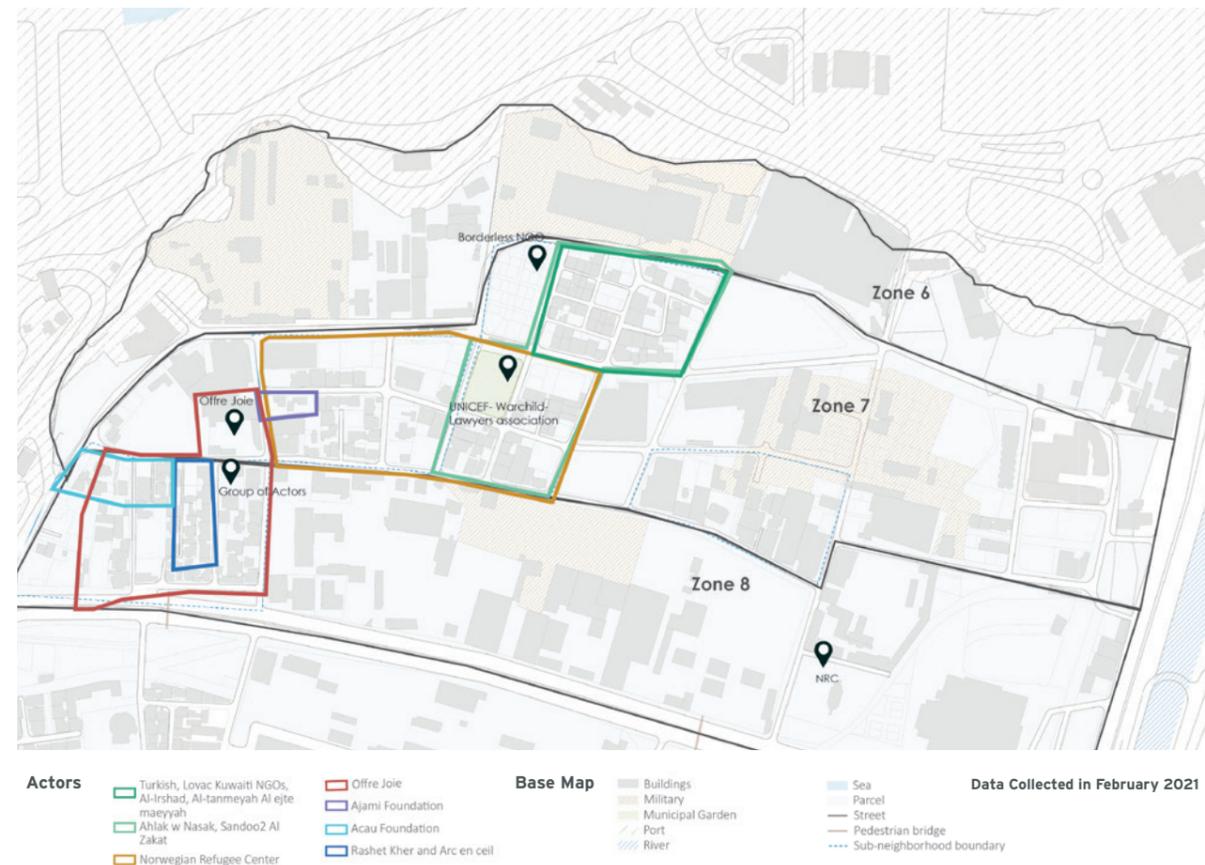


Figure 26: Presence of the actors in Karantina in November 2020. Source: Beirut Urban Lab's Karantina urban recovery team, 2020.

## 2. Overview of Actors Involved in the Recovery Response

In Zone 7, the area where Al-Khodor cluster is located, the reconstruction works were observed as minimal as emergency interventions at the beginning. The scope of work covered by NGOs on this zone mainly included replacing broken windows and doors and painting interior walls. Still, the homes' quality conditions needed a more consolidated reconstruction process. Many houses suffered from water leakages. Residents pointed to cracked walls and ceilings, as well as the poor quality of the repair works performed. Interviews showed a high level of disappointment. However, as mentioned previously, a more comprehensive reconstruction and restoration processes of damaged houses began as of November 2020 in this cluster and the Senegal cluster by the NRC and UNDP. According to an interview with an emergency response project manager at NRC, the NGO arrived to Karantina immediately after the blast, and started with the physical reconstruction phase in November. In addition to the physical reconstruction, the NGO provides educational and health services, a cash-for-rent modality, and legal protection through a platform known as "Information, Counseling and Legal Assistance" (ICLA).

In Zone 8, especially in Al-Saydeh sub-neighborhood, NGOs responsible for renovation have conducted solid work starting immediately after the port blast. Offre Joie is renovating 34 buildings in Al-Saydeh, in addition to the renovation of Al-Saydeh Church. Interviews with residents revealed their satisfaction towards the services offered by Offre Joie. The scope of work included the exterior and the interior parts of each house: structural enhancement, wall restorations, tiling, painting, sanitary fixtures, and electrical reparations.

Another NGO repairing homes in Zone 8, also in Al-Saydeh is ACUA. The scope of work for this NGO is also considered by residents at the same level of professionalism as Offre Joie. The NGO started work instantly after the blast and is renovating four buildings. An interview with the project manager responsible for reconstruction processes showed his interest in implementing Lebanese heritage architectural features on the interior and exterior facades. When asked if any level of coordination is happening between ACUA and Offre Joie, he said that each NGO is working alone.

### Beyond Physical Repair

A team of researchers from the BUL at the American University of Beirut, led by Professor Howayda Al-Harithy, is adopting a bottom-up participatory approach to propose a people-centered, long-term recovery framework. The BUL's objective is to promote a recovery agenda through the empowerment of local residents, identifying transversal issues, and developing a strategic framework for recovery of the neighborhood. The team is partnering with UNDP to set in place a long-term process through which it can guide physical, social and economic recovery.

### 3. Overview of Modalities of Aid, including Repair & Reconstruction

Five modalities of intervention that combine private and public actors have been identified in Karantina:

**Modality 1 Humanitarian and Immediate Emergency Aid**

Humanitarian relief was among the first forms of intervention. Food provision, psychosocial support, medical and health care were services provided instantly after the port blast for all residents of Karantina. Today, some of these services continue from Borderless, International Medical Corps, and Médecins Du Monde.

**Modality 2 Short Term Building Repairs**

Numerous NGOs, volunteers, private donors, and institutions offered short-term emergency repairs to people after the blast. The purpose of these quick repairs was to alleviate residents' displacement. Some windows and doors were covered with plastic sheets, while other repairs showed more solid forms by replacing broken windows and doors with new ones.

**Modality 3 Zone Recovery Interventions**

As mentioned previously, Offre Joie is conducting reconstruction in Zone 8/Al-Saydeh sub-neighborhood, and as of December 2020, they were almost done with repairs. Other NGOs are working on segments of Zone 7 and 8, such as the NRC and UNDP who started at a later stage.

**Modality 4 Long-Term Recovery Interventions**

In partnership with UNDP, the BUL is working on a neighborhood scale. As mentioned previously, BUL is adopting a multi-disciplinary approach to propose a community-led, long-term physical, social, political, legal, and economic recovery.

**Modality 5 Small-scale Punctual Intervention**

Small-scale punctual interventions on publicly owned or abandoned lots are being implemented, and other sites are being studied for small interventions as well. Currently, UNICEF is partnering with the charity CatalyticAction to rehabilitate Karantina's public park. The Rashed Kheir NGO rehabilitated a wall stretch in Al-Saydeh. Ten local artists were recruited by the NGO to paint the wall with the participation of residents, particularly children (Figure 27). In addition, the BUL recovery team is willing to implement three small scale tactical community interventions to activate public spaces that are currently used as gathering spaces but need enhancements.



Figure 27. The wall before and after it was painted by Lebanese artists and locals in collaboration with Rashed Kheir. Source: Abir Cheaitli, 2020.

## IV. IDENTIFIED TRANSVERSAL ISSUES

Five transversal issues were identified in the descriptive memory report. These issues are diagnosed and studied in-depth in the strategic diagnosis step. The five issues are:



### I. Affordable Housing and Social Inclusion

Due to the evictions and disruptive actions by landlords after the blast, there is a threat of losing the social diversity and the housing affordability in the neighborhood.



### II. Spatial, Economic and Social Connectivity

The multi-layered social, physical, and spatial divide/segregation is isolating the area from the rest of the city yet has safeguarded the neighborhood from development.



### III. Cultural and Economic Vitality of Karantina

Karantina has experienced a threatened economic activity after the blast. The area hosts businesses that are directly connected to the port, and active industries whose activity and/or presence was impacted by the blast.



### IV. Inclusive and Sustainable Development

Karantina has suffered restricted access to development by local landlords due to militarization, planning regulations, and suspended projects (LINOR) since the civil war.



### V. Quality of the Urban Environment

A degraded, intimidating, and unwelcoming urban environment due to the presence of the military, garbage dumps, and unregulated industries, and underserved public and shared spaces.

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Report 02

# STRATEGIC DIAGNOSIS

The strategic diagnosis was the second step of the urban recovery strategy of Karantina. It focused on the comprehensive analysis of the five transversal issues that were identified in the descriptive memory phase. It included five sections, and each section was devoted to one of the transversal issue. The strategic diagnosis built on the descriptive memory phase with additional and more in-depth fieldwork and research. The strategic diagnosis, therefore, involved an exhaustive data collection and field mapping based on aerial photographs, field observations, questionnaires, as well as the thorough analysis of the identified issues to understand the main spatial, economic, and social trends in Karantina.

The study followed a cyclical process of collecting data and reworking and reformulating the analysis and the positions of the research team as new material becomes available. The profile of Karantina that was generated in the descriptive memory phase was also validated at consultation sessions with the different community groups in Karantina and substantiated with additional information. It addressed the concerns that the residents raised across the thematic focus group discussions, the town hall meetings, and in the answers to the questionnaires. As such, the initial findings and conclusions from the data were revisited and validated in this phase.

Part of this phase of the research required crafting the vision of the urban recovery with the community. The vision was continuously reformulated and adjusted through an interactive process of consulting the local community groups. Combined with the diagnosis, the vision intended to pave the way of the next phase of the development of the strategic framework.

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# METHODOLOGY

The data collection and analysis of the five transversal issues in Karantina required the triangulation of quantitative and qualitative methods. The preliminary analysis in the descriptive memory phase of the research identified a lack of an in-depth profile of the socio-economic and physical characteristics of Karantina. As such, the research involved the collection of primary data from: (1) household, business, and building questionnaires, (2) thematic focus group discussions, (3) one-on-one interviews, (4) town hall meetings, and (5) field observations and spatial mapping conducted between January and June 2021.

Secondary data were also collected on certain topics such as the militarization of lots in Karantina, proposed infrastructural projects, and urban planning regulations. They were further validated by one-on-one interviews and thematic focus group discussions. Secondary data were useful to understand the historical trajectory of the development of Karantina and the multiple traumas that it went through. They were also used to conduct a comparative analysis of important events across the history of Karantina before and after the port blast.

The research team at The Beirut Urban Lab trained 12 citizen scientists from Karantina to partner in the collection of the data. The research team and the citizen scientists adopted alternative methods of data collection and safety measures to mitigate the challenges and the risks that were posed by the COVID-19 pandemic.

## CRITERIA FOR THE SELECTION, TRAINING, AND ENGAGEMENT OF CITIZEN SCIENTISTS

The research team adopted the citizen scientist model to facilitate for a more participatory process. The citizen scientists were engaged in the process of knowledge transfer, capacity building, participation in the various steps of the study from data collection to coordinating with the community groups and co-designing the urban recovery strategy. The participatory engagement empowered the citizen scientists to understand and change their circumstances on the long term. The model for engagement was adapted to the values and objectives of the project that promotes a people-centered and participatory urban recovery that considers local needs, practices, and cultural values. Accordingly, the research team recruited and trained 12 citizen scientists on research methods, tools, and ethical practices.

### 1. Selection Criteria

The selected citizen scientists are current residents of Karantina. The research team aimed to ensure the formation of a diverse and inclusive group of citizen scientists that reflected the population diversity on the ground. Therefore, the 12 citizen scientists were selected across different age, gender, religion, nationality groups and levels of education. The group was composed of: (1) in terms of gender: 7 males and 5 females; (2) in terms of nationality: 10 Lebanese and 2 Syrians; (3) in terms of age: ranging between 18-46; and (4) in terms of education: 3 with primary to secondary education, 4 with vocational training, and 5 with university degrees.

### 2. Training and Engagement

The training of the citizen scientists included a two-day professional workshop that took place at the American University of Beirut on 14-15 December 2020. It was followed by a two-day field training on 21-22 December 2020 (Figure 1). The workshop covered the research project and its objectives, research methods, research ethics, and three tools for conducting research: field observations, semi-structured questionnaires, and mental mapping. The citizen scientists were also trained to use the digital software Survey123 and Collector. The training sessions were in the form of interactive seminars in which the trainer presented the research project and the methodology and engaged in discussion with the citizen scientists.

The citizen scientists were then coupled with the team of researchers from The Beirut Urban Lab for two days in Karantina to facilitate the process of fieldwork, data collection, and guarantee a precise implementation of the process (Figure 2). Weekly meetings were organized to follow up on the work of the citizen scientists, address challenges and difficulties, and discuss preliminary findings. As was mentioned earlier, the citizen scientists collected in-depth data on the socio-economic profiles of local businesses and households, aid and relief efforts after the port blast, individual and group perceptions of neighborhood belonging, and the future vision for Karantina.



**Figure 1.** Professor Howayda Al-Harithy leading the training of the citizen scientists at the American University of Beirut in December 2020. Source: Mohammad El-Chamaa, 2020.



**Figure 2.** Citizen scientists collecting geo-referenced observations in Karantina in December 2020. Source: Ali Ghaddar, 2020.

The citizen scientists were also involved in the development of the urban recovery strategy and in the subsequent phases of the study. They became a focal point for the research team in Karantina and played a major role in connecting the team with the different community groups. The aim was to build their capacities, strengthen the connections to the local communities, and maintain the progress and credibility of the study.

The citizen scientists also participated in organizing, preparing, and inviting people to: (1) the thematic focus group discussions on the five transversal issues; (2) the town hall meetings to discuss community concerns, major issues and challenges, priorities, and future visions for Karantina; and (3) the workshops for co-designing community spaces. They also played a major role in identifying and connecting the research team to key individuals and community groups. They also assisted the research team in disseminating information on the strategic framework for urban recovery and participatory approaches by inviting representatives of the community groups to the capacity building workshops.

## TYPES AND SOURCES OF DATA

As was mentioned earlier in the report, due to lack of in-depth data on the socio-economic composition of Karantina, the research team mainly relied on primary sources and used secondary sources to conduct some comparative analysis and construct historic narratives.

### 1. PRIMARY DATA

#### Semi-Structured Questionnaires

The research team designed three types of elaborate questionnaires - including household, business, and building questionnaires - to collect in-depth data using the geo-referencing digital software Survey123. The questions focus on the socio-economic profiles of individuals and families - including their age, gender, nationality, level of education, employment, health condition, and rent tenure. The questionnaires also included questions on damage assessment, aid and relief efforts after the port blast, public spaces and socio-spatial practices, neighborhood quality and belonging, social and political activities, and neighborhood composition. Drafting future visions for Karantina also required an understanding of the physical conditions of the buildings, including their height and use and if they are abandoned or occupied.

The questionnaires were used to survey 545 households out of a total of 579, 83 businesses out of a total of 113, and 260 buildings out of a total of 280. The citizen scientists administered the household questionnaire and The Beirut Urban Lab research team administered the building questionnaire. The business questionnaire was administered as follows:

1. The citizen scientists were able to contact 62 micro businesses from Al-Khodor, Al-Saydeh, and Al-Senegal sub-neighborhoods.
2. The Beirut Urban Lab research team was able to contact 21 micro, small, to medium-sized chain businesses in the Industrial Zone.

The citizen scientists and The Beirut Urban Lab research team administered the questionnaires in person or online depending on the status of COVID-19 limitations on social contact. The results were geo-referenced to generate statistical charts and graphs for comparative analysis.

### Thematic Focus Group Discussions

The research team organized five thematic focus group discussion sessions between April and May 2021 to discuss the identified transversal issues in partnership with the United Nations Development Program (UNDP). Each session invited between 8 to 10 people from different socio-economic backgrounds in the Industrial Zone and each of the sub-neighborhoods of Al-Khodor, Al-Senegal, and Al-Saydeh. The main objective of the sessions was to form an in-depth understanding of the trends regarding each of the transversal issues that were identified in the descriptive memory report. The findings that were generated from these discussions informed the strategic diagnosis. The discussions were also an opportunity for the attendees to share their stories in a group setting and further understand individual and common challenges and pressing needs.

### One-to-one Interviews

The research team conducted two one-to-one interviews for every transversal issue with the local mukhtars, business owners, lawyers, and other key community group members. The interviewees were selected based on the issues they raised during the thematic focus group discussions and required further exploration. Additionally, the research team conducted more than 70 interviews between October 2020 and June 2021 to generate additional thematic narratives.

### Town Hall Meetings

As part of its community engagement to develop a holistic, bottom-up, and long-term strategic framework for urban recovery in Karantina, the research team at The Beirut Urban Lab planned a series of community group meetings to craft the shared vision statement. The first community group meeting was held on 11 April 2021 in the Karantina Public Park. The meeting hosted around 130 people that the trained citizen scientists invited across different age, gender, and nationality groups and sub-communities. The meeting empowered members of local communities to communicate their priorities, share their visions, and have an input in the urban recovery process. A second town hall meeting was held on 30 June 2021 in the Karantina Public Park to craft a shared vision with the local communities. The meeting was conducted as a workshop session that hosted around 70 people who were divided into four groups. Each group had a mediator from The Beirut Urban Lab research team to facilitate the discussion. The vision statement was crafted, tested, and verified during the meeting.

### Field Mapping and Field Observations

Data was also collected through site visits, field observations, walk-through assessments, and informal conversations. Subsequently, the collected data was discussed with the research team to validate the findings. The research team mapped the physical elements of the built environment like buildings and the socio-spatial practices in Karantina. The mapping was supported by data that was extracted from the answers to the household questionnaire on the number of household members, the types of socio-spatial and leisure activities that they engage in, and their use and perceptions of public spaces.

## 2. SECONDARY DATA

The research also relied on the collection and analysis of secondary data such as: (1) maps that trace the historical development of Karantina, (2) articles, reports, and documents about the militarization of lots, and (3) the descriptive memory report on Karantina that The Beirut Urban Lab drafted after the port blast. The descriptive memory report provided a general profile of Karantina that guided and informed the preliminary findings of the research. It situated the impact of the port blast within the longer term urban trends that influenced the development of Karantina over the past three decades.

### APPROACH TO THE ANALYSIS

The research team used different methods to conduct an in-depth analysis of the five transversal issues based on the data collected and the nature of the studied issue. The team used spatial analysis, statistical analysis, comparative analysis, cross-referencing content analysis, and benchmarking. Additionally, the team relied on the digital analysis software ArcGIS. ArcGIS allowed the research team to geo-reference the data, map spatial patterns, and, as a result, generate statistical charts and graphs for analysis. The statistical data, in specific, allowed the research team to compare certain findings across the different sub-neighborhoods and pinpoint changes over time, mainly before and after the port blast.

## VISION

In parallel to conducting the strategic diagnosis, the research team crafted the vision for Karantina. A shared community-based vision was formulated after several consultations with the different community groups and finalized during the town hall meeting on 30 June 2021. The vision was intended to guide the strategic framework for urban recovery that the research team will develop in the next step.

### The approach to crafting the vision

The first phase of crafting the vision included a content analysis of the household and business questionnaires to identify keywords from the responses to the question of *“how do you envision Karantina in the future?”* (Figure 3). The responses were then filtered and classified into function, description, and requirements. The number and repetition of certain keywords were significant in identifying the priorities of the local community groups (Figure 4). Based on the keywords, a first draft of the vision was formulated. It was then edited and finalized in consultation with the local community groups in two stages during two town hall meetings on 11 April and 30 June 2021. The vision was drafted at the first instance in Arabic and then translated into English to maintain the original meanings and intentions of the words of the local community groups.

### Vision

“ Karantina is a strategic, developed, and economically prosperous area. Its people are empowered and interconnected, its urban fabric is easily accessible, well planned, and environmentally conscious. It has adequate services, decent housing, and public and shared spaces

الكرنتينا منطقة استراتيجية متطورة ومزدهرة اقتصادياً. إنها منطقة مجتمعها متمكن ومتربط تكون سهلة الوصول ومنظمة عمرانياً ونظيفة بيئياً. تتوفر فيها خدمات ملائمة، سكن لائق، ومساحات عامة ومشاركة

Visions of Karantina	
<b>Purpose of the area</b>	
Industrial	50
Touristic	34
Economic	20
Commercial	9
Residential	2
<b>Description of the area</b>	
Modern	73
Urbanistically organized and developed	57
Social	44
Prosperous	39
Clean	27
Beautiful	27
Cultural Growth	18
Strategical	18
Open	12
Calm	12
Secured	7
The gate of Beirut	3
<b>Qualification for the area</b>	
Coexistence	68
Services (Hospital - School - Clinic - Nursing home)	50
Job opportunities	40
Public and green spaces	40
Clean and tidy streets	18
Entertainment locales	13
Affordable and decent housing	8
Return of appropriated land	8
Empowerments of women and youth	6
Infrastructure upgrading	5

Figure 3. Identifying and sorting keywords from the questionnaires for the vision statement. Source: The Beirut Urban Lab, 2021.



Figure 4. Town hall meetings in the public garden in Karantina on 11 April and 30 June 2021. Source: The Beirut Urban Lab, 2021.

Transversal issue I

# Affordable and Inclusive Housing in Karantina

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# 1. INTRODUCTION

Housing in Lebanon, and more specifically in the capital city of Beirut, is characterized by rising unaffordability and high vacancy rates. This was caused to the financialization of property and has transformed the provision of housing into a commodity rather than an essential form of shelter and a human right as defined in Lebanese law (Fawaz, Salamé, and Serhan, 2017). The amendment of the 2004 Building Law, among other state interventions, contributed to the rent gap, thus causing an increase in the construction activity, which had already started in the post war period. This resulted in the demolition of many residential units that were replaced by high-rises causing the evictions of many households. High-rise buildings were meant to attract foreign capital as a form of direct foreign investment (Marot, 2018).

In the context of a stable Lebanese currency exchange rate, housing became a financial vehicle for real estate speculators. Prior to those catastrophic events, housing was also undergoing a series of changes relating to rental laws, which were themselves contributing to unaffordability and a lack of inclusivity. Rent in Beirut is characterized by two different legal forms of tenure: the old rent (pre-1992) and the new rent laws. Outside of this system, there are informal rental and rent-pooling agreements (whereby several individuals or families rent one property), which add a third dimension. This situation has been exacerbated by the twin effects of the Lebanese financial crisis, which began in 2019, and the port blast in 2020.

Housing in Beirut is also characterized by crippling infrastructure and scarce public spaces. A lack of vacancy tax which encourages owners to keep their apartments off the market contributes to high rents. Prior to the blast, Karantina was beginning to be a destination due for developers to the availability of affordable and vacant or abandoned lots.<sup>1</sup> Although informal squatter settlements are no longer part of the housing landscape of Karantina, they have since been turned into brownfield sites or have been covered with prefabricated hangars for storage.

This section examines housing in Karantina as it relates to affordability and inclusivity which are discussed using the shorthand term 'access'. Karantina, which is a product accumulation of idiosyncratic and historical trends, has been affected, by the civil war, massacres, neglect, the wider economic crisis, and the port blast, to varying degrees. In broad terms, access to housing is defined by several determinants including loans, informality of tenure, displacement, currency devaluation, social capital, as well as artificial unaffordability created as a result of lack of policies to decrease vacancy rates in the city. The following section of this report begins with a brief consideration of the methodology used and gives an overview of Karantina's population and the development of its housing stock. This supports the diagnosis and wider analysis of this report and delves into the determinants of housing insecurity in the aftermath of the port blast on August 4 2020. The section then moves to assess the affordability and inclusivity of housing in Karantina in the post-disaster phase and contextualizes its findings in relation to the trends that previously existed.

This section of the report finds that Karantina is, overall, affordable when examined in relation to the rest of Beirut. However, as oral testimony (qualitative data) and statistical and other quantitative data gathered for this report demonstrate, Karantina has become relatively unaffordable to many of its residents when additional economic burdens are taken into consideration. These include relative income and high unemployment rates, a series of 'hidden' costs (which weigh heavily on household resources), and a general lack of amenities. Additionally, Karantina has a diverse population, which may suggest inclusive access to housing. However, as discussed in this report, inclusivity is affected by a range of factors including kinship, informality, lack of development, and lack of physical accessibility.

<sup>1</sup> For a more detailed discussion on affordability and the vacancy of land see the report on Transversal issue IV on Inclusive and Sustainable Development in Karantina.

## Position

The term affordability is typically defined in economic terms and measured by the amount of household income spent, in this case on housing. For Stone, Burke, and Ralston (2011: 11) housing affordability depends on consideration of three elements: to whom it is affordable, the standard of affordability, and for how long it is to be regarded as affordable. Thus, 'affordability' is an interaction between income, housing costs, and additional needs (as determined by household size). However, as Perera and Lee (2021) argue, the income-cost ratio must also be set in the context of available services and amenities, the prevailing vacancy rate, adaptive reuse of space, and other relational lenses such as "transportation costs, neighborhoods quality, and housing density." Therefore, this section expands on the traditional definition of affordability by including some of these additional factors.

Moreover, housing affordability must also be related to housing inclusivity, since this incorporates awareness of where households live and in what kind of housing. As Espino (2015) argues, inclusiveness taken from a spatial dimension means "the need to plan and design cities so that vulnerable social groups are not pushed out, isolated, and marginalized from important urban services, amenities, commercial flows, and jobs." In the Lebanese context, vulnerable social groups include refugees, the elderly, children, and the disabled, with potential threats, such as a lack of development, kinship, overcrowding, and lack of physical accessibility, contributing to a lack of inclusivity.

## Hypothesis

The disruptive actions by landlords after the port blast, such as evictions, rent hikes, and the conversion of residential units into commercial spaces, are a result of the post-disaster reality as well as the ongoing economic crisis. Therefore, there is a threat of losing the social diversity and the housing affordability in Karantina which has always hosted low-income groups who sought living and working in proximity to the city center. Tension between different nationalities, as well as different sectarian groups, threatens the diversity of Karantina's housing occupancy. Additionally, there is the threat of large-scale development and gentrification which might affect the availability of low-income housing stock.



## 2. METHODOLOGY AND DATA COLLECTION

This section of the report details the mixed-method approach (quantitative and qualitative) that is used to examine affordable and inclusive housing. In addition to data collected by the citizen scientists and in-depth interviews conducted with residents, this section has used historical maps and building permits to describe the constant evolution of housing in Karantina.

### SOURCES OF DATA COLLECTION PRIMARY DATA

Our sample size was selected to be representative of the community, surveying 1980 residents out of a population estimate of 2500, or the equivalent of 545 households out of a total of 579.<sup>2</sup> The data was then segmented into the three residential sub-neighborhoods of Al-Saydeh, Al-Khodor, and Al-Senegal and evaluated as such. The reason for this approach was because each sub-neighborhood has its own trajectory, and predominant demographics, such as income, religious groups, tenure, and age.

The fieldwork data revealed certain trends. During the qualitative phase of the research these trends were then discussed with our stakeholders: at two town hall community meetings held on 11 April 2021 and 30 June 2021, and in five thematic focus groups (one per transversal issue). The focused thematic discussion on housing was held on 29 April 2021. It explored the future of housing security among the diverse residents who access housing using different modes of tenure. All the attendees at the town hall meetings and the focus groups were from the three sub-neighborhoods; Ali Jaber, a lawyer who specializes in housing disputes and related issues, was also present to respond to any raised concerns. To understand affordable and inclusive housing as a transversal issue, this section of the report extracted specific socio-economic answers to the questions posed in relation to the household questionnaire. These included tenure, income, expenses, family members, place of occupation, schooling, repairs being done, injuries, illnesses, and date of moving in. The answers reinforced the quantitative data that was gathered during the fieldwork.

Additional qualitative data was gathered through one-to-one interviews with locals from each sub-neighborhood, these addressed questions about length of tenure, type of tenure, entertainment and leisure patterns, employment, education opportunities, and the impact of the Blast on their current standard of living and security of housing tenure in its wake.

### SECONDARY DATA

To support the analysis of the primary data, the section drew on a range of scholarly literature (including articles, monographs, and relevant dissertations) about Karantina, its historical and contemporary situation, and the development of housing in the area, in Beirut, and in Lebanon more generally. Given the dynamic evolution of Karantina and of each sub-neighborhood, and to illustrate what has gone on historically, the section also uses a series of historical maps and photographs. These include British military maps from the 19th and early 20th centuries and French aerial photos from 1931, the latter were originally intended for cadastral use. Finally, where appropriate, the section draws on the field observations of the researchers - these were the result of engagement in fieldwork as well as volunteering in the post-blast reconstruction.

<sup>2</sup> This corrects the number of WFP which estimates the population of Karantina to be around 6000 (WFP, 2020)

## METHODS OF ANALYSIS

This section uses comparative analysis to assess affordability and inclusivity. It does so by cross-referencing different variables (e.g., Rent hikes, evictions, informality, and adaptive reuse) against established benchmarks, and by using data analysis of factors of housing insecurity in the area.

The data gathered was located and spatialized through ArcGIS to showcase the correlation between variables, including those related to rent, nationality, evictions, and demographics. The resulting maps provide a further spatial demonstration of the data gathered in the quantitative research phase and confirmation of the observed trends. Statistical data was also classified using Excel and represented and analysed through bar graphs and pie charts.

## 3. IN-DEPTH PROFILE OF THE RESIDENTIAL LAYER OF KARANTINA

### 3.1 Development of Residential Settlements in Karantina

#### A. Al-Saydeh

The oldest built settlement of the sub-neighborhoods is Al-Saydeh, which is on the western edge of Karantina. It first started around 1850 - when Maronites from Mount Lebanon relocated to the area of the Quarantine, which was an extension of today's Mar Mikhael (Eddé, 1996). This increase in the population was demonstrated by the construction of the new Mar Mikhael Church in 1883<sup>3</sup> (1994, الدبس) (Figure 1) and the designation of a new parish. By the late 1870s, signs of a spillover began to show with buildings springing up in what is today Al-Saydeh (Figure 2). By the turn of the century, the Saydat Al Najat Church was built (2003, كيروز).

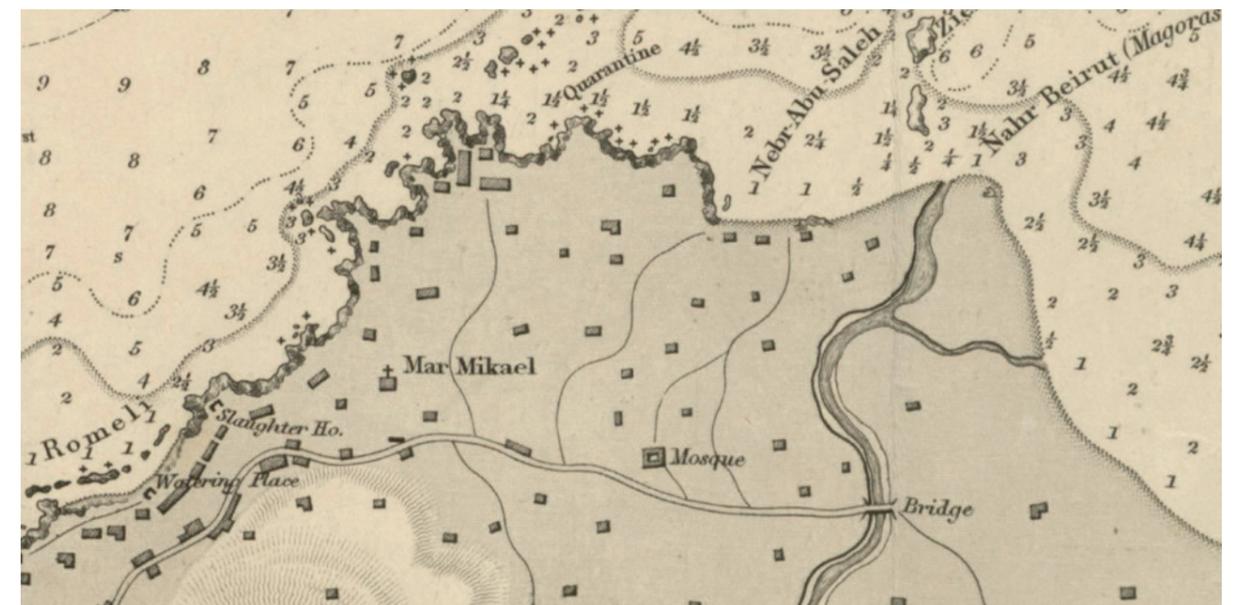


Figure 1: Mansell Map from 1862 showing early development and settlements in Karantina. Source: The National Archives, Kew.

<sup>3</sup> An older structure existed in the same place. As reported by Debs, the older church was built during the 1930s, and was demolished on his order to make way for the new church.



Figure 2: Karantina from 1876 showing the growing cluster in Al-Saydeh. Source: Löytved, Julius.

This new church is where Al-Saydeh gets its name from. However, Al-Saydeh was later physically disconnected from Mar Mikhael first due to the construction of the railway in 1895 and later the Charles Helou Highway in 1958. According to one long-term resident, the boundary between Al-Saydeh and Mar Mikhael was called the Rail because “the railroad ran through it.”<sup>4</sup> The morphology of Al-Saydeh grew around the roads which connected the Lazzaret to the city including the coastal road linking it to the center of Beirut, and the Ibrahim Pasha Road which starts from the Old Tripoli Road (today known as Armenia Street) (Figure 2).

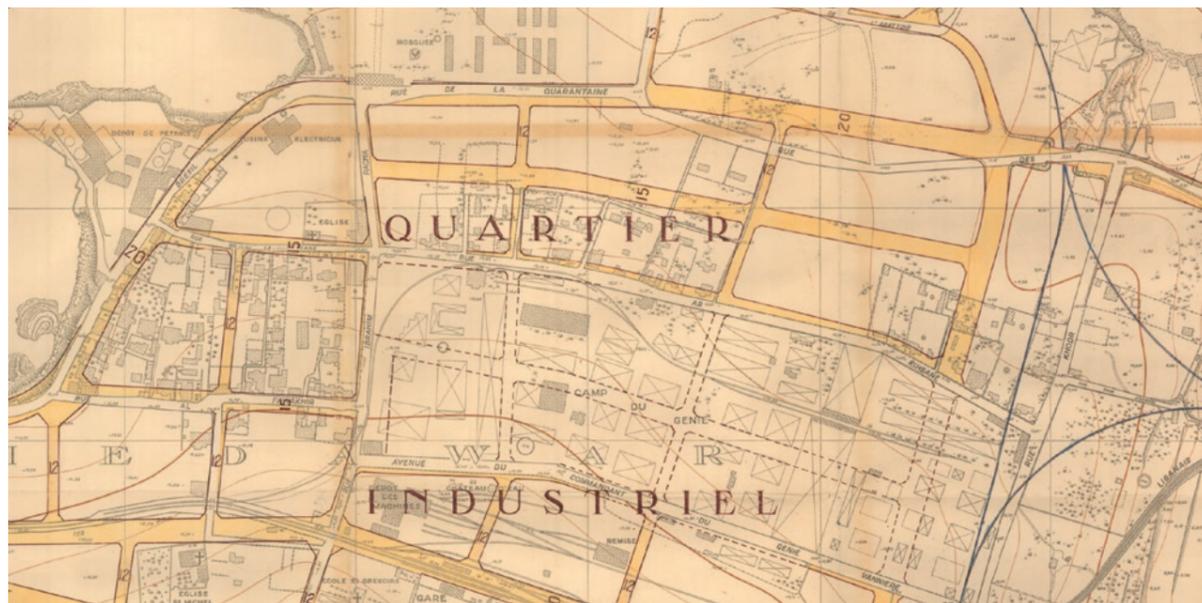


Figure 3: The Danger Plan showing Al-Saydeh and Al-Senegal sub-neighborhoods. Source: Danger frères et fils. (1931-32). Plan d'aménagement, d'embellissement et d'extension de Beyrouth (Liban): plan partiel projeté (éch.1/2000e).

One of the primary consequences of this sequence of developments, as can be seen from the maps in Figures 1 and 2, is that many of the buildings which exist in the sub-neighborhoods today were built between 1900 and 1940 (Figures 3 and 4). In the aftermath of the port blast, however, much of the surface plaster of the buildings were removed during the clean-up and renovation process which uncovered much of the historical layering. This showed that the bottom floors were built from sandstone and many of the top floors were made of bricks and mortar. Since concrete was first used in construction in Lebanon in the 1920s (Saliba, 1998), a lot of the vertical density did not exist until after the First World War.



Figure 4. Housing typologies in Al-Saydeh sub-neighborhood between 1900 and 1940. Source: Abir Cheaitli, 2021.

It allows us to deduce that at least some of the buildings in the original cluster were adapted and layered upwards with additional storeys, morphing into their current state. A 1942 building permit provided by one building owner corroborates this layering process, whereby a part of the original structure was knocked down to make way for a modern extension of the building. Whereas both the first and second floors of the original structure were made of sandstone, showing that they were likely to have been built before 1920, all four floors of the extension were built of concrete, and so after 1920, as confirmed by the 1942 permit. Most of the typologies are multi-storey walk-ups, where units have a central hall plan.

4 E.C., (2020-October), (Mohamad El Chamaa- Interviewer).

A final layer in this historical evolution of building typologies are apartments and offices dating from the 1980s onwards (Figure 5). These have larger footprints and modern finishes. Each street in the sub-neighborhoods, thus, has a mix of typologies from different eras, which can be easily observed. These include the central hall typologies from the 1880s to the 1920s, multi storey walk-ups from the 1930s to the 1950s, and the modern typologies. There are some hybrids, too, whereby some buildings started off as central halls built from sandstone and were expanded into multi stories or were retrofitted into single apartment walk ups.



Figure 5. Housing typologies in Al-Saydeh I sub-neighborhood from the 1980s onwards. Source: Abir Cheaitli, 2021.

## B. Al-Khodor

Al-Khodor sub-neighborhoods is one of the earliest settlements in Karantina. It takes its name from the eponymous Al-Khodor mosque<sup>5</sup> that is now separated from Karantina by the Charles Helou highway. It also lends its name to Al-Khodor administrative sector which extends from Armenia Street, past the highway into Karantina. The history of the sub-neighborhood is strongly associated with the arrival of Arab tribes around the 1850s and the building of the slaughterhouse. By 1862, a slaughterhouse appeared on the map originally west of Karantina (Figure 1). It was moved to its current location, east of the Quarantine, by 1910. This rooted the Arabs there, firstly in a tented community (Figure 6) and then in permanent constructions. Aerial photography, taken in 1931, shows the presence of bricks and mortar housing of at least one storey (Figure 7). According to Bourjy and Phares (1973), twenty cement buildings were built at this time, whose ground floor functions were intended initially as storefronts, but in fact housed cattle, and the floors above housed the families of the Arab tribes. Most of the typologies are single apartment walk-ups built on small lots. There was also a greater Al-Khodor area that consists of 130 informal dwellings, called Tanak, made of wooden planks and covered with a corrugated roof, 88 of concrete and galvanized metal sheets, and finally 81 formal buildings built with concrete.

<sup>5</sup> The mosque's architecture as well as other written sources point to the fact that the structure was originally a Byzantine era chapel.



Figure 6: Tents of the Arab tribe in Karantina. Source: The Postcard Collection of Issa Iskandar Maalouf, Beyrouth. Jafet Archives and Special Collections at the American University of Beirut.



Figure 7: Aerial Photo, taken in 1931, showing Armenian and refugee Tanke settlements. Source: Sandra Frem, 2009.

In 1976, during the civil war years, the tanak settlements and the concrete settlements were cleared by the Militias of the Lebanese Front, and the residents (Kurds, Arabs, Palestinian, and Lebanese Shiite) were displaced either to Jnah or Khaldeh. Additionally, an entire city block was destroyed along with the many tanakes that surrounded it. The surviving buildings were then occupied either by the Lebanese Forces Militia or by displaced Christians from the mountains. After the end of the civil war, many of the original residents were either unable to return due to the ongoing militarization of the sub-neighborhoods or were unable to rebuild their homes because of many factors. These are explored in a later section in this report.

Al-Khodor sub-neighborhood is mainly characterised by mixed use apartment walk-up typologies with store fronts on the ground floor and residential units above. Anchored around the slaughterhouse, most of the buildings are fenced on tertiary and secondary roads, and some of the corner lots are in the form of L-Shaped typologies. Many of the storefronts were originally used to house cattle in them. The period in which they were built varies, with some stretching back to the 1930s. Most of the buildings are three to four-story walk-up apartments, with the exception of one in-fill condo typology built in 2006. (Figure 8).

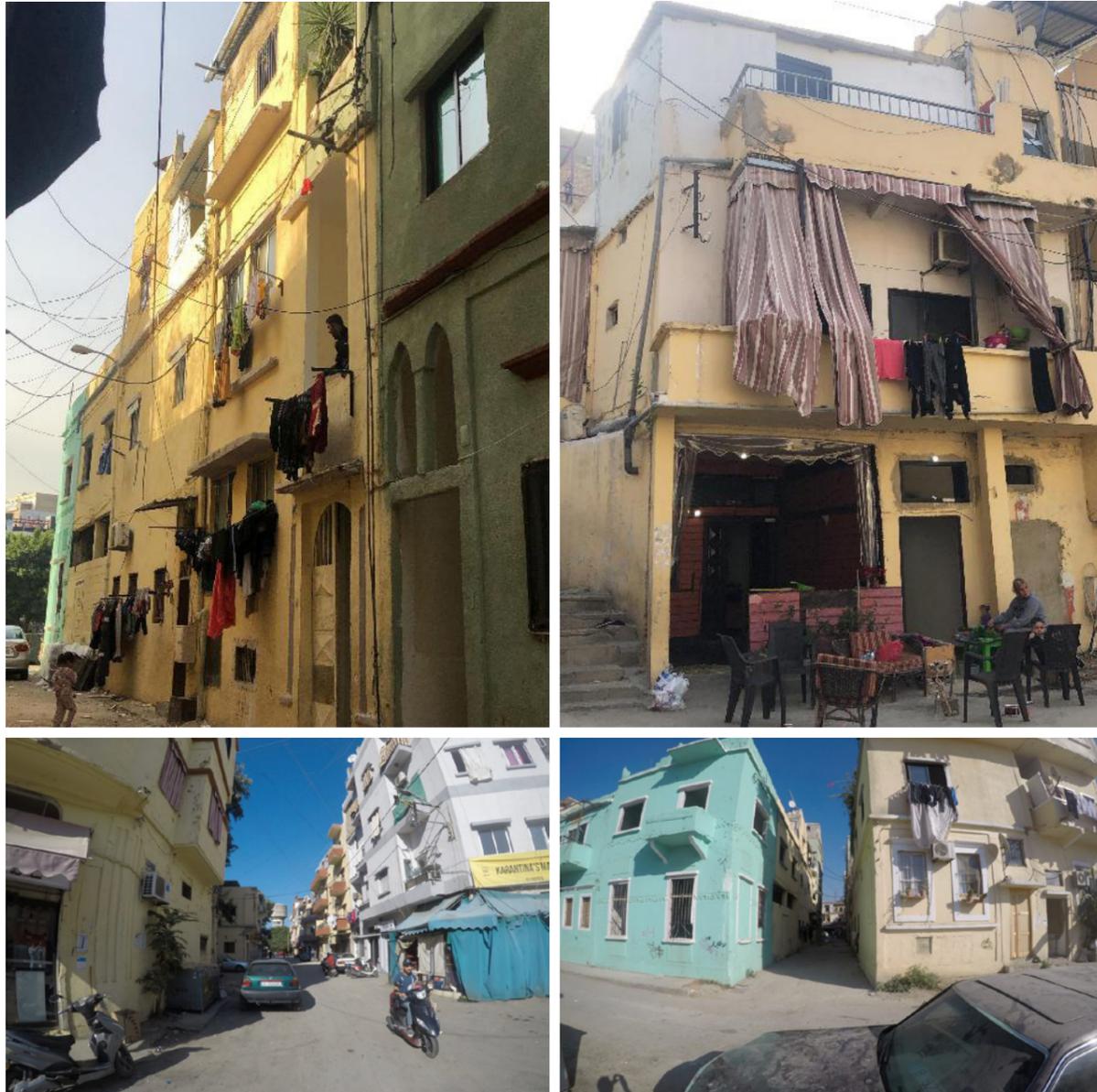


Figure 8. Street views and housing typologies in Al-Khodor sub-neighborhood from the 1980s onwards. Source: Abir Cheaitli, 2021.

### C. Al-Senegal

Al-Senegal sub-neighborhood is named after a west-east street connecting Al-Saydeh and Al-Khodor sub-neighborhoods, and is bounded by the quarantine to the north and the Rahben Road to the south (Figure 9). The land that makes up Al-Senegal today was originally a transit camp for Armenian refugees established by the French authorities in 1920 (Chantre, 2016). Hundreds of tents were set up next to those of the Arab tribes in Al-Khodor (Bourjy and Phares, 1973) but formed a separate community. Through these tents, the French authorities were better able to distribute food and medical aid to the Armenian refugees. The French authorities allowed converting the tents into the Tanak typology in 1926, thereby setting a precedent that remained until 1976 (ibid). This typology consisted of wooden walls covered by a correlated roof (hence the name Tanke). In the next few years, the number of “tanakes” grew from 10,500 in 1922 to 14,600 by 1925. The “tanakes” stretched to the eastern side of Karantina next to the river. However, the population of the sub-neighborhood never exceeded 15,000 people because of the limited amount of space and the mobility of the residents (Bourjy and Phares, 1973).



Figure 9: Map of Beirut, drawn in 1959, showing Karantina Park lot cleared out and the Senegal Street paved. Source: Service Géographique. Rice University: Levant Iconography.

Armenian camps in Mar Mikhael began to be cleared in 1929, including the transit camp in today’s Al-Senegal. Many of the residents were rehoused across the river in Bourj Hammoud (Bourjy and Phares, 1973). By the 1940s, enough space was thereby cleared to allow for the formal development of the Al-Senegal sub-neighborhood (see Figures 7 and 10 for comparison). Based on the visible differences between the 1931 aerial footage and the 1941 map, it appears that the western portion of the Armenian tanakes, which covered the area next to the quarantine, was removed, whilst leaving the eastern portion intact.

The original plans to carve out Senegal Street date back to the Danger Plan of 1931 (Figure 3) but was only constructed in the 1950s. After Senegal Street was carved out, the buildings behind those facing the Rahben road now bordered a new street (Figure 9) and new modern buildings were constructed on the other side of the road (Figure 11).



Figure 10: British map, drawn in 1941, showing the wiped out tanakes after the 1933 Karantina fire. Source: Great Britain. Army. Royal Engineers. Field Survey Company, 512th.



Figure 11: Al-Senegal Street housing typology. Source: Abir Cheaitli, 2021.

### 3.2 In-Depth Profile of the Population of Karantina

#### A. Social makeup of the current residents

Karantina is made up of an area of 61.5 ha and a population of 2460, and a population density of 40 people/ha. This is much less dense than elsewhere in Municipal Beirut, where the figure is 207 people/ha (Council for Development and Reconstruction, 2013). The three sub-neighborhoods, Al-Saydeh, Al-Khodor, and Al-Senegal, which together make up the residential portions of Karantina, are home to a diverse population (Figure 12). The sample surveyed consists of 1980 residents, of which more than fifty per cent are Lebanese (Figure 13).

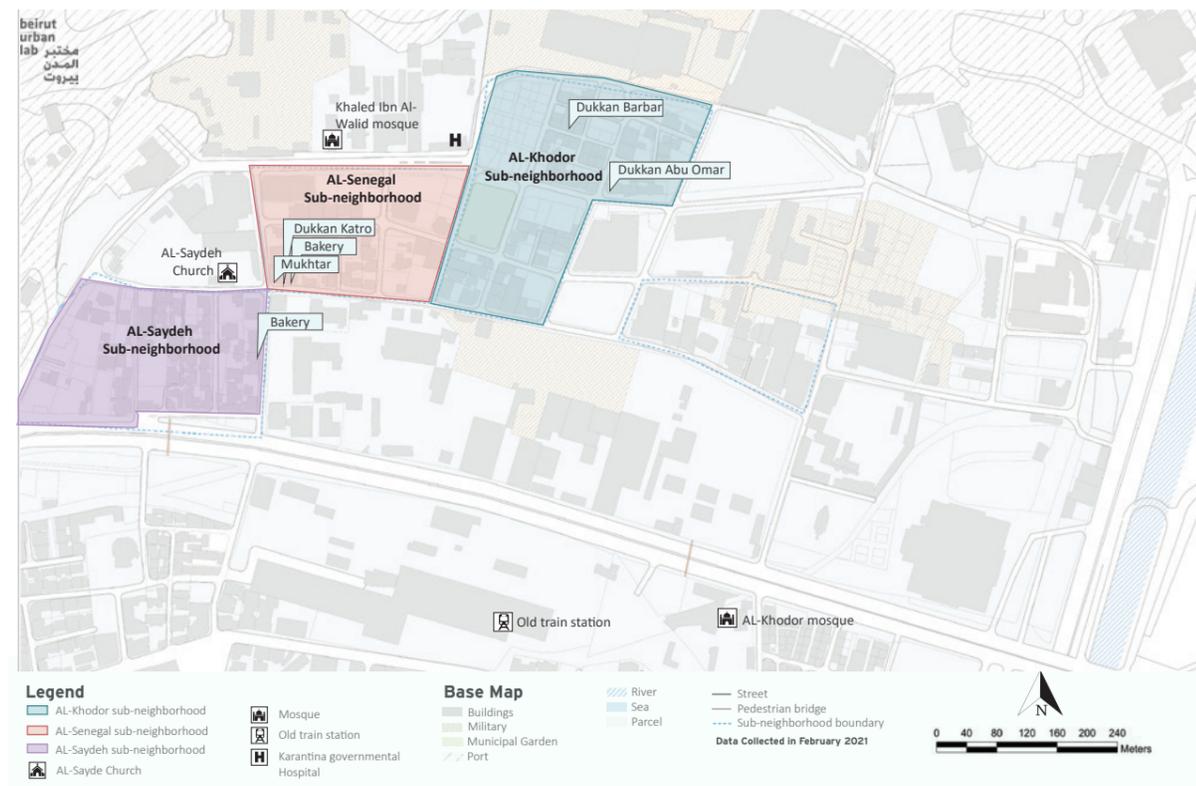


Figure 12: The three sub-neighborhoods in Karantina. Source: The Beirut Urban Lab, 2021.

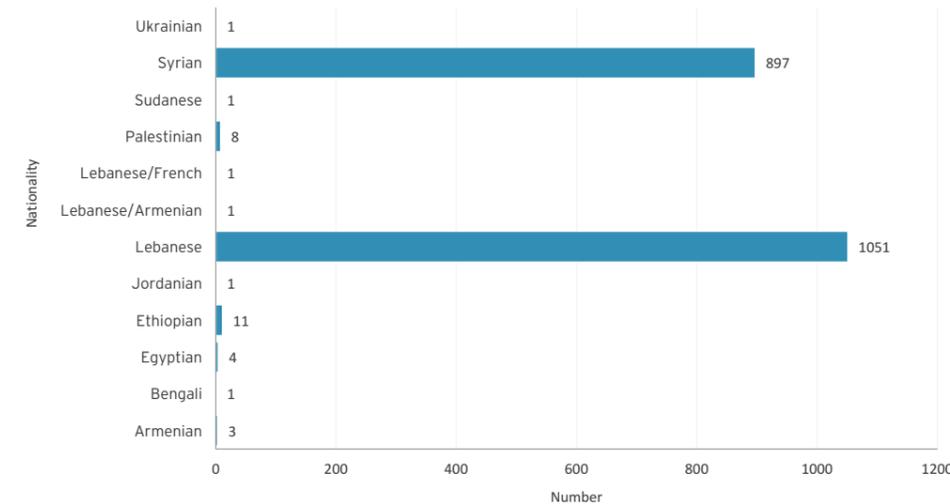


Figure 13: Distribution of nationalities in Karantina. Source: The Beirut Urban Lab, 2021.

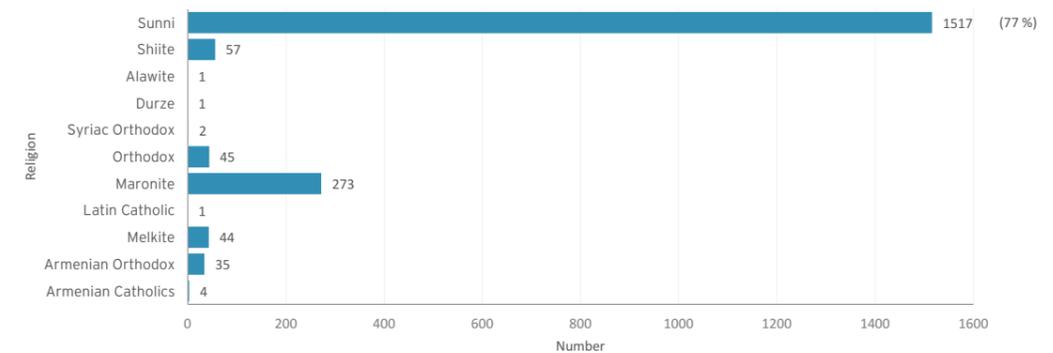


Figure 14: The distribution of religious affiliations in Karantina. Source: The Beirut Urban Lab, 2021.

The population is predominantly Muslim: there are 1576 Muslims in the sample compared with 404 Christians (for the denominational breakdown see (Figure 14).

The average age of residents in Karantina is 30, with those surveyed ranging in age from a few months to 107 years old. The average annual income is 14,086,972 Lebanese Pounds, and ranges from 1,200,000 to 50,000,000 Lebanese Pounds per annum<sup>6</sup>. These statistics differ according to sub-neighborhoods. Each sub-neighborhoods evolved separately and during different periods of time, in some cases as part of other areas of the city and have been affected by historical disasters and different migration and displacement patterns.

The nationality distribution in each sub-neighborhoods were as follows: Al-Saydeh and Al-Senegal were predominantly Lebanese whereas Syrians represented the largest nationality in Al-Khodor owing to its status as a host community for refugees (Figures 15, 16, and 17).

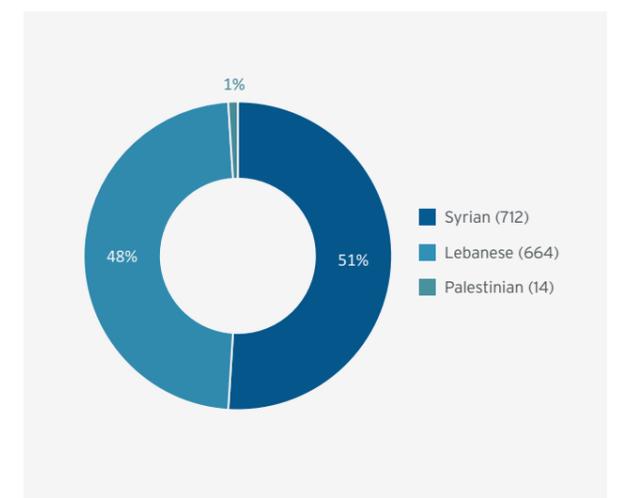
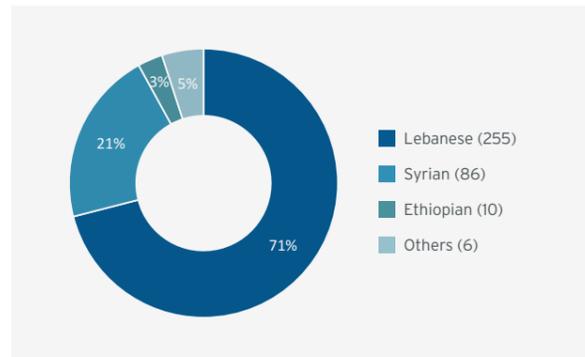
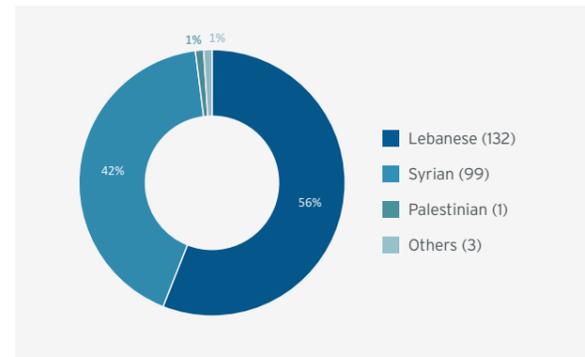


Figure 15: The distribution of nationalities in Al-Khodor. Source: The Beirut Urban Lab, 2021.

<sup>6</sup> The US dollar rate at the time of collecting the data was 1 USD = 1500 LBP

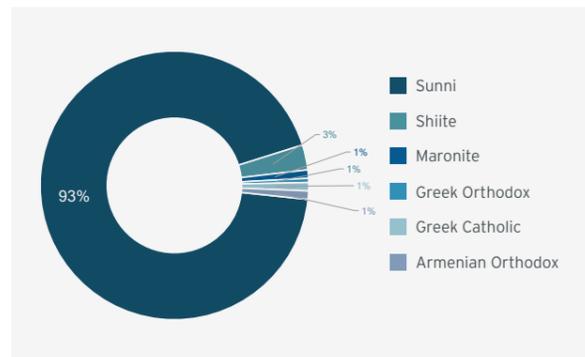


**Figure 16:** The distribution of nationalities in AI-Saydeh. Source: The Beirut Urban Lab, 2021.

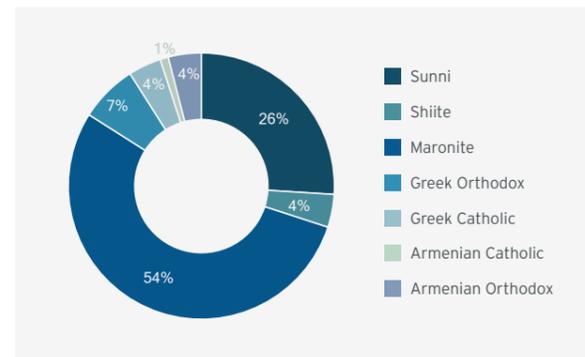


**Figure 17:** The distribution of nationalities in AI-Senegal. Source: The Beirut Urban Lab, 2021.

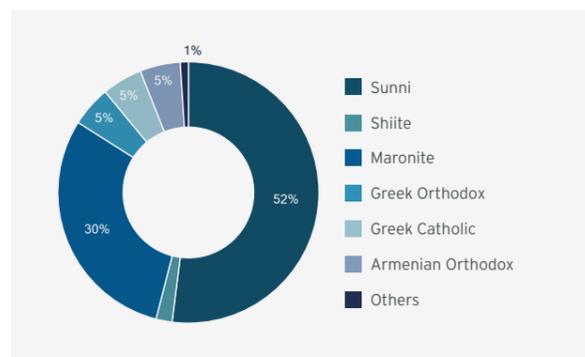
As for religious confessions, there was a polarity between AI-Khodor and AI-Saydeh, where the latter was predominantly Christian and the former Muslim. Whereas AI-Senegal was more mixed with Muslims, forming an overall majority at 56% and the rest were Christians. Unlike the Muslims, however there was a diversity of sects among the Christians (see Figures 18, 19, and 20).



**Figure 18:** The distribution of religious confessions in AI-Khodor. Source: The Beirut Urban Lab, 2021.

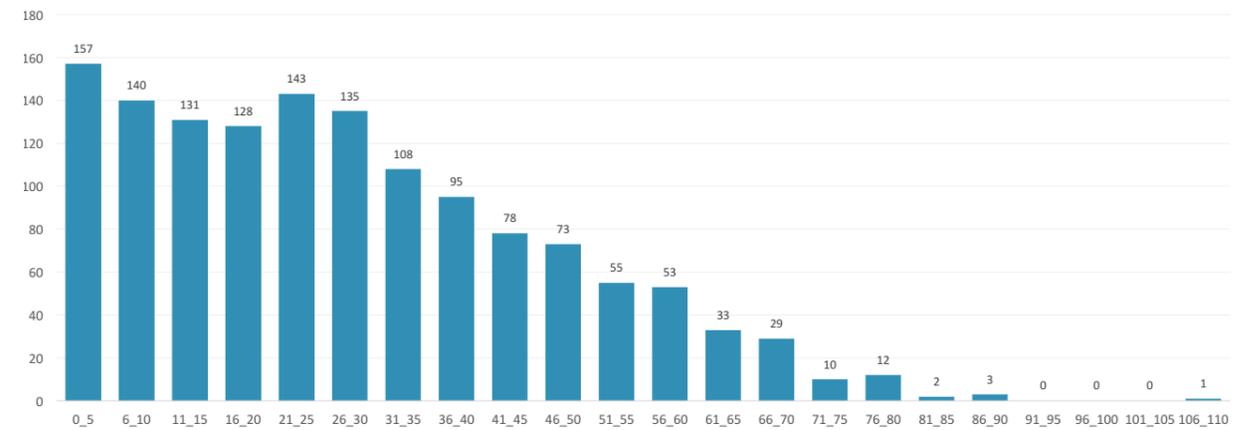


**Figure 19:** The distribution of religious confessions in AI-Saydeh. Source: The Beirut Urban Lab, 2021.

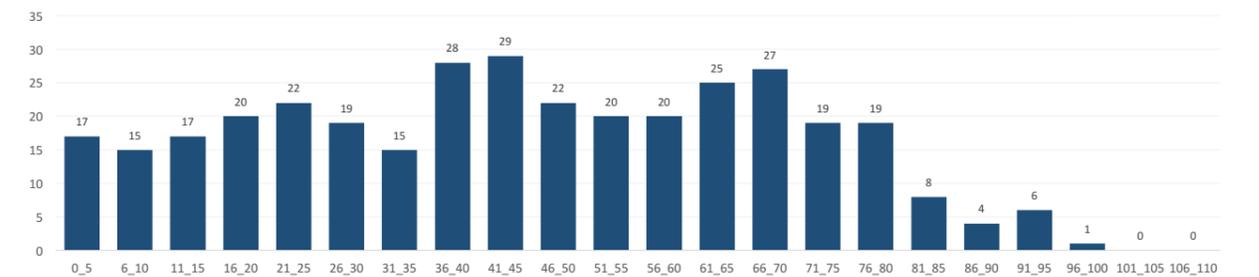


**Figure 20:** The distribution of religious confessions in AI-Senegal. Source: The Beirut Urban Lab, 2021.

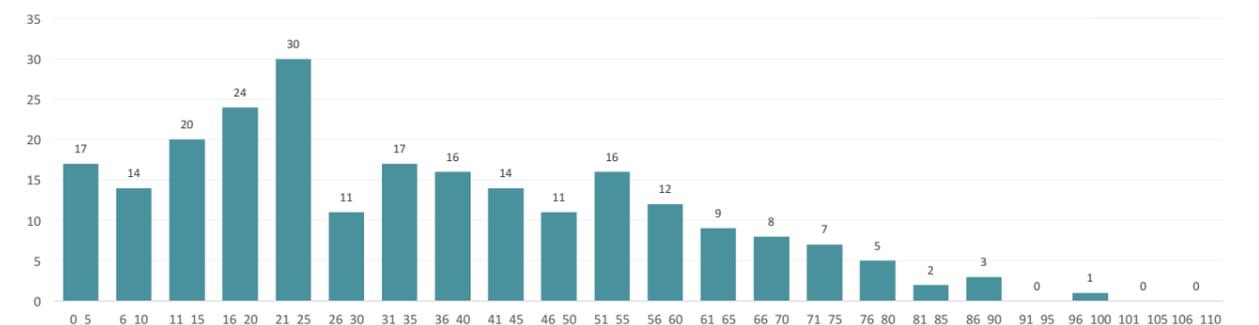
As for the breakdown of age groups, AI-Senegal and AI-Khodor tend to skew towards the younger generation, while in AI-Saydeh its spread is scattered across age groups and not completely weighted to the younger generation (Figures 21, 22, & 23).



**Figure 21:** The breakdown of age groups in AI-Khodor. Source: The Beirut Urban Lab, 2021.



**Figure 22:** The breakdown of age groups in AI-Saydeh. Source: The Beirut Urban Lab, 2021.



**Figure 23:** The breakdown of age groups in AI-Senegal. Source: The Beirut Urban Lab, 2021.

## B. Types of Tenure

In Lebanon, tenants live under either the “Old Rent” or the “New Rent” law. The former is covered by the successive extensions of strict rent control, the latest being in 2011. It guarantees “a strict rent control that has neither accounted for the progressive devaluation of the Lebanese currency in the 1980s-1990s period nor prices of inflation” (Khechen, 2015, p. 14). Until recently, rents were still fixed at the pre-hyperinflation rates. However, the lack of self-generating funds left landlords with no money to maintain the building or improve it. Therefore, many rent-controlled buildings became a burden to their owners: the only way out is to sell them to developers who, in turn, ultimately demolish the property to take advantage of the latest Building Law from 2004. In 2014, the old rent tenure was upended with a new law that stipulated gradual rent increases until 2026, at which point the house is returned to its owner.

The new rent law as of the 1992 legislation, whereby residents can either sign a one or three-year lease with no rent control or compensation in the face of eviction. New rent tenants also encompass those without a formal contract. Landlords claim that informal arrangements make rent cheaper. This arrangement happens for various reasons such as tax evasion, informality in the building structure, and illegal status of the tenant, etc. However, it facilitates for the landlords to evict tenants.

In Karantina as a whole, tenure of property is mixed where 22.4% of households own their own homes, 58.5% are new rent tenants, 14.3% are old rent tenants, and the remaining 4.8% (or 26 households) are hosted for free (Figure 24).

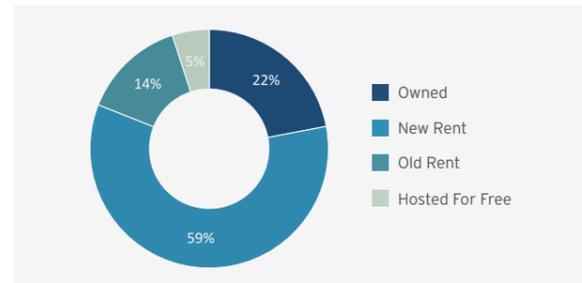


Figure 24: Property ownership and rent. Source: The Beirut Urban Lab, 2021.

Of the households that are hosted for free: 14 are Lebanese, 6 are Syrians who arrived prior to 2011, 5 are Syrian refugees, and 1 is Ethiopian. The average income amongst households where tenants are housed for free is 830,000 Lebanese Pounds.

Tenure according to each sub-neighborhoods, thus, reveals certain nuances. In Al-Saydeh, for example, the most common form of tenure comes under the old rent system, which is not the case in the other two sub-neighborhoods. By contrast, in Al-Khodor, most of the rental agreements are new but reflect situations where tenants do not have a formal rent contract (Figure 25). Al-Khodor sub-neighborhood is mostly new rent because it is a host community for refugees, including those who arrived after the outbreak of the Syrian war in 2011. Moreover, there is a sizable section of the population who rent in the sub-neighborhoods who were displaced during the Lebanese civil war and have not yet returned to their houses. The reasons for that displacement are discussed further below.

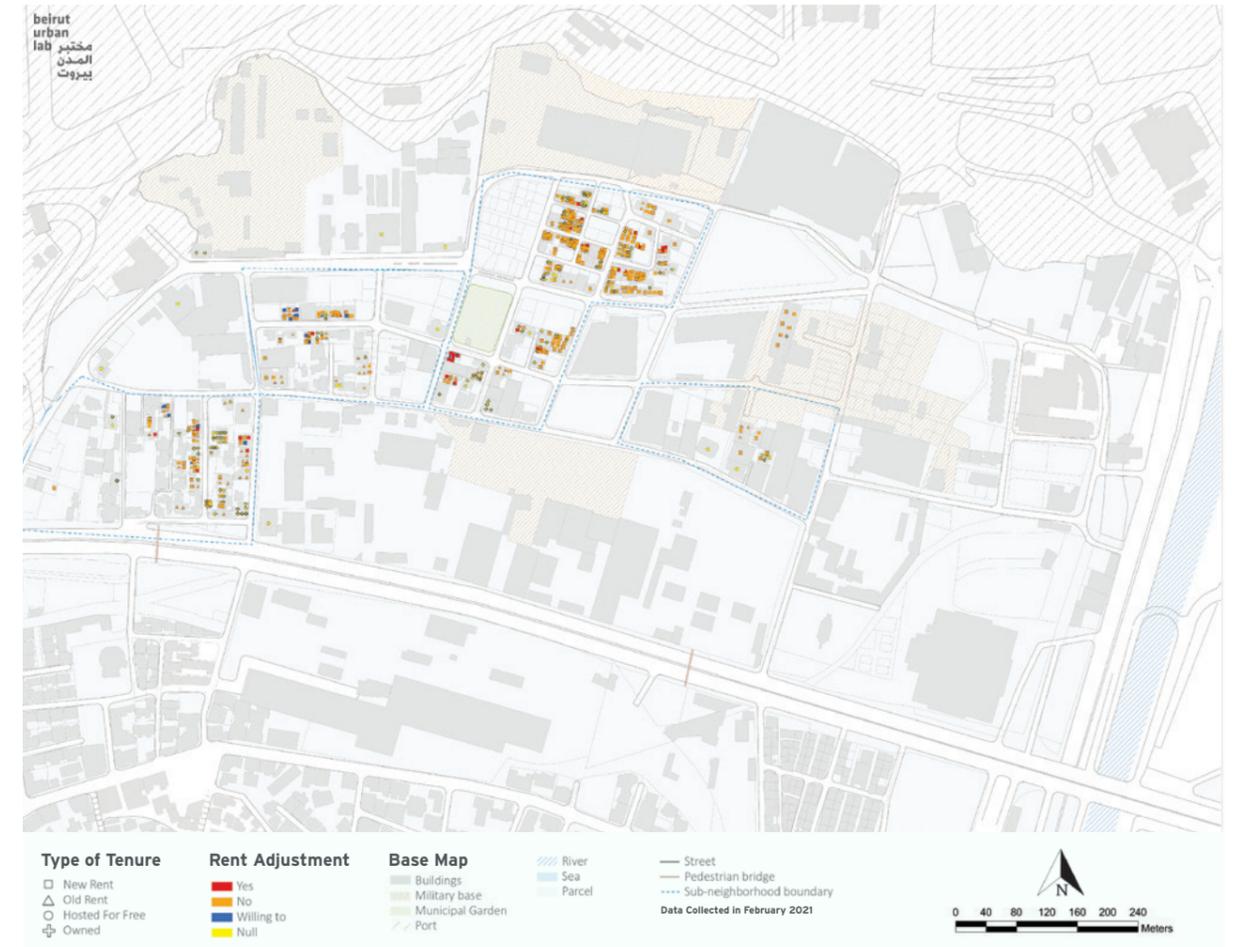


Figure 25: Type of tenure versus rent adjustment. Source: The Beirut Urban Lab, 2021.

## 4. PROBLEM DEFINITION

The provision of housing in Karantina is in a vulnerable state, and there is an urgent need to safeguard the tenure of its residents in the post blast phase. Housing insecurity threatens to displace the area’s residents from the city, or increases their vulnerabilities. The area faces a challenging process of recovery.

Several key issues negatively affect the affordability and inclusivity of housing in the area, and they are identified as follows. The income-to-rent ratio in Karantina is high, with many paying more than 30% in rent. The vacancy rate contributes to this by ensuring there is less housing stock available and thus prices are driven up. Access to services such as education, leisure, and healthcare is limited, with the area further impacted by fading infrastructure and enclaving from the city.

Additionally, post-blast repairs are making housing less affordable, with renovations leading to increases in rent and rates of evictions, or threats thereof. The second issue related to inclusivity. Karantina is home to a diverse population in terms of religion and nationality. However, in terms of income and accessibility, this is not the case.



# 5. DIAGNOSIS TRACKS

## 5.1 Affordable Housing

This report defines affordability in relation to income, but also in relation to access to services, and availability of housing stock (vacancy rate). A series of localised indicators were also added to measure affordability. This section has investigated rent hikes and evictions in Karantina since the port blast and found a causal relation that was enabled and exacerbated by pre-blast conditions. The vacancy rate applies because supply and demand affect rent: a decrease in the supply of houses removes units from the market, which creates scarcity (The Beirut Urban Lab, 2019). Vice-versa, decreasing the vacancy rate can unleash a stock of housing into the market and open a window for affordability based on wider availability. This has historically played a role in migration patterns in Karantina. For example, in the 1940s many Lebanese-Armenians in Karantina moved to Soviet Armenia or to other neighborhoods, releasing a stock of affordable housing in Burj Hammoud and Karantina onto the market, which was quickly acquired by Shiites migrating from the South of Lebanon (Hovannisian, 1974).

Additionally, this section uses the traditional 30% rent-to-income derived from the US Department of Housing and Urban Development definition of housing affordability. Meaning anything above 30% of a household's income paid in rent is considered relatively unaffordable (Esruq-Labin, 2014). This figure also works in a Lebanese context because the Central Bank of Lebanon mandates that monthly installments of subsidized housing loans be no more than 33% of a person's monthly salary. However, it is now increasingly recognized by researchers that affordability does not only encompass the percentage of a person's income paid in rent, but also the quality of services, and level of local development. Therefore, the local amenities in Karantina - which are also its affective characteristics - were factored into the measurement of affordability because their availability, or lack thereof, places an additional set of hidden costs and burdens on the residents. This expanded measurement can be expressed as affordability being equal to rent-to-income ratio added to the value of Karantina's amenities.

### A. The Proportion of Rent to Income

Despite the relatively low rents found in Karantina when compared with the rest of Beirut (Figure 26), according to the household questionnaire most residents in fact pay more than 30% of their income in rent. This is because many of the residents are from low-income households: the average household income in Karantina being 827,645 Lebanese Pounds. The residents who do pay 30% or less are either old rent as in the case of Al-Saydeh (27 out of 35 units) or share a home with multiple families as in Al-Khodor. Additionally, unaffordability is projected to increase by 2026, when rent control is set to be lifted, affecting 78 old rent households in Karantina, particularly the 35 households in Al-Saydeh. Therefore, Karantina is becoming less affordable to its current residents when income is factored into our understanding, and this relative unaffordability is set to get worse over time, despite Karantina being on paper less expensive than neighboring areas such as Gemmayze and Mar Mikhael, where rents can reach up to \$500 and \$800 respectively (McCarthy, 2021).

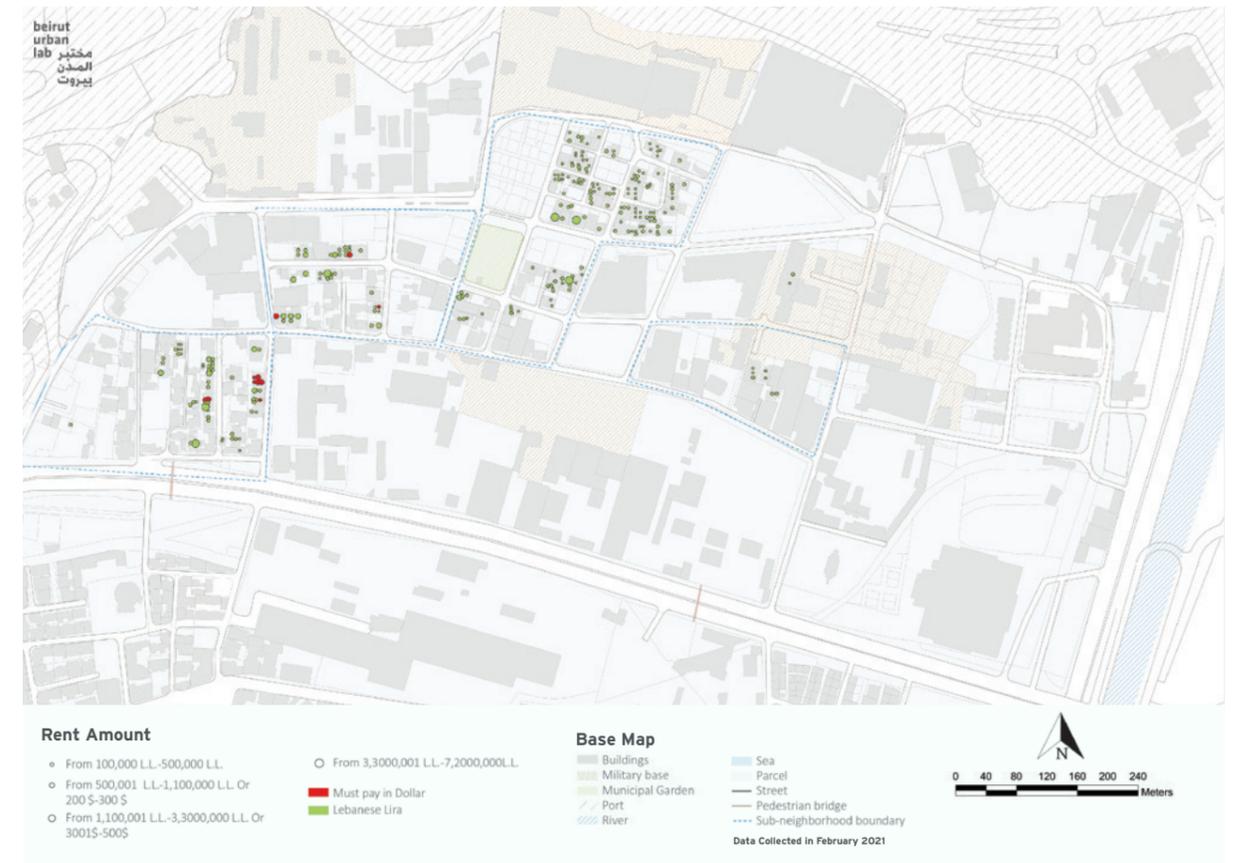


Figure 26: Rent amount paid either in Lebanese Pounds or Dollars, Karantina. Source: The Beirut Urban Lab, 2021.

Rent above the 30% threshold is unevenly distributed across each of the three sub-neighborhoods: in Al-Saydeh; it is evident that 56% of the surveyed households paid more than 30% of their income in rent, in Al-Senegal 80%, and in Al-Khodor 92% (Figure 27). The lowest relative rents are concentrated in Al-Khodor. This is due to its status as a host community, as well as reflecting the small footprint of its buildings compared to the other sub-neighborhoods. Moreover, as shown in Figure 27, Al-Khodor is dominated by rents paid in Lebanese pounds, which has been devalued by more than 94% since 2019. The dominance of rents paid in Lebanese pounds in Al-Khodor suggests that its population is impoverished and, as a host community for refugees, lacks access to dollars. The specialization of rental statistics for the district reveals those certain parts of Al-Khodor, nevertheless, attract higher rents: in general, these buildings have better views and are not as cramped as those that attract much lower rents. By contrast, the highest rents are concentrated in Al-Saydeh. Some houses there are rented out in dollars. Al-Saydeh also has the highest proportion of rent-controlled homes paid in Lebanese Pounds. Al-Senegal represents a mixture of these trends, which is itself a reflection of its 'in between' character.

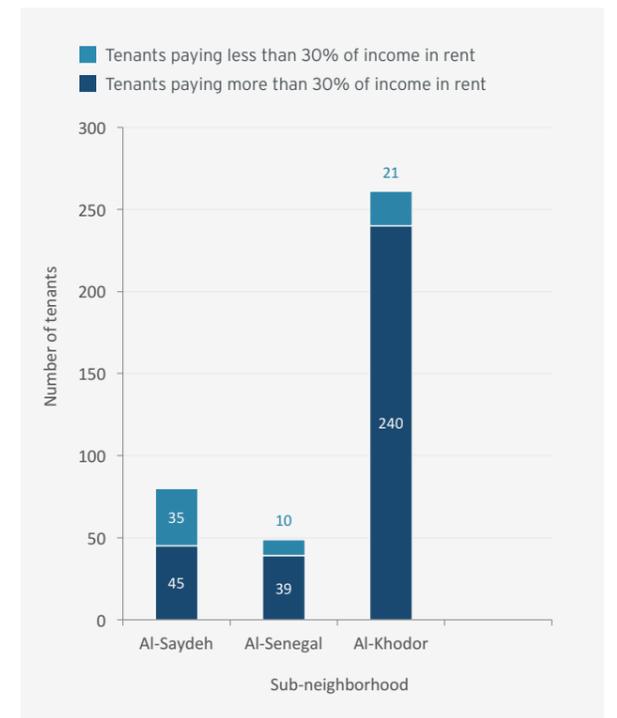


Figure 27: Number of tenants paying more than 30% of their income in rent. Source: The Beirut Urban Lab, 2021.

### Rent Adjustments

During the initial phase of this research, which involved informal discussions, many of the residents expressed concern over the future of housing in the aftermath of the port blast. A common anxiety was that a lot of the renovation in Karantina would lead to mass evictions as landlords would take advantage of their newly renovated apartments. J.N., an old rent tenant in Al-Saydeh, confided that he is afraid that the post-blast reconstruction will upscale the sub-neighborhoods and force out lower-income tenants. "What's going to happen to us once everything is fixed up", he asked, before adding that "I'm sure the landlords are going to take advantage of the new conditions of the homes."7 The residents also felt that this would change the character of Karantina which had developed in part because of its relative peripheral position in the city. Accordingly, this report looked at the data from the fieldwork to see if their concerns were taking shape empirically on the ground.

In the aftermath of the port blast, as renovations were taking place, it was noted that in Al-Saydeh, 14.1% of tenants either received a rent increase or were threatened by it. While 11.7% of the residents either received an eviction suit or eviction threats. This was also evident in Al-Senegal, where 23.5% of the tenants either received a rent increase or were threatened by it.

While 7.8% of the residents received an eviction threat. As for Al-Khodor, 9.9% of the tenants either received a rent increase or were threatened by it. While 6.1% of the residents received an eviction suit or eviction threats. These numbers varied considerably in terms of rental tenure (Figure 28), with it being more likely to happen to new rent than old rent residents because of the protections the latter arrangements provided the tenants and because many rental arrangements under new rent laws are informal.

Several factors explain the reasons behind the rent hikes and eviction trends in Karantina. The first being the repairs done in the aftermath of the blast. In Al-Saydeh, 10 out of 12 households who received a rent increase, or a threat of rental increase, were either fully repaired or undergoing some form of renovation. In Al-Senegal, it was also evident in 10 of the 12 households that were in the process of being fixed, and in Al-Khodor, in 21 of the 27 households (Figure 29).

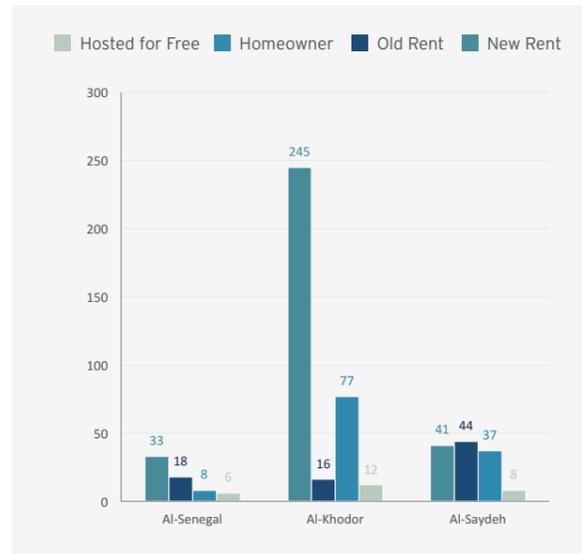


Figure 28: Breakdown of tenure per sub-neighborhood. Source: The Beirut Urban Lab, 2021.

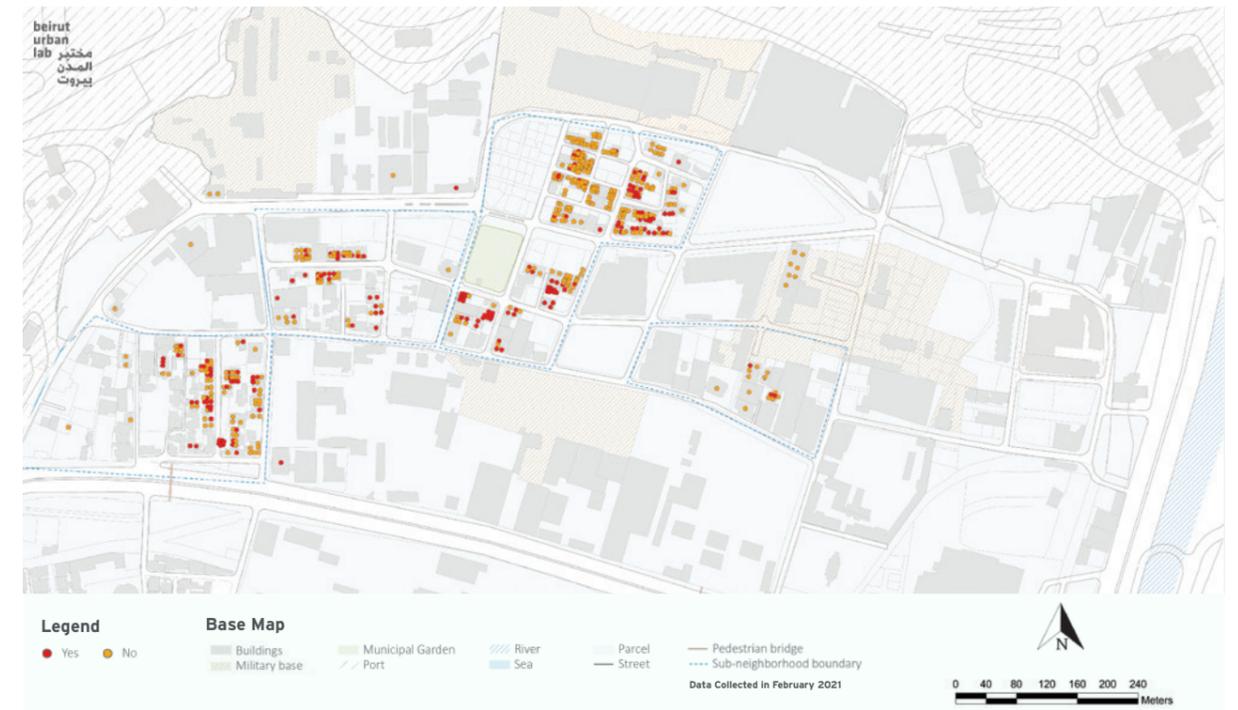


Figure 29: mapping of apartments that have finished repairs, Karantina. Source: The Beirut Urban Lab, 2021.

The same trend was noted in evictions; in Al-Saydeh 80% of households who received eviction suits or threats were undergoing repairs of some kind, this also applied to 100% of the cases in Al-Senegal, but only 31.2% of the cases in Al-Khodor (Figure 30). What is evident is that landlords in Al-Saydeh and Al-Senegal are taking advantage of the renovations for their financial benefit. Showing that the reconstruction process did not protect the residents despite some initiatives by NGOs such as the NRC and Offre Joie to ask landlords to sign a pledge not to raise rents in exchange for free renovation. Despite the commendable efforts by these NGOs, only long-term policy solutions and legal frameworks delivered and implemented by the government can truly alleviate these concerns.

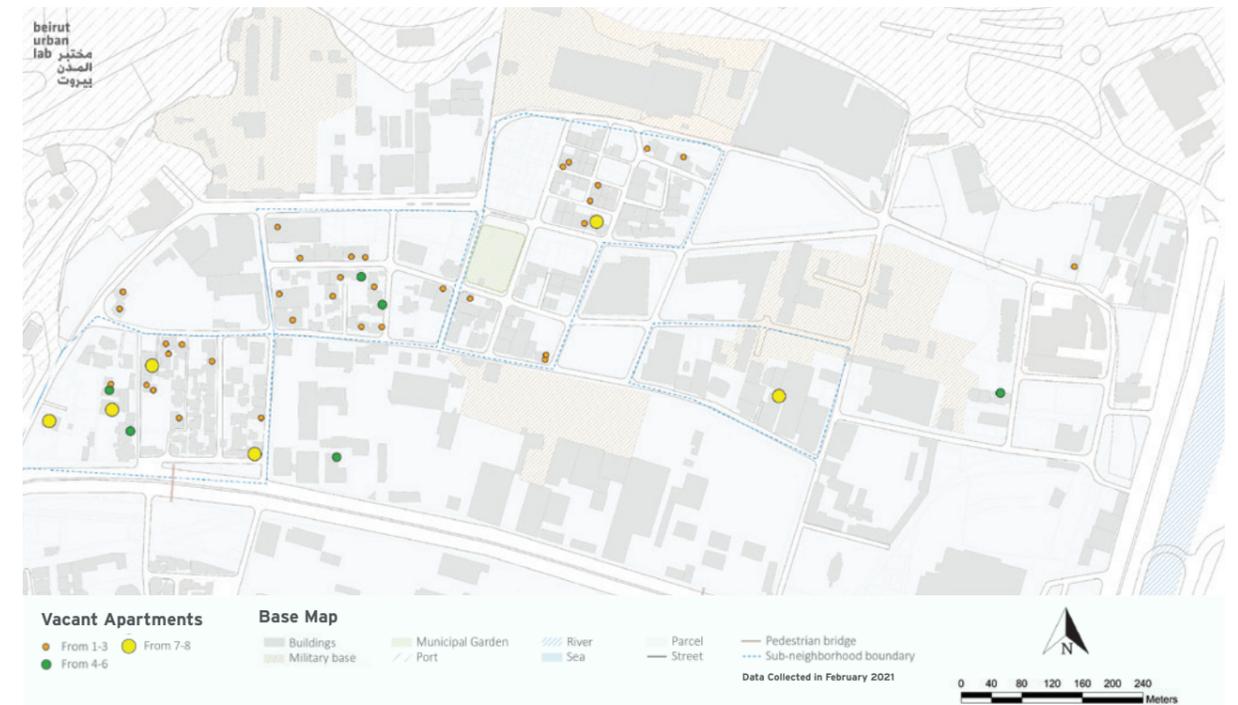


Figure 30: Vacancy rates in Karantina. Source: The Beirut Urban Lab, 2021.



7 J.N., (2020-November), (Mohamad El Chamaa- interviewer).

The need for a new law to prevent post-blast displacement was echoed at our community meeting: “Owners of buildings received substitutes for renovating their houses,” one person explained, “They are not threatening us as tenants to be evacuated now; however, we are afraid that when they are done with their renovations, they might kick us out of the apartments. We want a law that protects the disadvantaged tenant in the area, that when the landlord has received more than 100,000 US dollars to renovate his property, the tenant should be secured in it” he added.<sup>8</sup>

Additionally, geo-referenced maps that The Beirut Urban Lab produced showed that the increase in rent and evictions can be correlated to the nationality of the tenants (Figure 31). For example, in Al-Khodor sub-neighborhood, 24 of the 25 households that received a rent hike were Syrian. Moreover, of the 16 residents that faced eviction suits and threats, 15 were Syrian. In Al-Senegal sub-neighborhood, 4 of the 14 Syrian new rent tenants got hike threats, of which 1 faced an eviction suit. In Al-Saydeh sub-neighborhood, 3 of the 14 Syrian new rent tenants got hike threats, and 2 faced eviction threats, 1 faced a rent hike, and 1 faced an eviction suit. The reason for this correlation is because of informality of tenure; many tenants lack formal leases, so landlords have considerable room for manoeuvre. For example, in Al-Khodor, the reported cases are all under an informal agreement. This was also evident in the 16 Syrian tenants who faced eviction suits and threats.

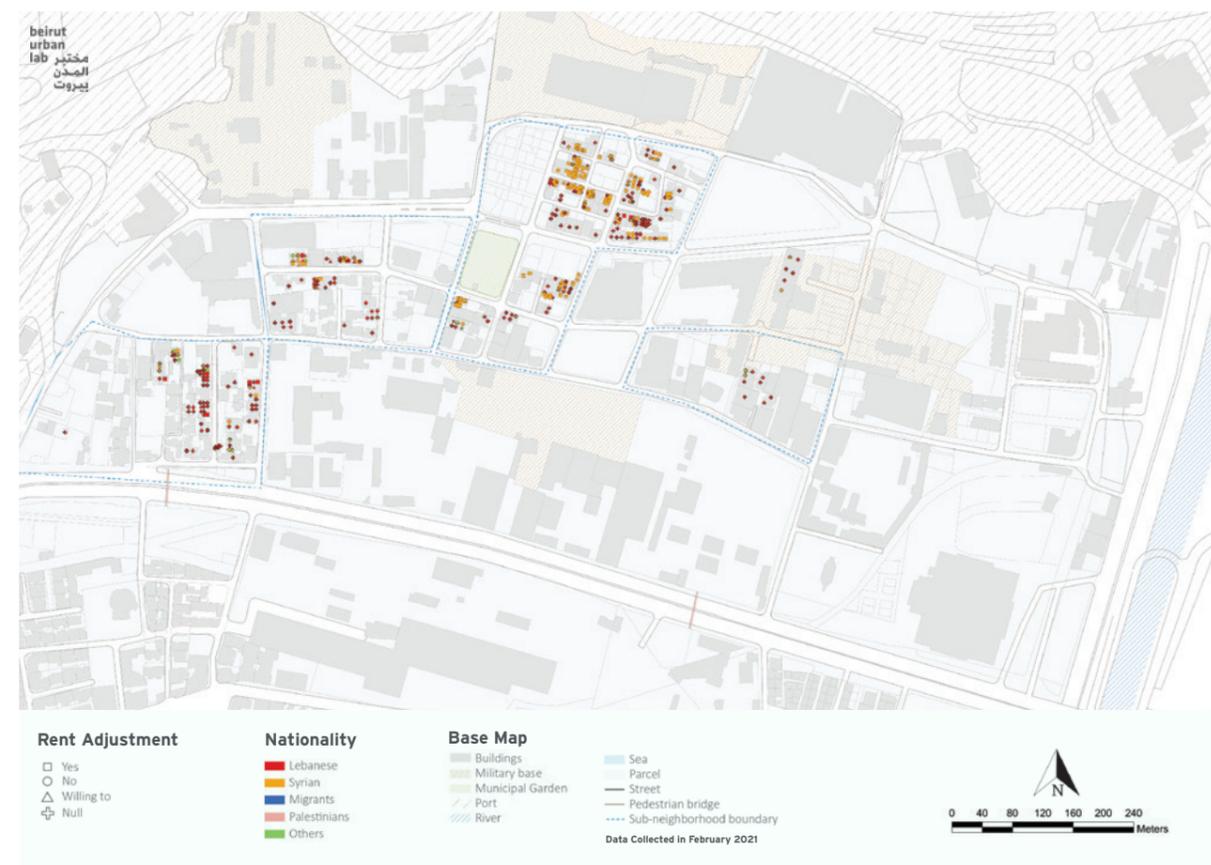


Figure 31: Rent Adjustment versus nationality, Karantina. Source: The Beirut Urban Lab, 2021.

## B. Access to Services

At the first community meeting at the Karantina Park, the residents deplored the lack of amenities in the area, with one saying that “the area lacks everything, we need cultural, developmental, healthcare, and environmental projects.” This section investigated these issues through the household questionnaire in terms of healthcare, level of services, public and shared space, and schools to see to what extent the residents were getting value for their money, whether the relative affordability in rent is, in fact, worth the trouble. This leads to a taxonomy of needs, like that proposed by Abraham Maslow in his hierarchy of needs. All the sub-neighborhoods meet a basic level of needs: residents have food, water, shelter, and electricity. Albeit in the case of the latter, provision relies on a dual system with government provision supplemented by a backup generator. In terms of running water, this is a considerable improvement since the 1970s, when only 25% of residents in Karantina had access to water (Bourjy and Phares, 1973). It is at the higher levels of need, such as safety and security, transportation, internet, healthcare, education, and facilities for leisure, that the desires of the residents are not met. Figure 32 shows the availability of services across the three sub-neighborhoods.

SERVICE	SUB-NEIGHBORHOOD					
	Al-Khodor		Al-Senegal		Al-Saydeh	
EDL	346	98.85%	66	100.00%	128	98.46%
Water	317	90.57%	60	99.91%	127	97.69%
Unofficial EDL hook up	3	0.86%	0	0.00%	0	0.00%
Electricity subscription	146	41.71%	48	72.73%	122	93.85%
generators	12	3.43%	4	6.06%	3	2.31%
Private water subscription	4	1.14%	2	3.03%	4	3.08%
parking	8	2.29%	4	6.06%	9	6.92%
Internet Connection	262	74.86%	47	71.21%	107	82.31%
Total Respondents	350	—	66	—	130	—

Figure 32: The number and percentage of households with access to services and the percentage of sub-neighbourhood population. Source: The Beirut Urban Lab, 2021.

## Education

The lack of educational facilities is a major factor in the relatively poor standard of living in Karantina and contributes significantly to the broader sense of lack of affordability resulting from an absence of local amenities and services. One concerned resident said that “we want an English education school. We can’t afford school buses for outer areas and the schools here are closed, even the French ones. This is to us the most important issue, more important than roads.”<sup>9</sup> Before the civil war, Karantina had at least three schools (one Catholic School, one UNRWA School, and one public school) providing places for 2,097 students - chiefly boys.<sup>10</sup> The Catholic School closed during the civil war, while the public school shut its doors in 2014. This affected 14 households with school-aged children in Al-Saydeh, 20 households in Al-Senegal, and 135 households in Al-Khodor (Figure 33). The schools which attract the largest number of pupils are understandably ones that are closest to Karantina, such as the ones in Achrafieh and Burj Hammoud, but families also send their children to places which are farther away such as Ras Al-Nabaa owing to the presence of two public schools there. In any case, this all involves crossing the highway by vehicle or school bus and incurring extra costs. The unaffordability of commuting was noticeable in the words of one Syrian resident who explained: “The nearest school to us is in Achrafieh, and our children are passing the main street to reach it. Some people can afford bus transportation for their children, but not all of us can.”<sup>11</sup> The lack of schools shows that there are hidden costs which must be considered when assessing housing affordability.

<sup>8</sup> First Town Hall Meeting, (2021- April- 11).

<sup>9</sup> First Town Hall Meeting, (2021- April- 11).

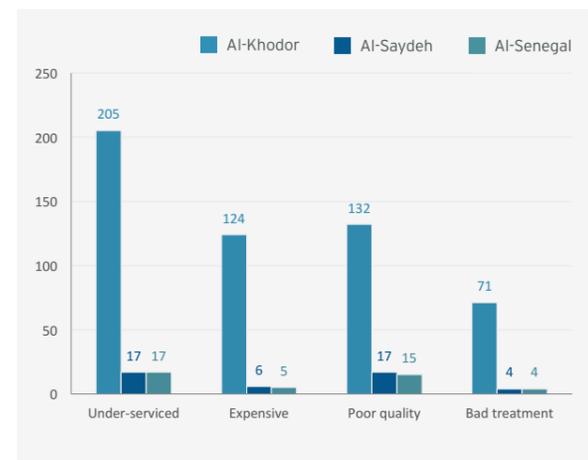
<sup>10</sup> In 1972, 68.43% of boys attended school compared with 50% of girls. This has vastly improved over the past 50 years, particularly in relation to girls’ access to education (Bourjy and Phares, 1973).

<sup>11</sup> First Town Hall Meeting, (2021- April- 11).

In addition to the lack of schools in Karantina, there are no places for after-school activities for the wider community. This lack of infrastructure was evident in the words of one resident in the community meeting who felt that educational reinforcement was needed “not everyone is able to learn online. We need institutes that offer academic aid, especially since many of the children need after-school lessons. Some parents are depending on private teachers in some courses, but they cannot afford English language lessons. No one has a good command of the English language to help them in their future work.”<sup>12</sup> Additionally, Khaled, a resident of Al-Khodor, lamented the lack of spaces for his children to study in: “I wish we had libraries in the area”, he said, “My children are studying on their phones in their bedrooms because we can’t afford computers. I wish there was an area with a computer lab or something.”<sup>13</sup>

## Healthcare

Despite the presence of Karantina Public Hospital in the area, most of the residents do not benefit from its services, instead, they complain that they are treated there as second-class citizens (Figures 34 and 35). Some also point to the fact that they are no longer given employment preference: before the civil war, Lebanese residents in Karantina were often hired preferentially at public institutions such as the hospital, the slaughterhouse, and the municipal garbage dump. For further discussion on our findings relating to the hospital.<sup>14</sup>



**Figure 34:** The main complaint that the residents had was regarding the Karantina Hospital. Source: The Beirut Urban Lab, 2021.



**Figure 35:** The interior of the Karantina Governmental Hospital. Source: Ali Ghaddar, 2021.

## Leisure Facilities

The cramped living conditions in Karantina increase the need for children to go outside for recreational activity and to play; however, safe environments for leisure and activity are not provided. Unlike access to schools, 41.1% of respondents said that their children seek leisure in Karantina only, compared to only 1.2% outside the area. A dearth of public space in Karantina makes this experience more difficult: because residents cannot afford to go elsewhere for leisure, they must make do with what they have. Data showed that half of the surveyed households in Karantina were unsatisfied with the quality of the public and shared spaces, and almost three-quarters avoided using them all together. As for the Karantina Park, access to it is restricted, as in the case of other parks in Beirut. Anecdotally, it was observed on countless occasions that the parking lot next to the park was filled with children playing and engaging in sporting activities on the hard asphalt surface, while the park with its greenery and play equipment was closed to them. Some children resorted to sneaking into the park by climbing the light pole and then jumping over the fence.

Residents are also not able to benefit from Karantina’s proximity to the sea, knowing that previously they had been able to access a beach. E.C. who grew up in the 1950s, lamented the port’s encroachment in the 1960s, which cut Al-Saydeh off from the sea: “Whenever we went swimming, it was just a stone’s throw away around the cliff. I used to walk to the beach from my house. It was here, I used to hike down the hill and I would reach it immediately.”<sup>15</sup> This was echoed at the community meeting by one resident: “We have a beach next to us, and it is a very comfortable place that we can use; however, we are not able to benefit from it because it is closed by the public authorities.”<sup>16</sup>

Shared space is a staple of Karantina’s socio-spatial practice, as many residents congregate outside. This was observed during the preliminary phase of our research. Many residents sit outside on sidewalks or the street itself on plastic chairs for morning coffee and play checkers, explored in more depth later in Transversal Issue V. However, the infrastructure is dilapidated with ageing sidewalks or no sidewalks at all. Additionally, shared public spaces are threatened by the activity at the port, as trucks transporting goods to and from the port clog the streets. One Karantina resident complained that the “trucks working for the port are passing in the area causing traffic jam[s]. We are not able to get a taxi to our work in the morning.”<sup>17</sup> In addition, this traffic poses danger to the safety of the residents: during fieldwork it was observed that many children who play in the streets were almost run over by the trucks. Legally speaking, trucks are not allowed to enter Karantina, but the lack of accountability encourages them to do it anyway.

## C. Vacancy Rate

In Beirut, the vacancy rate for housing was 23% in 2020 (Fawaz and Zaatari, 2020). However, it is generally agreed that a healthy vacancy rate for a city should be closer to 7% (McCartney, 2010). The figure for Beirut is therefore three times higher than it ought to be. It is worth noting that many of the vacant properties in the city are high market and in good condition, and therefore outside the realm of affordable housing stock. There are several contributory factors to the city’s vacancy rate including the absence of vacancy taxes and the exemptions vacant apartments receive from municipality taxes, which encourage landlords not to place their units on the market. The absence of laws and taxation benefits keeps supply artificially low, thereby not affecting the supply and demand equilibrium.

This scenario does not apply to Karantina where many buildings are vacant because they are in a degraded condition. This situation is partly the result of the port blast but also reflects many years of neglect. Of the 932 apartment units in Karantina, 75 (8%) are vacant and in a habitable condition and 89 (9.5%) are in buildings that are in a degraded and unliveable state. Most of the latter units (67/89, or 75%) are concentrated in Al-Saydeh (Figure 30), which has the oldest housing stock and is closest to Warehouse 12 in the Port of Beirut where the blast occurred. Many of the other degraded buildings (18%) are located in Al-Khodor (Figure 36). Though the 8% vacancy rate is only marginally higher than the 7% benchmark, it can be improved upon if repairs are made to the uninhabitable buildings which would add new housing stock to Karantina.

A second reason for the vacancy rate in Karantina is that landlords are reluctant to rent out their property because of the current financial crisis. E.C., who is the majority shareholder in his family building, said that he is worried about renting out the vacant apartments in his building because he used to “rent these for 700 thousand before the crisis but now 700 thousand will get you nothing.” He added that “People can’t afford a higher price so I may just leave it empty or rent it out to an NGO.”<sup>18</sup>

Keeping to his word, E.C. put up a for-rent sign outside the building with the following words written on it “for rent, office space available” (Figure 37).

<sup>12</sup> First Town Hall Meeting, (2021- April- 11).

<sup>13</sup> First Town Hall Meeting, (2021- April- 11).

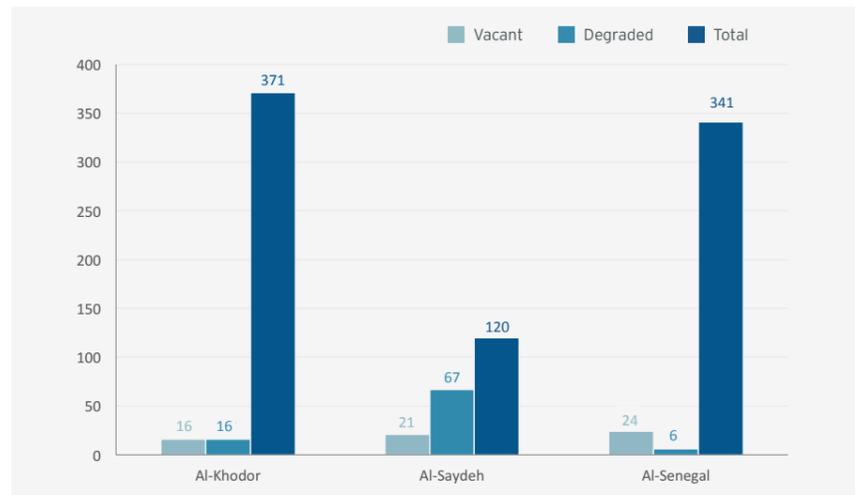
<sup>14</sup> Refer to transversal issue V: The quality of the Urban Environment.

<sup>15</sup> E.C., (2020-October), (Mohamad El Chamaa, Interviewer).

<sup>16</sup> First Town Hall Meeting, (2021- April-11).

<sup>17</sup> First Town Hall Meeting, (2021- April- 11).

<sup>18</sup> E.C., (2020-October), (Mohamad El Chamaa- Interviewer).

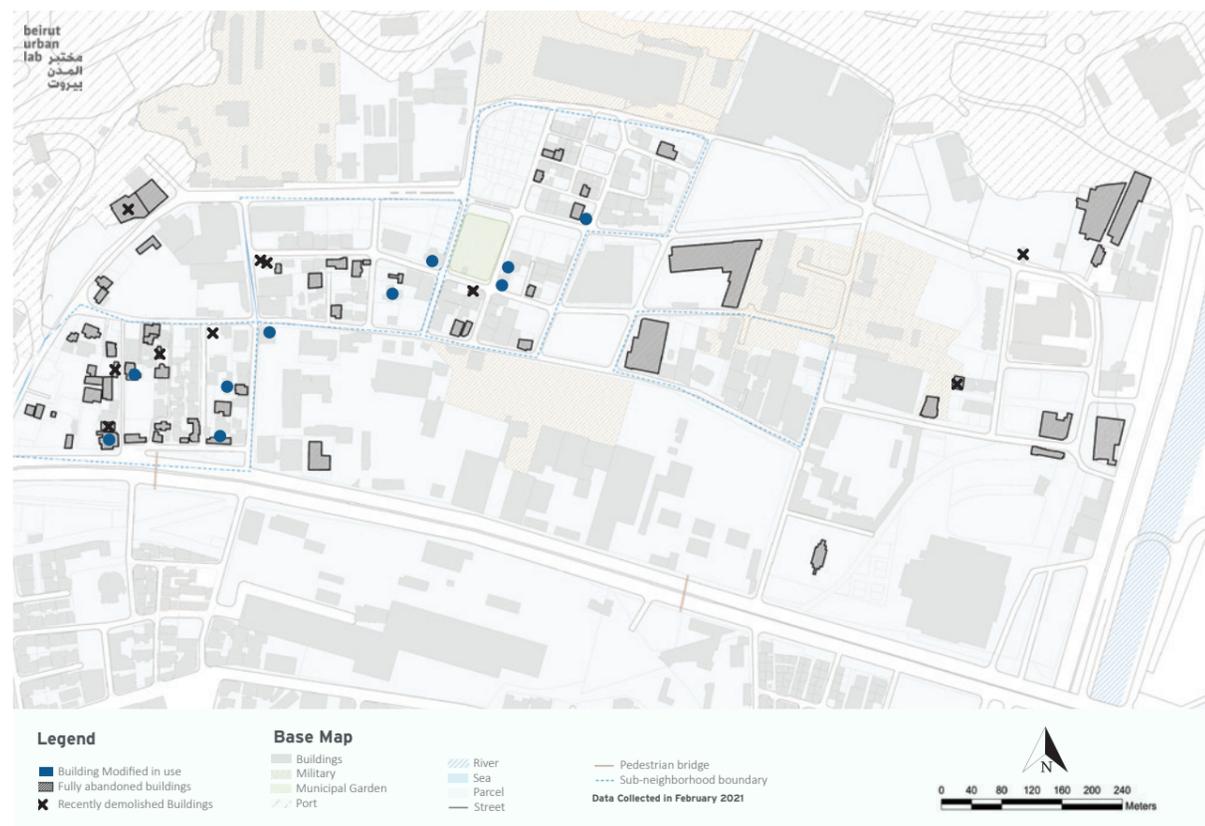


**Figure 36:** Number of vacant and abandoned apartments across Karantina. Source: The Beirut Urban Lab, 2021.



**Figure 37:** For rent sign displayed outside of renovated home targeting businesses in Al-Saydeh. Source: Mohamad El-Chamaa, 2021.

This reveals a third trend, that of converting residential units to office space, as was evident in a GIS map, showing that this is largely taking place in Al-Saydeh (Figure 38) with 9 buildings having their ground floor changed from residential to office space. So far, in Al-Senegal six buildings have seen their ground floor use changed, two of which also had this done to their upper floors. This trend was also noted in Al-Khodor, with five buildings changing their use, and two buildings having their upper floors converted. The landlords might also be doing this because businesses and NGOs can bring scarce dollars, but in the long run could cause housing scarcity in Karantina. This can only be exacerbated by the fact that there are no new developments in Karantina (refer to Section B), therefore, no new stock of housing to decrease the vacancy rate and make the area more diverse.



**Figure 38:** Modification in land-uses from residential to business facilities. Source: The Beirut Urban Lab, 2021.

## 5.2. Inclusive Housing

This section of the report draws on examples of less inclusive housing in Lebanon to identify a range of potential barriers to inclusivity. Moreover, it considers whether Karantina aligns with those barriers. We take inclusivity to refer to diversity and accessibility. By diversity we mean factors such as religion, income, and nationality as well as age. By access we mean physical accessibility. In the scholarly literature, definitions of inclusive housing vary, however. They may have to do with accessibility such as elderly care and physical disabilities whereby physical access is guaranteed (Peace and Holland, 2001), or diversity characteristics. In overall terms, Karantina has a diverse population, one mixed by religion and by nationality. However, it is not so diverse when income is taken into account and, in any case, there is an observable aggregation by sect and nationality across the three sub-neighborhoods of Karantina, which is analysed here.

### A. Religious Diversity

In Karantina there is religious diversity, however, there is also clustering within the sub-neighborhoods. Our survey shows that almost every sect, Christian and Muslim, is represented in the area. In terms of Christian denominations, 7 sects were documented for total of 404 persons, while in terms of Muslim denominations 4 with a total of 1576 persons (See Figure 14). Likewise, in terms of voter registrations, the majority of voters in the Medawar district are Armenian Orthodox at 54.2%, followed by Sunnis at 15.9%, which demonstrate the ongoing legacy of Karantina’s Armenians, who mostly moved out of the area before the war.

It was also observed that the three sub-neighborhoods were divided along religious lines with Al-Saydeh majority Christian, Al-Khodor predominantly Sunni Muslim, and Al-Senegal being a mixed community (See Figures 18, 19, and 20). This suggests that, aside from Al-Senegal which is new and rapidly changing with no time for networks to develop, religious groups tend to aggregate in clusters. There are historical reasons for this clustering. In terms of ownership, the people who own their houses have inherited them from previous generations and have mostly been living there all their lives. In Al-Saydeh, for example, 64.6% of those surveyed renting from Christian landlords were Christian. The Christian character of Al-Saydeh is thus notable both from its affiliation with the Church and because the Maronite Waqf is a significant landowner and landlord in the area (Figure 39).



**Figure 39.** Al-Saydeh Church located in Al-Saydeh sub-neighborhood. Source: Batoul Yassin, 2021.

This was illustrated through the Waqf houses, which were all rented to Lebanese Christians. Additionally, the data shows that members of the Arab tribe are the largest landlords and property owners in Al-Khodor: 97% of the landlords’ tenants in the sub-neighborhood were Muslim, with a majority from the Arab tribe, while only 3% were Christians (Figure 40). This is due to tribal kinship which is explored further below. There was more mixity in Al-Senegal, with the equivalent rate being 45% for Christian landlords, and 50% for Muslim landlords.

S-N	Landlord	TENANTS				Total
		Leb. Chrsitian	Leb. Muslim	Syrian	Migrants	
Al-Khodor	Wakf	0	0	0	0	254
	Christian	2	4	16	3	
	Muslim	7	85	137	0	
Al-Senegal	Wakf	5	0	0	0	50
	Christian	16	8	11	0	
	Muslim	2	5	3	0	
Al-Saydeh	Wakf	5	0	0	0	68
	Christian	42	6	11	3	
	Muslim	0	1	0	0	
<b>Total</b>		<b>79</b>	<b>109</b>	<b>178</b>	<b>6</b>	<b>372</b>

Figure 40: Relationship between the religious backgrounds of the landlords and the tenants. Source: The Beirut Urban Lab, 2021.

The strongest links in Al-Saydeh are, therefore, religious in character; however, in Al-Khodor, they are tribal and based on relations of kin - particularly within the Arab tribe who have lived there for over a hundred years (Figure 41). This form of kinship factors into and impacts religious diversity, especially through preferred access to housing. Despite the sub-neighborhoods being predominately Muslim, a discrepancy was noted between members of the Arab tribe (all Lebanese) and Syrians living in Al-Khodor, particularly in terms of access to housing. For instance, although overcrowding among households was most notable in Al-Khodor, this was not evenly distributed. The household survey revealed that 68 Arab households were single family households, (which together make up 80% of the Muslim Lebanese tenants). This compared with 64 Syrian households that share a home with one family or more. In this context, the Arab households received preferential treatment in terms of tenancy. Access to housing through kinship was also noted in the sample of residents that are housed for free. In Al-Khodor, 8 of the 11 households housed for free were from the Arab tribe. This contrasted with the three Syrian households who received housing for free in exchange for working as concierges.



Figure 41: Social gathering among residents of Al-Khodor residents. Source: Abir Cheaitli, 2021.

Moreover, in our housing focus group, the role of kinship was illustrated by R.A. who was displaced during the civil war and is unable to return to her home on the eastern edge of Al-Khodor because “the army still occupies my house after taking it over from the Lebanese Forces.” She currently rents an apartment from her aunt for 700,000 Lebanese Pounds, and mentioned that if this were not the case, “there would be no way for me to live in the area.”<sup>19</sup> R.A says that her aunt will not ask her to move out because it would be embarrassing in front of the Arab tribe. This shows that social capital is employed through kinship to access housing in Karantina and staves off eviction. This explains the concentration of low rent in Khodor as illustrated in Figure 40.

19 Focus Group Discussion on Housing (2021- April- 29)

It was also noted that kinship has played a role in how evictions have been handled. K.S<sup>20</sup>. said that, after the explosion, the rent of his store in Al-Khodor was raised and that he either had to pay the increase or leave. He left and was not compensated. When asked why he did not take legal action against his landlord, he said that it was because she was a member of the Arab tribe and that he did not want to cause any trouble with a member of his own community. Kinship (and a sense of kinship) facilitates smooth transition and prevents legal battles, even when there are legitimate concerns, thereby showing how strong the ties are amongst the tribe.

## B. Nationality

In Karantina there is a diversity of nationalities. Our survey shows that the largest groups are Lebanese (53%), followed closely by Syrians (45%), with a minority of Ethiopians, Sudanese, and Palestinians (Figure 13). What has contributed to this diversity is informality. However, this has itself caused tensions. National groups tend to aggregate in clusters, which in housing terms causes significant overcrowding. Syrians tend to live in Khodor, whereas the Lebanese live in every sub-neighborhood. As for the other nationalities, they mostly are spread across Karantina. The area’s national composition has shifted over time, as Karantina was home to Kurds and Armenians, as well as a more substantial Palestinian community. This change can be attributed to the wiping out of the tanak typology from the area during the Civil War. After the war ended, these informal settlements were not rebuilt, and instead, we can observe a shift towards new informal modes of tenure.

The new informal modes of tenure have brought a new population into the area, namely the Syrian refugees. This phenomenon is tied to geopolitical forces, namely the Syrian war of 2011. 183 of the 545 surveyed households moved to Karantina in the past 10 years, equivalent to 33.5% of the surveyed houses. 145 of these households, or around 80%, came from Syria after the war (Figure 42).

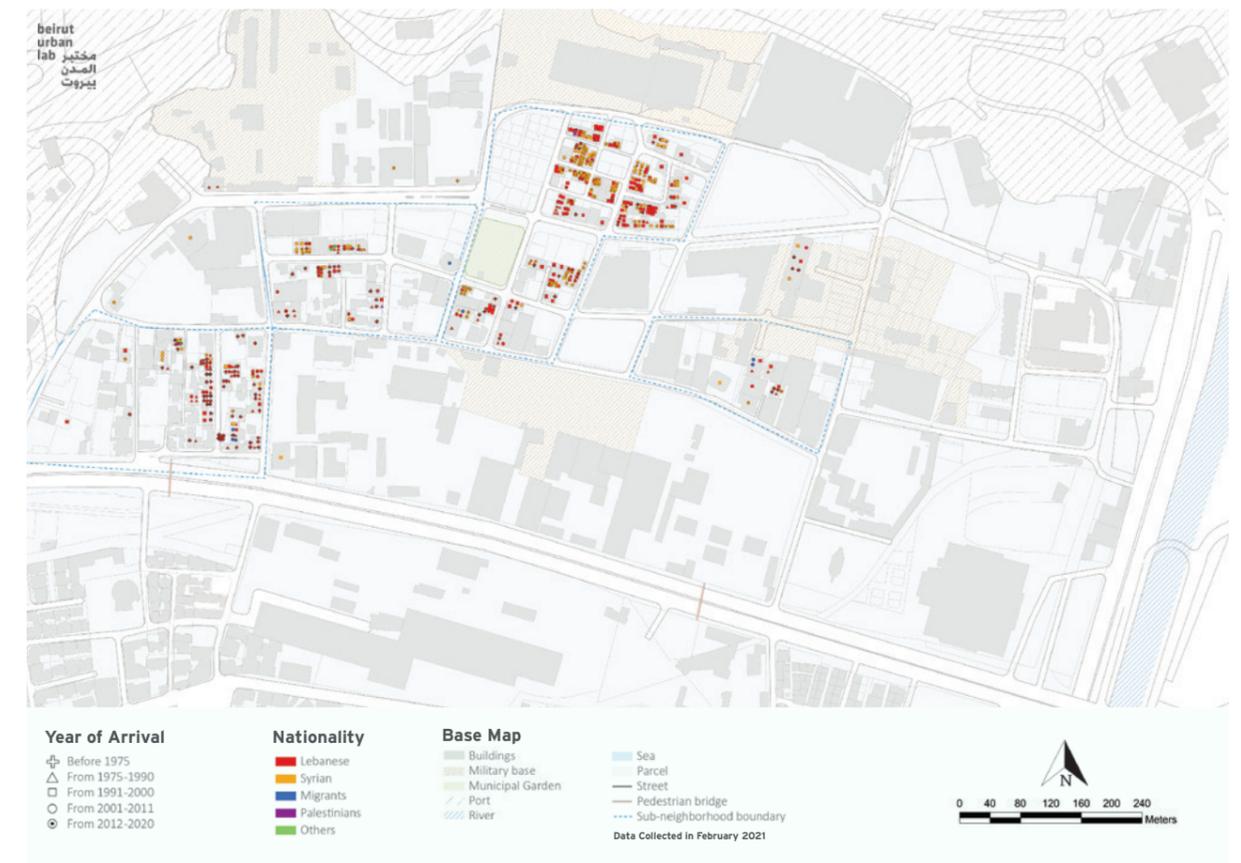


Figure 42: Nationalities of residents versus date of moving into Karantina. Source: The Beirut Urban Lab, 2021.

20 K.S., (2020-October), (Mohamad El Chamaa- Interviewer).

Our data shows, therefore, that Karantina has maintained its role as a host to transient communities. Most of the Syrian households have accessed housing informally and without a rental contract. The highest instance of informal new rent was in the Al-Khodor sub-neighborhood, where 234 households did not have a formal rental contract, while only 11 respondents had formal agreements. This was not significant in other sub-neighborhoods such as Al-Saydeh and Al-Senegal, with only 9 and 5 households respectively under informal rental contracts. The informality of this kind is a mode of inclusivity because, as Fawaz (2017) argues, exceptions can be inclusive if they “create opportunities for a minority to enjoy political accommodations and conditions.”

Informality facilitates rent pooling amongst communities with minimal resources. In our data, this pooling was noted more among Syrians than Lebanese. There was a discrepancy, for example, in the proportion of households that had to share a house with one other family, and sometimes several more. In Al-Saydeh, 35.7% of Syrian households reported sharing a house with at least one other family. In Al-Khodor this figure was higher again at 41.8% and higher still in Al-Senegal at 57.1%. This was not the case with Lebanese residents, with only 2.3% sharing their houses in Al-Saydeh, 6.4% in Al-Senegal, and 11.2% in Al-Khodor (Figure 43). Although informal rental agreements leave tenants susceptible to immediate evictions and rent hikes, according to a legal expert who attended the meeting, tenants without contracts can fight off eviction in courts if residency can be proven using an electricity receipt or water bill, or proof of residency from a Mokhtar.

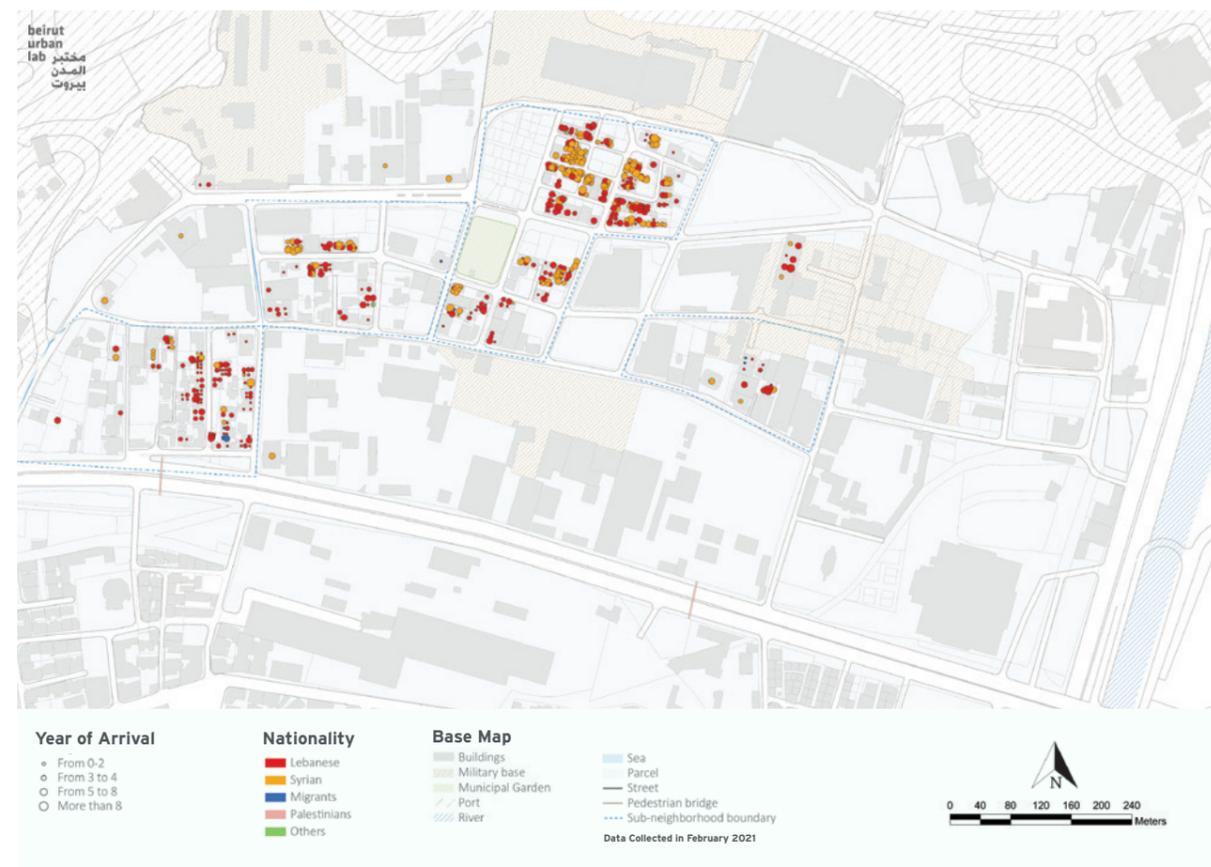


Figure 43: Nationalities of residents versus the number of family members per household. Source: The Beirut Urban Lab, 2021.

The high percentage of rent pooling amongst Syrians is the result of several factors. First, dividing up rent among several families enables Syrians to afford higher rents compared to single families. Second, landlords take advantage of the Syrians’ vulnerability by driving up rent and engaging in preferential practices, in other words preferring to rent out to groups of families instead of single households.

This shows that landlords are exploiting the vulnerable situation of Syrian refugees to extract the most rent out of their properties. Rent pooling is leading to a new modality of housing, which increases diversity because Syrians are nevertheless able to access affordable housing. There are negative consequences, however, most notably overcrowding. According to Lebanon’s Central Administration of Statistics, the median liveable space is 30 sq. m (Yacoub and Badre, 2011). In the case of Karantina, of the 113 homes that have more than one family per household, 88% (n=99) offer less than the 30 sq. m benchmark per person, with available space varying from 2.5 to 27 sq. m per person. These households are thus considered overcrowded.<sup>21</sup> This situation is especially true for the Al-Khodor sub-neighborhood, which is the densest of the three and hosts 82 of the 113 households that have one family or more in them.<sup>22</sup>

Rent pooling among Syrians - of the 99 overcrowded households in our sample, 74 are Syrian households - has in some cases created tension with older, Lebanese residents and in others hostility at the housing focus group, for example, a Lebanese resident of Al-Senegal said that “us Muslims and Christians love each other, but then there’s the Syrians.”<sup>23</sup> Another Lebanese resident complained that landlords were “bringing in Syrians.”<sup>24</sup> One old rent resident said that her landlord is making life unbearable through water leaks. She said that he was doing this so that he could drive her away and rent out her apartment to a group of Syrians, which he had already done with the apartment above her. One Ethiopian woman, resident in Al-Saydeh, said “I’m afraid the madam is going to kick me out of the house because I am Ethiopian, and she is taking advantage of the fact that I do not have a rental contract even though I asked her multiple times for one.”<sup>25</sup> This was echoed by another who explained that she and her Ethiopian roommates could not get a lease from their landlord in Al-Senegal: “They’re really taking advantage of the fact that we are not Lebanese to try to get us to move.”<sup>26</sup>

### C. Diversity of socio-economic profiles

Karantina is mostly home to lower-income residents. This relationship between income and housing reflects the area’s wider economic circumstances, notably those types of employment and employment opportunities that are available. Our survey found that of the 300 residents who currently have a job, 28.6% of them work in Karantina itself and 13% at the Port of Beirut, making a total of 41.6%. Additionally, of the 258 workers who are currently unemployed and living in the area, 36.8% of them once worked in Karantina and 14.3% at the Port of Beirut (Figure 44). The area’s proximity to the rest of the city, as opposed to the suburbs, thus makes it a strategic location for low-income workers to live in and for the businesses that employ them.

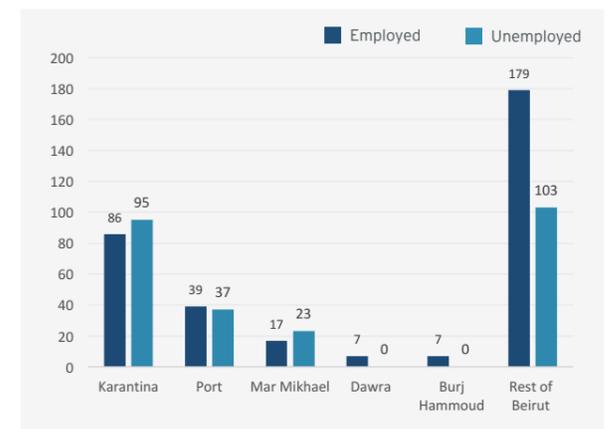


Figure 44: Where the residents of Karantina worked (or currently work). Source: The Beirut Urban Lab, 2021.

There is not a great deal of income diversity in the area, however. Around 95% of the surveyed households in Karantina make no more than 2,000,000 Lebanese Pounds per month, with the range being between 120,000 and 5,000,000. The average monthly income in the area is 1,065,385 Lebanese Pounds or 12,784,620 annually. This varies according to the sub-neighborhood. In Al-Khodor, the monthly average income is 899,999 Lebanese Pounds. While in Al-Saydeh, the average is much higher at 1,480,808 a month. And in Al-Senegal where income levels are closest to the Karantina average, the figure is 1,178,750 per calendar month. By comparison, the average monthly income in Mar Mikhael, measured around the same time period, is 3,936,350 or 47,236,200 annually (Pietrostefani et al, 2022). The Karantina figure is approximately 28% that of Mar Mikhael.

21 With 8 people per home and the average size of the home being 87 sq. m it is apparent that this standard is not being met.

22 Senegal (9) and Saydeh (8)

23 Reference as above.

24 Reference as above.

25 C.B., (2020- October) (Mohamad El Chamaa- interviewer)

26 Z.A., (2020- October) (Mohamad El Chamaa- interviewer)

The reason for this lack of income diversity is limited development, which prevents in-migration to Karantina from across a range of socio-economic backgrounds. Therefore, it is important to look at what has prevented new typologies from appearing in the area despite the availability of vacant parcels of land. There are several reasons why these parcels had not been developed prior to 2020. These include, for example, the continued militarization of the area and the restrictive zoning regulations covering Karantina (Zones 3 and 7).<sup>27</sup> The regulations stipulate a required setback of 4.5-10 meters, a minimum lot size of 100 to 120 sq. m, and an exploitation ratio of 60% (Zone 3) to 70% (Zone 7).

After the civil war ended, the army took over areas that the Lebanese Forces once occupied including privately owned parcels of land which they have not returned to their original owners. The army's presence thus acts as a significant barrier. One resident expressed his frustration at the town-hall meeting: "Until now I cannot enter my neighborhoods nor do anything inside because the Lebanese Army is residing in it. I appreciate the army, but this is a Lebanese area, and we should not be avoided from it and prevented from getting our properties back. We are displaced inside our country, and this issue is being dismissed under the fact that these are small properties."<sup>28</sup> Another added that "The army is appropriating the undeveloped lands 'أرض بور' owned by people. This is our army, and we know it is a security issue so we cannot say anything."<sup>29</sup>

Bureaucratic red tape is another hurdle, in addition to zoning regulations, as it is costly and time-consuming. According to Mneimneh (2019), access to development is primarily facilitated through nepotism, especially in the Municipality of Beirut. One concerned resident echoed this at the community meeting, saying: "You are talking about the development of the area, but how could it develop if we are not able to build on my own and my parents' property. A building permit here costs 3-4 times the price of an apartment outside the area. This is unacceptable."<sup>30</sup> Another resident agreed, stating that "people who own a one-two-story building cannot build extra floors for their sons or themselves. This is our property that we inherited from our parents, yet we cannot make use of them; we are not talking here about common land." He classified these properties as being of two types: "unused lands and built-up properties composed of two-three floors." Further stating that "we are not able to get a building license because it becomes too costly; the terms constitute building a 25 square-meters garage among a list of other demands. This means an apartment would cost 200-300 million Lebanese Pounds which no one can afford!"<sup>31</sup>

Additionally, there are concerns around transportation due to its enclaving, this is discussed further in Transversal Issue II. Here it is important to note that working-age residents emphasized that their commute was difficult, especially with gaps in transit coverage and provision. "We are suffering to reach out for our work," stated one resident, "we must walk all the way out to get transportation. There was a bus stop in the area before, and it should be reclaimed."<sup>32</sup> This further affects the relative affordability of Karantina and its attractiveness to a more diverse socio-economic profile.

#### D. Physical Accessibility

It was also observed that there is a lack of inclusion when it comes to disabilities and the elderly (Figure 45). According to our data, 43 households reported at least one member living with a disability, while 181 respondents (or 9% of the total) were above the age of 64. In terms of physical accessibility, there are only seven buildings in Karantina with elevators, making the area less inclusive to wheelchair users and to the elderly. There was also a notable absence of wheelchair ramps in the entire area. Future development of Karantina therefore needs to incorporate inclusive design practice because, as Peace and Holland (2001) suggest, it is much easier and cheaper to "make new buildings barrier-free and to design in flexibility at the outset" (p. 240) rather than retrofitting.

Additionally, the overcrowded and dense character of housing in Karantina, as discussed earlier, adds specific limitations with regard to physical accessibility. Wheelchair users require more space to move around, for example, and the elderly also have adaptive requirements to improve the safety and comfort of their housing. Finally, the near-home environment is another factor affecting inclusivity, particularly for the elderly and the disabled. As Peace and Holland (2001: 243) further note, this can "affect their ability to get out [of their homes] as well as to stay in." It was noted earlier, for example, that Karantina has limited services (e.g., public transport, education, healthcare, and public spaces), but in terms of physical accessibility, there are other identifiable needs to consider such as street crossings and the surface of the ground underfoot.



Figure 45: Elderly people in Karantina sitting on the sidewalk in front of their houses. Source: Batoul Yassine, 2021.

<sup>27</sup> According to the answers to the questionnaires, 7 out of the 8 landowners in Al-Khodor were unable to build. Reasons preventing access include militarization (9), multiple heirs (6), restrictive building code (1), the former two combined (4), all three together (1), willing to rent land (1), and willing to sell (1).

<sup>28</sup> First Town Hall Meeting, (2021-April- 11).

<sup>29</sup> Reference as above.

<sup>30</sup> Reference as above.

<sup>31</sup> Reference as above.

<sup>32</sup> First Town Hall Meeting, (2021-April- 11).

## 6. SYNTHESIS AND RECOMMENDATIONS

### FINDINGS

- 01** In terms of assessing whether Karantina is affordable or becoming less affordable to its current residents, the research team found that most of the tenants are paying more than the benchmark ratio of 30% of their income in rent. In Al-Saydeh, 56% of surveyed households paid more than 30% of their income in rent, in Al-Senegal 80%, and in Al-Khodor 92%.

This suggests that Karantina is becoming less affordable despite the average monthly rent being around 540,000 Lebanese Pounds. This is significant because 72.84 % of the residents are tenants, compared with 22.38 % being owner-occupiers. The data showed that there was some increase in rent and evictions in homes that were repaired after the port blast as well as threats thereof. But overall, this was not a significant trend in Karantina as rent hikes were only evident in 7.8% of the houses and while evictions in 4.5% of the houses. The reason for this is due to repairs being made, the nationality of the tenants, and informality. It is easier to evict or raise the rent because there is no lease that clearly defines the parameters of the agreement and is enforceable by law. Affordability is further affected by the vacancy rate which is at 8% and is being exacerbated by changes in land-uses. Landlords targeting businesses for their residential units create stiff competition with the residents.

- 02** In the aftermath of the port blast, only 11 households out of the 545 interviewed said they wanted to leave Karantina. Their reasons differ from household to household ranging from the economic situation, lack of safety, people's attitudes, bad treatment from the landlords, they feel threatened by their neighbors, or to find cheaper rent. However, the remaining 534 households did express a desire that they wanted to stay in Karantina. This shows that Karantina is still a place where people want to live and do not want to abandon easily. Karantina is within the city proper; it is low density and has reasonably cheap rents compared to the rest of Beirut.

- 03** When it comes to the amenities in Karantina, the limited access to the park and the lack of schools and proper healthcare facilities add to the level of unaffordability because residents incur costs to access these services. Households with school-aged children incur transport costs for the lack of schools in Karantina. This has forced children to commute outside to 22 different locations to get an education.

Therefore, despite living in Beirut, the residents of Karantina are not afforded the benefits of living in the city because they cannot access urban infrastructure owing to the lack of connectivity and the under-resourced facilities they have. This section of the report shows that Karantina was unique in that it offers housing to many of Beirut's key workers, and this provides a service to the city for its survival and functioning. This is nothing new as historically Karantina has always been outside the logic of the housing market and has provided refuge to the down-trodden (Arab Tribes, Armenians, Kurds, Shia and Syrians) who in return have given back to the city and contributed to its growth through the work they provide.

- 04** Affordability for the current residents of Karantina is threatened because of pre-existing conditions and has been exacerbated by the explosion and the financial crisis. However, Karantina remains much cheaper than the surrounding areas of Beirut and this presents an opportunity for creating new housing, new inhabitants, new economic possibilities, and new forms of diversity and inclusion. If better services are implemented throughout Karantina, then more people would flock to it and increase the housing stock.

For example, Karantina remains a low-density area compared to the rest of Beirut; therefore, air rights can be sold to build a stock of new, affordable housing on top of existing typologies and reap the consequent benefits of the 'density bonus'. Selling air rights in exchange for letting old rent tenants stay in their homes can create ways for landlords to make money from property that currently does not produce income because of rent controls. This would necessitate a change in the Building Law.

- 05** In Al-Khodor, most of the 80% Muslim Lebanese tenants from the Arab tribe do not have to share a home with another family, unlike the Syrians. Accordingly, although Al-Khodor is predominantly Muslim, there are clear discrepancies between the Lebanese and Syrians in accessing housing based on nationality and kinship. Because they share homes with several other families, Syrian refugees can afford higher rents which is often to the disadvantage of single families. This is causing tension in Karantina as landlords are driving away single-family tenants in favor of renting out to multiple families per house. This was brought up at the housing focus group where one resident with an old rent expressed frustration with being pressured to leave her home by the landlord.

### RECOMMENDATIONS

This section of the report proposes the following recommendations for affordable housing and inclusivity based on the evidence in the data discussed above. The recommendations are divided between local and national scales.

#### LOCAL

Firstly, the study proposes amending the zoning regulation to allow construction work to take place on smaller lots and provide a density bonus to landlords and developers if they allocate 40% of their built-up area to affordable residential units. This approach is frequently used in the United States and is necessary in Karantina where the zoning regulation remains restrictive unlike in other parts of Beirut. Secondly, the study proposes a build-operate-transfer (BOT) mechanism in abandoned buildings in Karantina. In the BOT, an NGO or a charitable organization can renovate these abandoned buildings to accommodate vulnerable population groups. In return, the owner of the building can grant the NGO or charitable organization a 20-year lease. Thirdly, the lack of social infrastructure - including leisurely and educational services - can be countered with the opening of Game Lebanon and a Non-governmental Organization (NGO) from Bourj Hamoud. These actions will also allow residents to reclaim accessibility to municipal land and utilise its potential. Fourthly, reopening local schools so children do not have to commute outside of their neighborhoods. Local schools can also provide community space for non-school-based learning.

#### NATIONAL

Firstly, there is a need to negotiate a transitional phase between old tenants and landlords as the 2026 deadline approaches. Old tenants have the priority and option to buy their apartments. Accordingly, the study proposes that a third-party purchases the apartment on behalf of the tenants at a reduced price. Secondly, it is important to introduce laws to remove dilapidated buildings and protect informal rental agreements with a layer of transparency. Thirdly, the study recommends the introduction of rail transport to reduce the frequency of trucks passing through Karantina. By connecting the Port to the Dora train station. In this case, trucks can directly pick up freight from the Port that will be connected to the Dora rail station. This will reduce road traffic which will improve the air quality and general pedestrian safety in Karantina and provide opportunities to enhance the local social infrastructure.

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Transversal issue II

# Spatial, Economic & Social Connectivity in Karantina

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# 1. INTRODUCTION

This report presents the strategic diagnosis of the qualities of spatial, economic, and social connectivity in Karantina. These qualities constitute one of the five transversal issues that were generated at the end of the descriptive memory report. The descriptive memory report provided a general understanding of the state of connectivity of Karantina to the rest of Beirut. This report aims to present a more focused understanding of the various levels and scales of connectivity through the in-depth profiling of spatial, economic, and social networks.

## Position

Cities are often described in terms of complex networks that “exist to provide access to people, goods, services, and information: the better and more efficient this access, the greater the social and economic benefits of urban living” (The Guardian, 2016). This quote suggests that the level of connectivity is based on physical proximity between the places where people live and work or on the availability of reliable infrastructure and transport networks between neighborhoods to overcome spatial separation. In the process, the city becomes resilient to adapt, restructure itself, and evolve through opportunities for connection and interaction.

However, in the context of this report, the qualities of connectivity and accessibility in Karantina are not only explored in terms of the spatial qualities or infrastructural services, but also in terms of the availability of connected economic and social networks. As a result, connectivity is enhanced through a multiplicity of networks and is defined as a process that shapes urban form in all its dimensions. It affects other spatial elements of Karantina such as sustainability, livability, and accessibility.

## Hypothesis

Karantina is confined by clear road infrastructure and natural boundaries (the Beirut River and the Mediterranean Sea). It is characterized by specific types of businesses (the Port of Beirut, the waste management facilities, and the slaughterhouse), and the diverse communities that it hosts. Those factors played a role in fragmenting Karantina internally and isolating it from its surroundings. This isolation safeguarded Karantina from the negative impacts of ongoing gentrification in Beirut that could have led to the displacement of residents.



# 2. METHODOLOGY AND DATA COLLECTION

This section of the report examines connectivity as a multilayered concept and considers three key dimensions: the spatial, the economic, and the social dimensions. Accordingly, the data collection for the report required both qualitative and quantitative methods and objective and subjective measures for the study of connectivity. In addition to analyzing the findings from the data that the citizen scientists collected, and analyzing the physical characteristics of the urban fabric, this section of the report looked at the historical urban transformations that led to the various spatial, economic, and social fragmentations. It did so through typo-morphological analysis that is inspired by Kevin Lynch's notion of edges and nodes. The edges that were examined in the research were either physical or perceived by the residents and the users of Karantina.

## SOURCES OF DATA COLLECTION PRIMARY DATA

The analysis of the quality of the urban environment is based on the analysis of the primary data from the household questionnaires, the one-to-one interviews, the town hall meetings, the thematic focus group discussions, and mapping that was carried out between January and April 2021.

### 1. Thematic Focus Group discussions:

The research team at The Beirut Urban Lab organised two town-hall meetings on 11 April and 30 June and a thematic-focused group discussion on connectivity on 27 April (Figure 1). The meetings discussed some of the critical issues that emerged from the descriptive memory report, such as the perception of Karantina in isolation from the rest of Beirut. They also examined how the border conditions of Karantina contributed to its spatial and social isolation, how the local economic activities and practices further stigmatized Karantina from its surroundings, and the social divisions between the three sub-neighborhoods.



### 2. Field mapping and field observations:

The citizen scientists collected the relevant data at site visits using field observations, photographs, walk-through assessments, and informal conversations. In addition to the spatial mapping, socio-spatial practices were mapped to explore patterns of connections or disconnections between the three sub-neighborhoods and their users and networks. Subsequently, the citizen scientists discussed the collected data with the research team to validate the findings. The mapping was cross-referenced with the findings from the household and business questionnaires.



**Figure 1.** The thematic group discussion on 27 May that focused on spatial, economic, and social connectivity in Karantina. Source: Abir Cheaitli, 2021.

## SECONDARY DATA

The analysis of the primary data also relied on secondary sources such as:

- (1) maps that show the historical development of the street networks and the urbanization of Karantina;
- (2) online databases and literature reviews of relevant scholarly articles, dissertations, and books; and
- (3) the Urban Snapshot Report (descriptive memory) of Karantina that The Beirut Urban Lab produced after the port blast.

## METHODS OF ANALYSIS

This section of the report relied on statistical analysis to inform the research on transport systems and commuting habits, employment rates, access to services and facilities, and the needs of the different community groups in Karantina. The research for the report further used comparative analysis to explore social connectivity, people's sense of belonging, and feeling of safety in the three sub-neighborhoods in Karantina. Spatial analysis was also crucial to understanding spatial connectivity and accessibility in the three sub-neighborhoods.

The research team also conducted a content analysis of narratives from the residents and business owners and employees on how they perceive their sub-neighborhood in Karantina and define its boundaries. The data was located and spatialized using the mapping software ArcGIS and the drafting tool AutoCAD. Excel was also used to tabulate statistical data and generate relevant graphs.

# 3. PRELIMINARY FINDINGS FROM THE DESCRIPTIVE MEMORY REPORT

### Edges

Karantina is bounded by hard and impermeable edges. These include natural edges (the Beirut River) and physical infrastructure (the Port of Beirut and the Charles Helou Highway). The latter separates Karantina from the rest of Beirut.

### External division

The construction of the Charles Helou Highway in 1958 disconnected Karantina from the surrounding neighborhoods. The highway not only caused a physical division but also a socio-cultural rupture; for example, the residents of the Al-Saydeh sub-neighborhood still perceive themselves as part of the Mar Mikhael neighborhood.

### Internal division

Karantina is composed of three residential sub-neighborhoods: Al-Khodor, Al-Saydeh, and Al-Senegal. The spatial and social composition of the three sub-neighborhoods is characterized by religious and political fragmentation due to a number of historical events in Lebanon like the waves of incoming refugees and the civil war from 1975 to 1990. This was evident in the narratives of the residents who described living with socio-cultural boundaries that are not necessarily physical.

### Undesirable practices

Land-use practices such as the old slaughterhouse and the waste management facility stigmatized Karantina. These economic activities made Karantina largely undesirable for residential developments but attractive to small and medium-sized industries. The combination of services and industries created an economic connection between Karantina and Greater Beirut but did not contribute to enhancing the financial conditions of the residents of Karantina.

### Business network

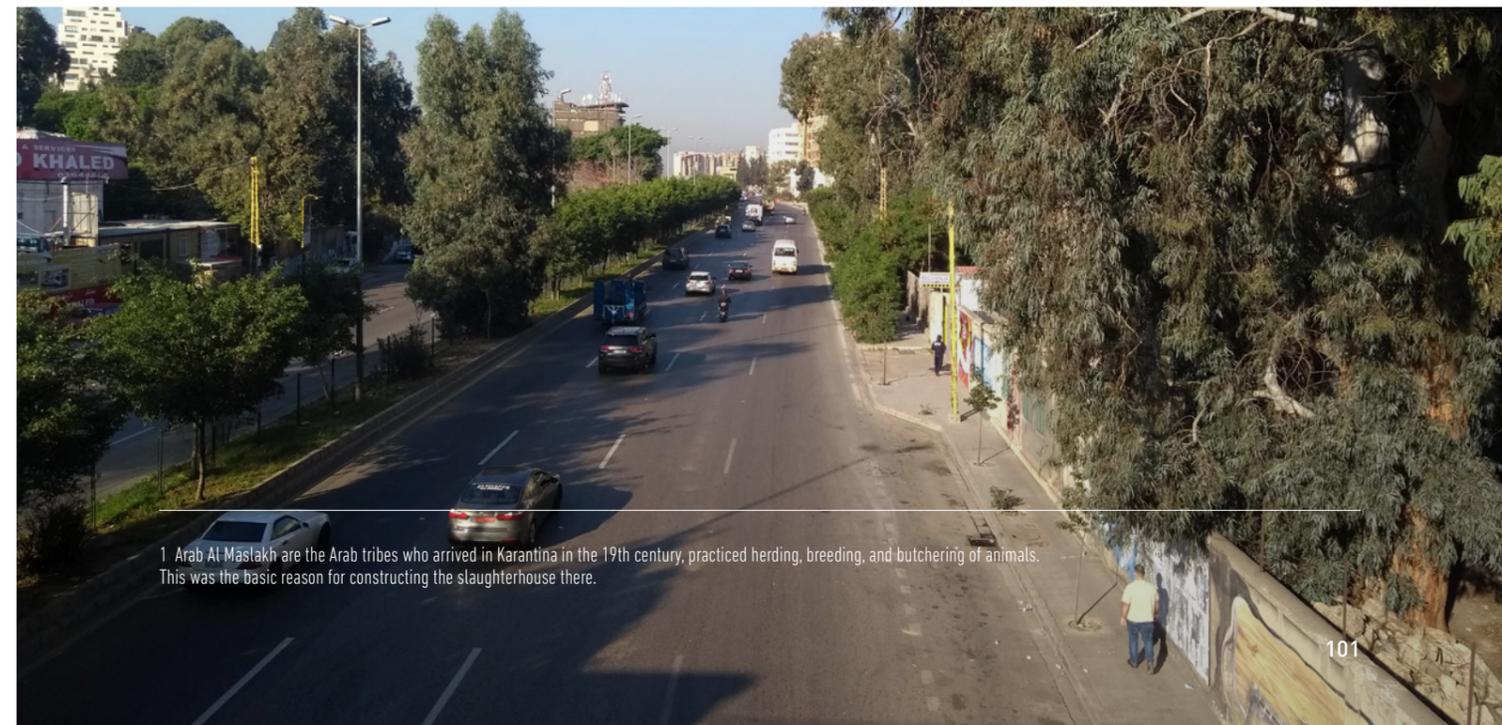
There is a strong connection between some of the economic activities and socio-cultural practices of the communities in Karantina; for example, the one between Arab Al Maslakh<sup>1</sup> and the slaughterhouse. Another strong connection is noticed between freight companies and the port. These important connections were under threat since the closure of the slaughterhouse and because of the uncertain future of the port after the blast.

## 4. PROBLEM DEFINITION

Karantina is located within the boundaries of municipal Beirut at its western edge and has an area of approximately 645,126 square meters. The historical development of Karantina from a quarantine site to a collection of sub-neighborhoods is closely intertwined with the evolution of the port.

Karantina is currently considered one of the least expensive areas in Beirut and is relatively affordable and attractive to multi-scale businesses. This is due to multiple reasons from the urban planning regulations to infrastructural ruptures (the Charles Helou Highway and the port), historical tragedies ranging from destructive fires (1933 and in the 1960s), the civil war (1976-1990), and recently the port blast (2020), unregulated economic activities and public services (the waste management facility and the slaughterhouse), and its degraded and polluted urban environment.

As a result, rupture of religious and political divisions, severe disconnection from the rest of Beirut, and internal fragmentation within Karantina are central problems. Its isolation, stigmatization, and inaccessibility are the result of interconnected processes of spatial, economic, and social disconnection. Karantina also does not have any sustainable development projects.



<sup>1</sup> Arab Al-Maslakh are the Arab tribes who arrived in Karantina in the 19th century, practiced herding, breeding, and butchering of animals. This was the basic reason for constructing the slaughterhouse there.

# 5. DIAGNOSIS TRACKS

## 5.1. Spatial Connectivity

In general, spatial connectivity is studied at multiple scales. It is evident in the operation of street networks, the nature of the edges, and mobility; they determine the degree of accessibility in a particular area and its connection with its surroundings. The street web is “determined by the functions the network serves for as well as the physical geographical context. In most cases, the road network has a fixed form because of the nature of the area that it serves; the density and pattern of a network of street blocks are usually determined by location and history” (Han et al., 2020, p.1). As is mentioned in the descriptive memory report, Karantina was a quarantine site due to its strategic location across the Mediterranean Sea and its proximity to the port. The Medawar/Karantina road network was also developed to connect the quarantine site to its surroundings. There were no urban plans in place to connect Karantina to the rest of Beirut despite the settlement of different communities from the 1850s because of its strategic location, affordability of housing, and availability of economic opportunities. Karantina which was stigmatized for a long period because of the quarantine site, the influx of refugees, and the industrial land uses, was further disconnected from the rest of Beirut with the implementation of the Charles Helou Highway in 1958. Karantina remains marginalized due to challenging spatial conditions such as infrastructural breaks, block-topologies, the ongoing militarization of land, and the absence of a public transport system.

It is worth mentioning that the communities in Karantina frequently mentioned to the citizen scientists their need for greater spatial connectivity. This need was also discussed during a town hall meeting on 30 June 2021. Many of the attendees insisted that the research team needs to include principles for spatial connectivity in the vision for urban recovery.

### A. Infrastructure

“ We live in an area that is isolated from Beirut<sup>2</sup>  
 نحن عايشين بمنطقة معزولة عن بيروت

The Charles Helou Highway connected the north of Lebanon with Beirut through Medawar. As a result, it isolated Karantina from Mar Mikhael and created a harsh edge along its southern periphery. Also, the Beirut River to the east and the Port of Beirut to the north and west are infrastructural edges that define Karantina’s boundaries, and confine it.

### HISTORICAL OVERVIEW THE URBAN EVOLUTION OF THE STREET NETWORKS OF MEDAWAR/KARANTINA

Before the 1950s, the street network was mostly designed to ease access to the city center and the Port of Beirut. Beirut and its port were important economic hubs that required adequate public transport systems such as a train railway and a tramway. The railway and the tramway passed through the Medawar district. With the increased urbanization of Beirut, cars became a priority, and the train and railway were replaced with urban highways as in the Ecochard transport plan for Greater Beirut in the 1940s. As a result, the connections between Karantina and the rest of Beirut were compromised.

A number of notable urban planners from Europe, like Ernst Egli (1951), Constantinos Doxiadis (1958), Father Lebret and the IRFED’s Team (1959-64), Michel Ecochard (1961-64), the Atelier Parisien d’Urbanisme (1977), and the Institut d’Aménagement et d’Urbanisme de la Région Ile de France (1983-86 and 1991-onwards), proposed various plans for Beirut. Ecochard proposed a transport plan for urban highways in Greater Beirut. (Verdeil, 2005)

<sup>2</sup> A resident from Al-Khodor sub-neighborhood during the thematic group discussion on connectivity.

The highway grid included the Charles Malek Highway, the Alfred Naccache Highway, the Independence Highway, the Bechara El-Khoury Highway, the Ring Road, and the Charles Helou Highway among others. The Lebanese government gradually implemented the highways between the 1950s and early 1970s (Figure 2).

Most of these highways “did cut through entire pre-existing neighborhoods, causing immense damage to the historic city fabric, and contributed to the fragmentation of the city by separating areas from each other and cutting neighborhoods in pieces” (stopthehighway.WordPress, 2016) (Figure 3).

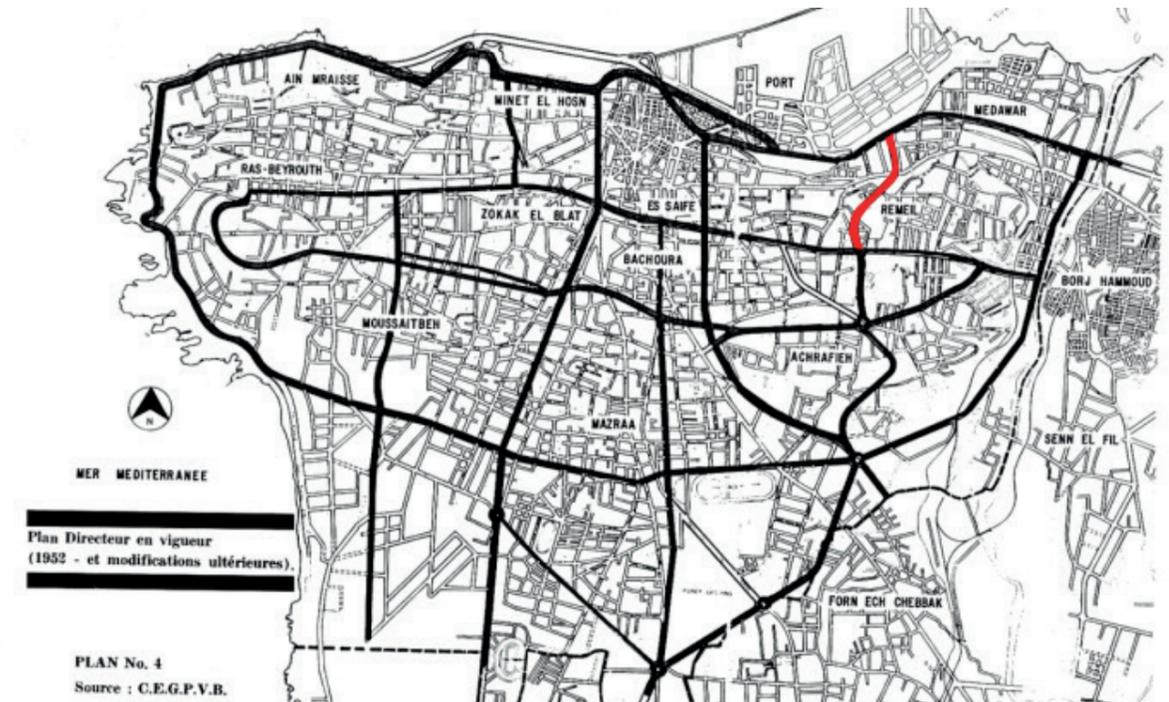


Figure 2: The Michel Ecochard masterplan for Beirut with the proposed highway network. Source: C.E.G.P.V.B, Eric Verdeil, 2010.

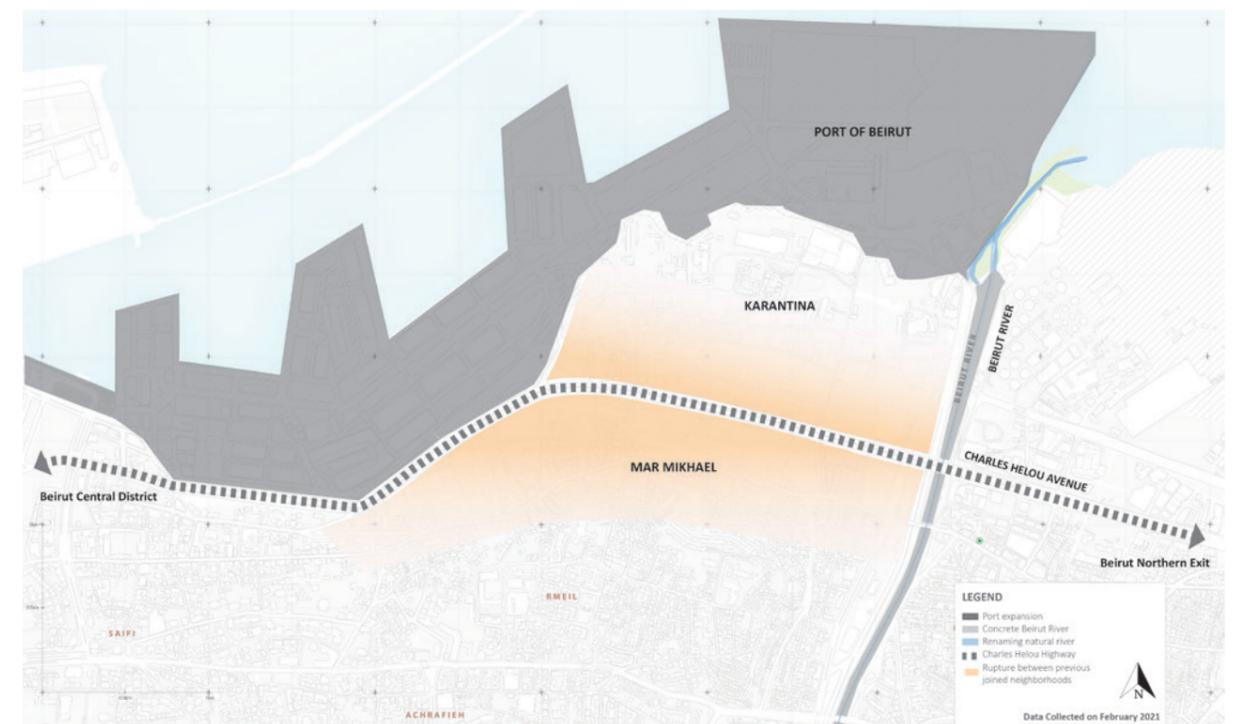


Figure 3: The urban stretch of the Charles Helou Highway caused rupture of the neighborhoods in Medawar. Source: The Beirut Urban Lab, 2021.

Before the construction of the highway in 1958, the district of Medawar was one entity that was bordered by Tripoli Street to the south, known today as Gouraud and Armenia Streets. Armenia Street was the main route that connects the northern areas of Lebanon to the Port of Beirut and the city center (Figure 4). It also provided access to the quarantine through Al-Khodor and Ibrahim Pasha Street which dates to the 1840s (Figure 4). During the French mandate from 1923 to 1943, Beirut and its port became important commercial hubs along the Mediterranean Sea. The strategic location of the port and its importance as a primary center for government activities also attracted people from various locations in Lebanon to move to Beirut. As a result, Beirut witnessed economic and demographic growth and an increase in vehicular mobility and car dependency. This increase required the implementation of the modern urban highways in Ecochard’s transport plan for Greater Beirut; as a result, the implementation of the Charles Helou Highway prioritized vehicular circulation in Medawar over pedestrian movement.



Figure 4: The early development of the street network around Medawar in 1841. Source: Scott, 1841 (Edited).

### CURRENT CONDITION

The Medawar district and its neighborhoods are examples of how masterplans, several urban planning tools, and regulations can negatively impact the development of an area. In the interviews, the residents of Karantina expressed their frustration with the Charles Helou Highway. The highway operates as an infrastructural obstacle for people living in Karantina. During the town hall meetings on 11 April and 30 June 2021, many of the residents mentioned how the highway intensified the spatial segregation of Karantina. They mentioned how many people were killed or injured trying to cross the highway. They were used to walking to Mar Mikhael either to visit the Saint Therese Church, for leisure activities, or shopping, but this was no longer possible after the highway was built. After 30 years of isolation and hundreds of death incidents, two pedestrian bridges were built between Karantina and Mar Mikhael (Figure 5).

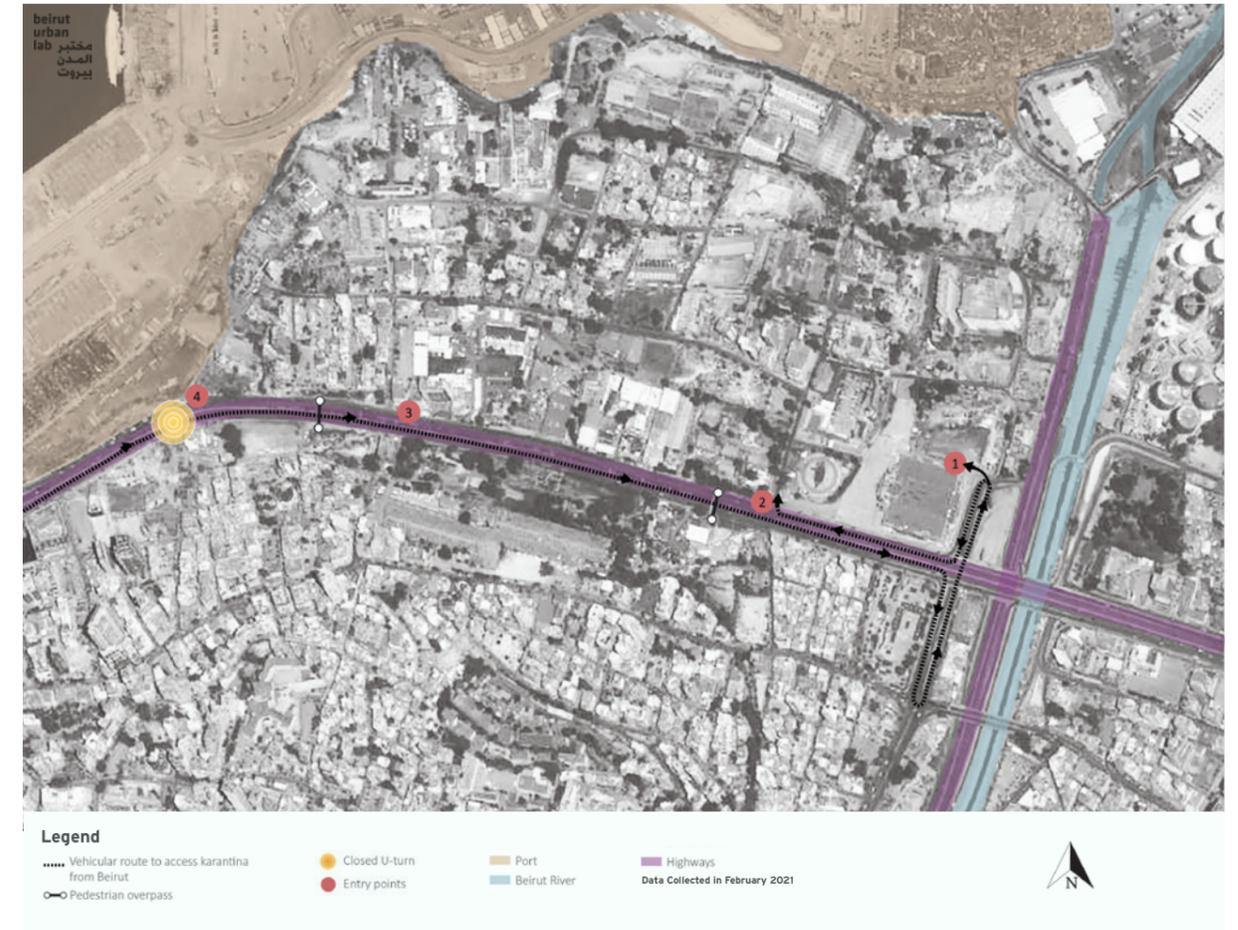


Figure 5: Mapping of the accessibility and connectivity conditions of the Charles Helou Highway in relation to Karantina. Source: The Beirut Urban Lab, 2021 (base map: google maps).

During a thematic group discussion on connectivity on 27 May 2021, the residents of Karantina mentioned that although the pedestrian overpasses provided a connection to the other side over the highway, they were not safe (Figures 6 and 7). A woman expressed her fear of walking on the overpasses and stated, “I feel scared to use the overpasses at night because it is not well lit. I heard that many people were robbed while walking on the overpasses”. She continued: “during the day, the overpasses are occupied by beggars and during the night by burglars”. The Urban Lab Team saw beggars sitting on the overpasses during the day when they were conducting the fieldwork. The overpasses are not accessible to people who need them the most, they are unmaintained and unclean, and are not shaded (Figure 8).



Figure 6. A pedestrian overpass that links Karantina to Mar Mikhael. Source: Ali Ghaddar, 2021.



**Figure 7.** The physical quality of the pedestrian overpass from Karantina to Mar Mikhael: the structure of the overpass does not include a shaded roof and the handrail is damaged. Source: Ali Ghaddar, 2021.



**Figure 8.** Street Beggars appropriating the pedestrian overpass in front of Karantina. Source: Abir Cheaitli, 2021.

Accessibility was further compromised after the removal of a U-turn at the entrance of Karantina from the highway (Figure 5). A resident mentioned during the thematic focus group discussion that “before, we used to access the area from the highway through a U-turn. After they closed it a few years ago, we were obliged to go to Dawra to make a U-turn and enter the area. So, now the nearest entrance to the area is 4 to 5 kilometers away”. The U-turn was closed because of a number of reported accidents. However, the residents felt that Karantina was further isolated from its surroundings after they felt the U-turn was closed and they no longer had direct access to their houses.

Thus, the highway broke the continuous spatial connection that Karantina had with the rest of Beirut, enforcing its existing marginalization, rupture, and isolation due to the militarization of some of its lots, heavy industrial land-use, the lack of adequate urban planning regulations, and high levels of pollution. However, disintegration and isolation were also due to the lack of a public transportation system that can connect the inner areas of Karantina to the rest of Beirut.

## B. Public Transportation

“ We need public transportation that reaches the area inside<sup>3</sup>  
 نحن بحاجة لوسائل نقل عام يللي بتوصل لجوات المنطقة

During the thematic group discussion on connectivity, and the two Town Hall meetings on 11 April and 30 June 2021, many of the residents mentioned that Karantina is not connected to any transport system. Public transport can contribute to creating more livable cities in a variety of ways (Bai, 2015). The residents said that the available transportation services in Beirut like taxis and informal bus routes do not pass through Karantina and that they must walk to the Charles Helou Highway to use these services.

<sup>3</sup> A resident of Karantina during the second town hall meeting on 30 June 2021.

<sup>4</sup> A quote from a resident of Al-Khodor sub-neighborhood during the thematic group discussion on connectivity on 27 April 2021.

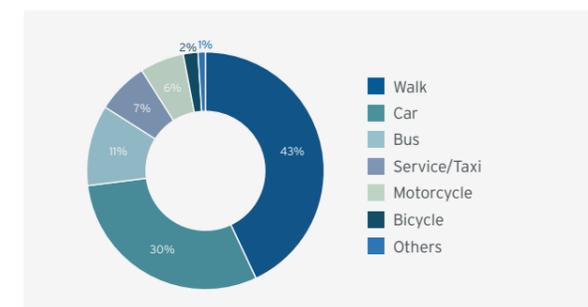
“ We are suffering to reach our work. We must walk all the way out to get transportation. There was a bus stop in the area before, and it should be reinstated<sup>4</sup>  
 نحن منعاني للوصول إلى أشغالنا، لازم نمشي للأوتوستراد كرمال ناخذ الباص. كان في محطة للباصات بالمنطقة من قبل، ولازم ترجع

As some residents mentioned during the thematic group discussion, there used to be a bus stop inside Karantina. This bus stop used to be part of an old transportation system that connected several areas in Beirut. However, the transport system was gradually discontinued after the civil war. It was replaced by an informal transportation system that runs across several areas in and around municipal Beirut. As a result, Karantina was further marginalized since the taxis and informal buses do not access Karantina but rather operate along its edges (Figure 9).

Figure 10 shows the old bus route and the structure of the bus stop in Karantina, also sketched by a resident during the thematic group discussion. Furthermore, the findings from the household questionnaire showed that out of the 401 people who currently work outside of Karantina, 11% only use the informal bus service while 30 % rely on private cars and taxis (Figure 11). This is partially due to their choice or inability to walk to the highway; some of the residents also mentioned that they do not find the informal buses reliable.



**Figure 9.** Residents of Karantina waiting for the bus along the Charles Helou Highway. Source: Ali Ghaddar, 2021.



**Figure 11:** The various transportation modes that residents use to commute to work. Source: The Beirut Urban Lab, 2021.



**Figure 10.** The discontinued bus route and the old bus stop that the residents drew at the thematic focus group discussion on connectivity. Source: Abir Cheaitli, 2021.

### C. Entry Points

Spatial disconnection is also present at the entry points to Karantina in the existing street layout and block typologies. Karantina has four entry points and, according to the field observations and interviews, each entry point is used by a different group of people.

The entry points emerged with historical events that date back to the 19th century. As was mentioned earlier in the report, the quarantine site in Karantina required connections with the rest of Beirut. Accordingly, Figure 12 shows that accessibility to Karantina was shaped by the early street network of coastal roads and the current Ibrahim Pasha Street that connected the quarantine site to the Port of Beirut. As a result, the coastal roads and Ibrahim Pasha Street provided two entry points to Karantina from the west. While, from the eastern side, Al-Khodor Street was implemented to connect Al-Khodor Mosque to Armenia Street (Figure 12).



Figure 12: The early development of the street networks around Medawar in 1911. Source: Cressot, 1911 (Edited).

The entry points were used according to the typology of urban development in Karantina into residential sub-neighborhoods, the presence of military bases, industrial zones, and municipal facilities (Figure 13). Four main entry points to Karantina are illustrated in Figure 5. For example, entrance number three is mainly used by the residents of Al-Saydeh sub-neighborhood while entrance number two is used by the residents of Al-Khodor sub-neighborhood along with the military vehicles. Entrance number two leads directly to the military base that is located at the northeastern edge of Karantina. Entrance number one is close to the industrial zone and is mainly used by truck drivers. Similarly, entrance number four, which is the main entrance to the port, is congested with trucks and military vehicles.

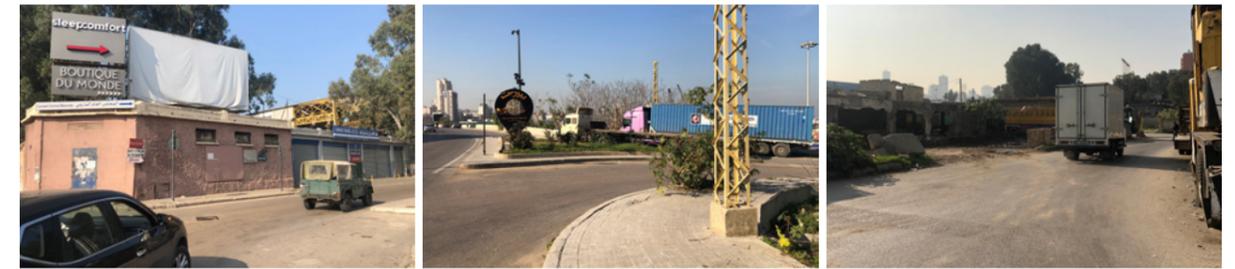


Figure 13. Several entry points to Karantina. Source: Abir Cheaitli, 2021.

### D. Block Typology and Edge Condition

Harsh borders (the Beirut River, the Charles Helou Highway, and the Port of Beirut) define the edge condition of Karantina. The implementation of the Charles Helou Highway created another impermeable edge along the southern edge of Karantina and cut across a large municipal lot.

The large municipal lot has a total area of approximately 200,000 square meters (Figure 14) and was split into two sections (Figure 15). One section of the lot is in Mar Mikhael and includes the remains of the train station while the other section is in Karantina. As a result, the edge condition of Karantina to the south is defined by the development of the large municipal lot, further compromising the porosity and accessibility to Karantina. It extends over 600 meters and blocks pedestrian and vehicles accessibility (Figure 10).



Figure 14: Aerial photo of Karantina in 1931 showing the municipal lot before it was dissected by the Charles Helou Highway. Source: The Lebanese Army, 2009.



**Figure 15:** The municipal lot split into two sections after the implementation of the Charles Helou Highway in 1958. Source: The Beirut Urban Lab, 2021.

This lot was a base for the French army during the French mandate period between 1923 and 1943 and included the late 19<sup>th</sup> century train station (Figure 16). It currently hosts a combination of economic and municipal services such as the fire station, a local department of the Municipality of Beirut, the center for the internal security forces, a parking space for the municipality, private institutions, and a military base. Around 15% of the area of the lot is occupied by the military. Thus, the inner edge of the lot has restricted accessibility from Al-Rehban Street and is marked by several checkpoints and security elements on the sidewalks (cement blocks and metal obstacles) (Figure 17).



**Figure 16:** The Mar Mikhael Railway Station and its rail routes in 1941. Source: the British Army, 1941.



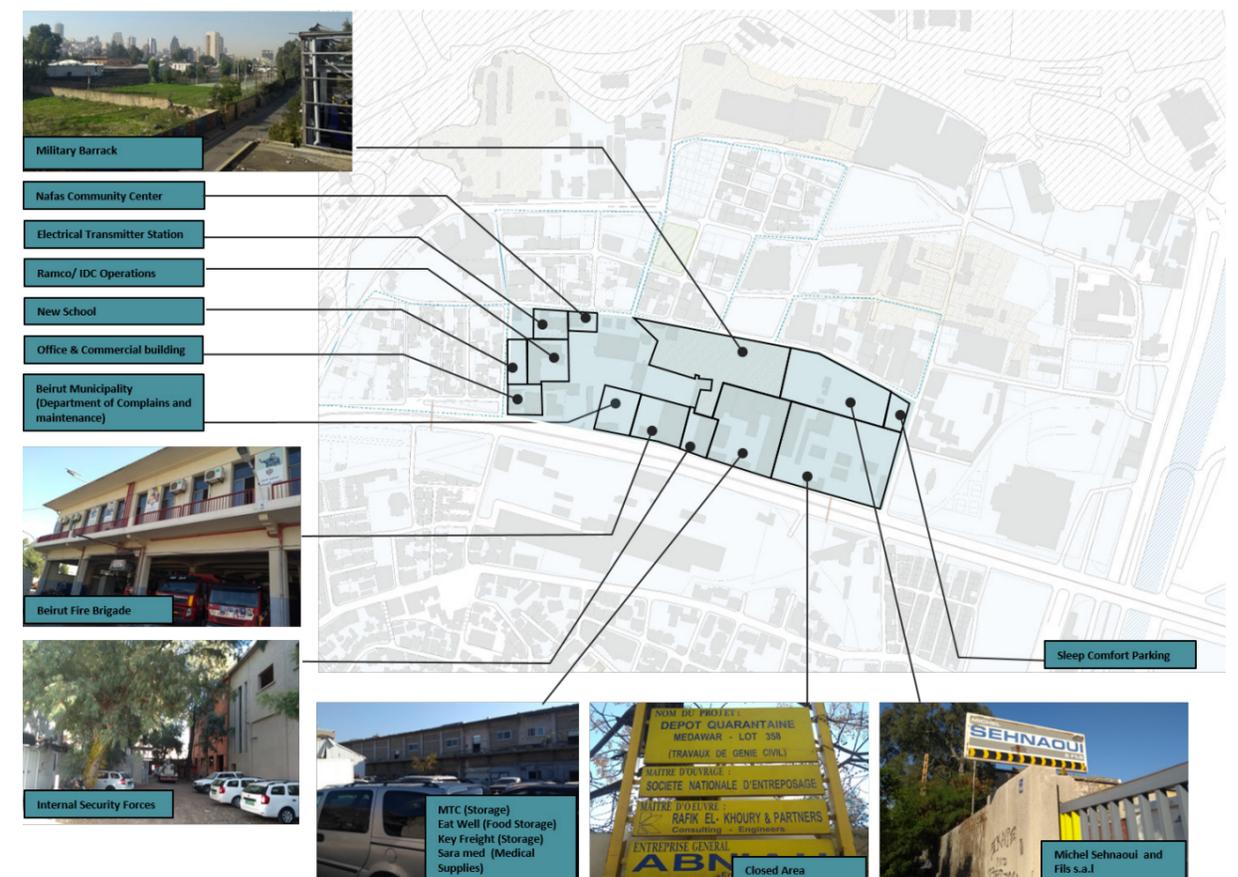
**Figure 17a.** The southern edge of the municipal lot. Source: Abir Cheaitli, 2021.



**Figure 17b.** The northern edge of the municipal lot. Source: Abir Cheaitli, 2021.

In addition, the lot includes other municipal facilities such as several warehouses that the municipality owns (Figure 18). A large block with an area of 6,100 square meters is located on the same edge to the right side of the municipal lot (Figure 19). The ownership of the block is divided as follows: the Municipality of Beirut owns 20% of the block and private developers own the remaining 80%, with the largest portion allocated to Forum du Beirut. The block also includes the BO18 nightclub and the local department of the Municipality of Beirut (Figure 20).

As a result, the block creates another impermeable physical edge that limits connectivity and accessibility between its northern and southern edges, as a result, increasing the isolation and fragmentation of Karantina. According to Jacobs (1961), if large blocks are bisected, opportunities for interaction and commerce multiply (Jacobs 1961). Porosity has the potential to boost spatial, economic, and social connectivity in Karantina; it can enhance the levels of transparency which refers to “the degree to which people can see or perceive what lies beyond the edge of a street or other public spaces” (Ewing, 2013, p.6).



**Figure 18.** A large block at the southern periphery of Karantina that is owned by the Municipality of Beirut, including a mapping of the primary land-uses. Source: Ali Ghaddar, 2021.

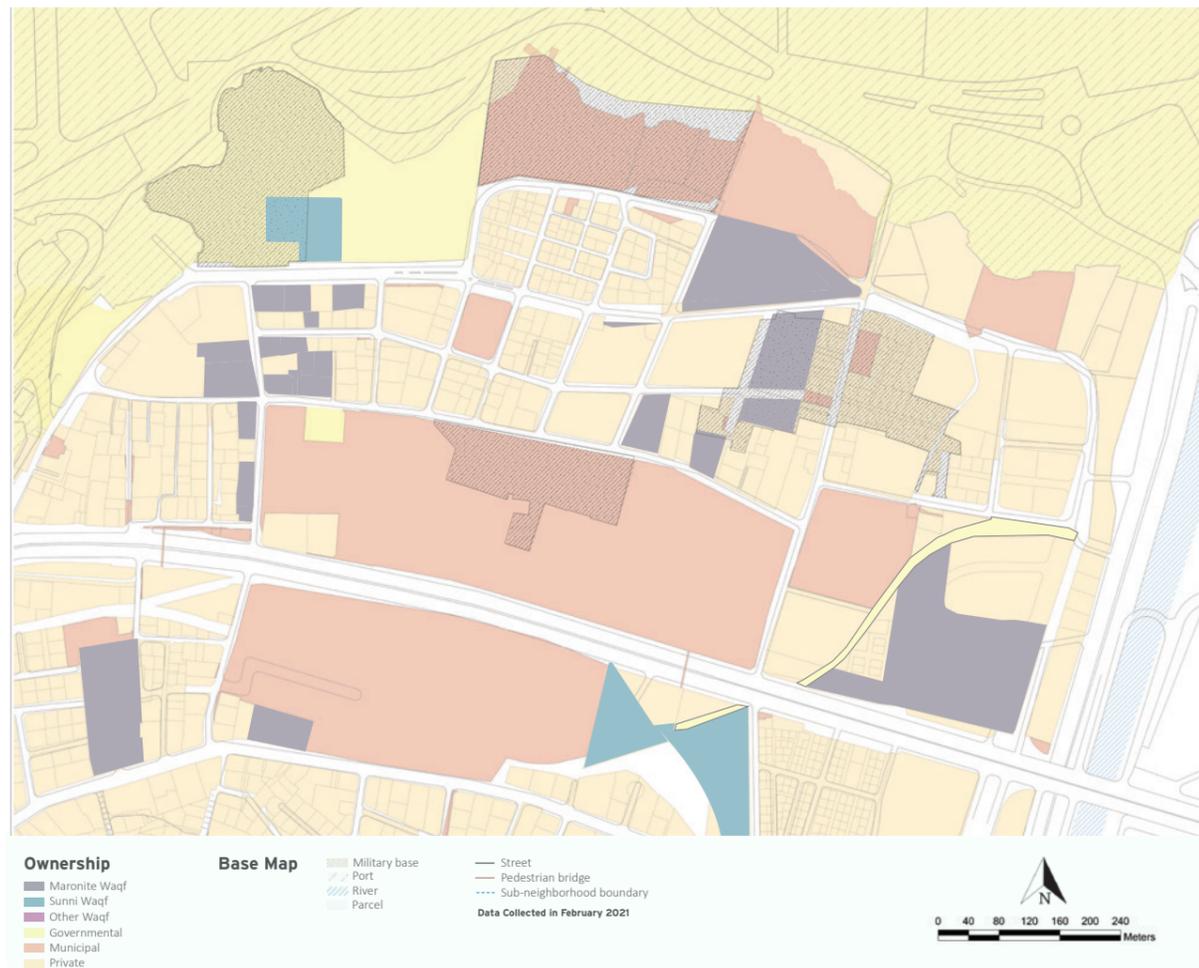


Figure 19: Lot ownership, Karantina Source: The Beirut Urban Lab, 2021.



Figure 20: A large block at the southern periphery of Karantina that is owned by the Municipality of Beirut and private developers, including a mapping of the primary land-uses. Source: Ali Ghaddar, 2021.

### E. Frontages

The physical quality of the public realm and the physical relationship between the different elements of buildings, streets, sidewalks, and lots can create cohesion in the urban fabric and boost social interaction and daily practices or create spatial and social breaks (Jacobs, 1961; Gehl, 1996, 2006; Madanipour, 2011). The street frontages between public spaces and building facades at the ground level in Karantina are fragmented. A street frontage refers to the edge between a lot and the public street (Lawinsider, 2021). An active frontage enhances the level of engagement between the street life and the uses on the ground floor of the buildings (Urban Design Guidelines, 2016).

The fieldwork in Karantina showed that there is disintegration and lack of connectivity between the front facades of the buildings at the ground level and the surrounding streets and sidewalks. This was mostly observed in the industrial area and among commercial buildings. Out of the 252 buildings that were surveyed, 31 % are fully commercial buildings (Figure 21). Some buildings have fences or gates along their entrances with minimal transparency, thus, blocking visual connectivity. Other buildings have intensive security elements on the ground floor such as guards and barriers. In addition, walking from one building to the other was challenging as the sidewalks are not maintained, and in some cases, there were no sidewalks (Figure 22).

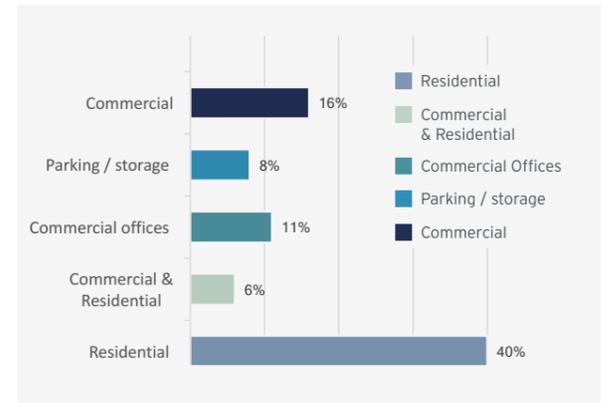


Figure 21: Building's occupation at the ground floor level. Source: The Beirut Urban Lab, 2021.

Street frontages between the two public parks and their surroundings are also fragmented. The parks are fenced with metal mesh that provides visual continuity but blocks spatial connectivity. Furthermore, sidewalks are the main public spaces in Karantina. Most of the sidewalks inside the sub-neighborhoods have a width that is less than 1.5 meters, which the American Association of State Highway and Transportation Association considers the minimum requirement for people to walk on the sidewalk (Steiner, Butler, & American Planning Association, 2012). In addition, in several areas in Karantina, sidewalks are either not present or not continuous. (Figures 23 and 24)



Figure 22. Commercial building frontages. Source: Abir Cheaitli, 2021.



Figure 23. Streetscape and frontages in Al-Senegal sub-neighborhood. Source: Abir Cheaitli, 2020.

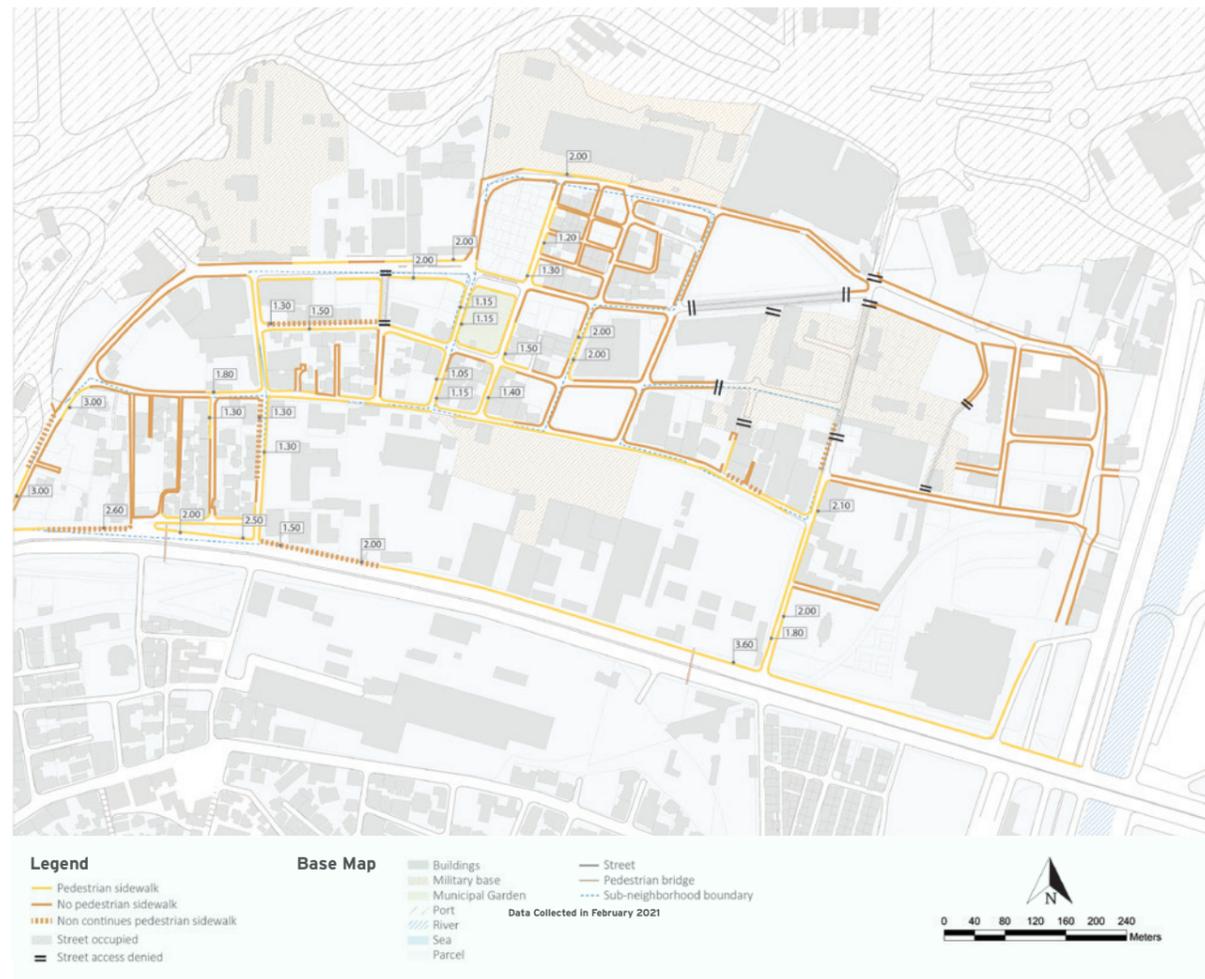


Figure 24: Sidewalk continuity, availability, and size in Karantina. Source: The Beirut Urban Lab, 2021.

The width of the sidewalk affects street frontages and connections between the buildings and public spaces. It also affects pedestrian usability and determines the type of access and other pedestrian elements that can be installed. Therefore, the lack of connectivity between the ground floor of a building and street frontages was considered a critical issue in the research since street frontages have the potential to create continuity in Karantina. They can act as engagement points for social interaction and spontaneous socio-spatial practices between the residents of the three sub-neighborhoods and with businesses in Karantina.

### F. Land-use

The Lebanese military has occupied several lots in Karantina for over 30 years. As is mentioned in the descriptive memory report, four military bases are distributed in Karantina on public and private property. The four bases played a role in dividing Karantina into restricted zones and causing inner fragmentation. Spatially, the military bases occupy approximately 103,720 square meters out of 645,126 square meters, constituting 17% of the total area of Karantina (The Beirut Urban Lab, 2021). Yet, based on fieldwork and street surveys, the spatial practices of the military bases are not confined to the boundaries of the lots; many of their security elements extend beyond the lots into the public spaces. These security elements operate as physical obstacles to walkability on some streets in Karantina (Figure 25).

Figure 26 shows how militarization translated into spatial constraints through security measures and mechanisms. Closed streets, check points, fortified walls, metal barriers, cement blocks, no parking zones, plastic cones, and security cameras are scattered across Karantina. They constrain pedestrian and vehicular mobility, breaking the flow and continuity of streets and increasing inner fragmentation in the sub-neighborhoods. These practices and strict measures render Karantina uninviting for people to visit (Fawaz, Harb, and Gharbieh, 2012). Moreover, the typology of businesses in Karantina also determines the level of connectivity with its surroundings. Some businesses contribute to the high levels of isolation and stigmatization of Karantina.



Figure 25. Edge conditions and security elements along the militarized lots. Source: Abir Cheaitli, 2021.

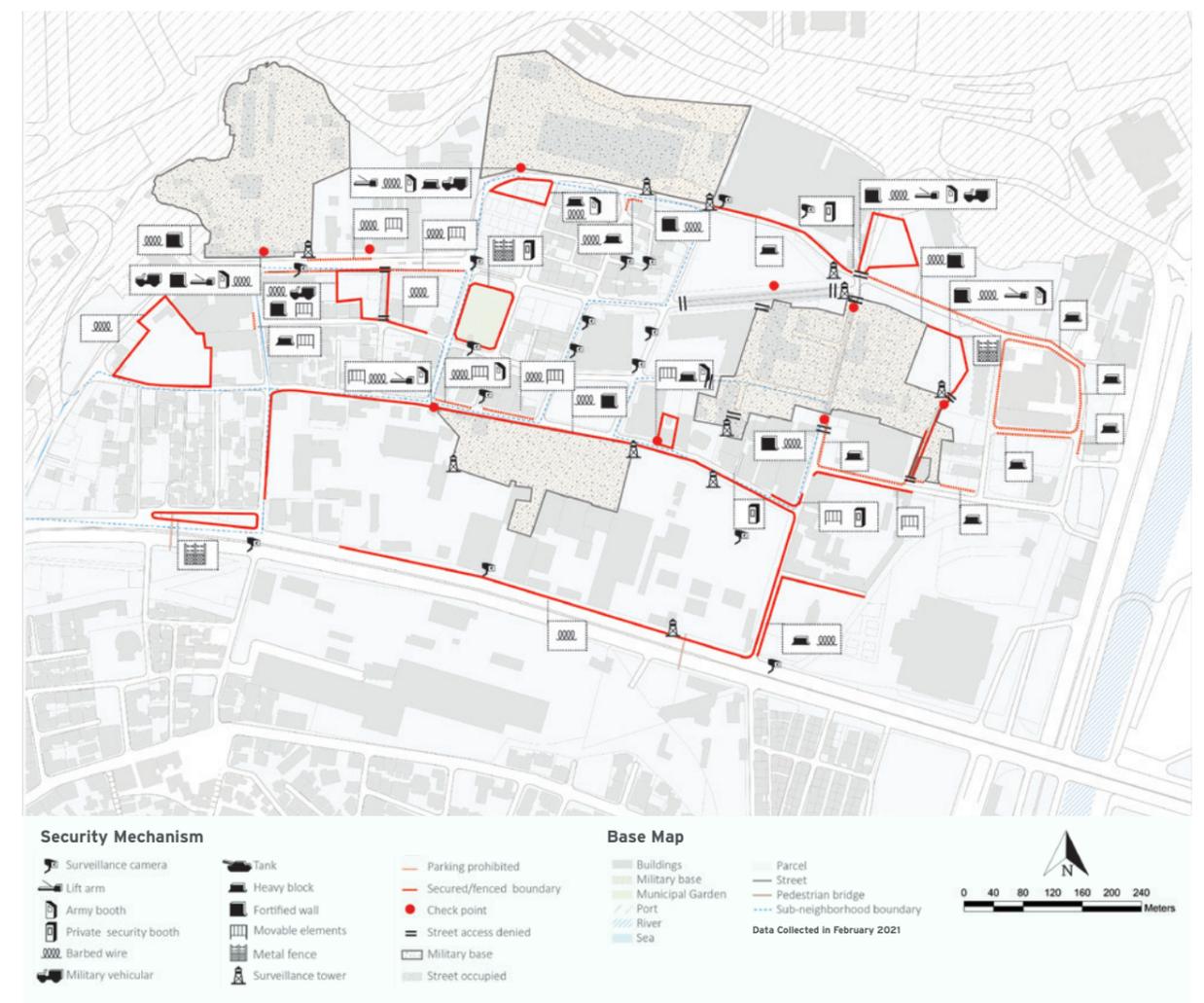


Figure 26: Security Mechanisms in Karantina Source: The Beirut Urban Lab, 2021.

## 5.2. Economic Connectivity

The relatively low rent and the strategic location of Karantina close to the city center and the port attracted many economic activities to Karantina. Landuse in Karantina is mostly mixed-use with multiscale economic activities, government facilities, industrial companies, freight logistics services, and micro-scale businesses. These businesses had a two-edged sword impact on the economic activities in Karantina. On the one hand, they operate as active magnets that link Karantina to Greater Beirut and beyond through economic networks. On the other hand, they contributed to the isolation and stigmatization of Karantina, rendering it largely undesirable for residential developments.

### A. Active Magnets

The old slaughterhouse, fish market, government hospital, flour mill, freight services, and art galleries created economic connections between Karantina and its surroundings. These connections generated links within a particular network of services, capital, and human flow. Many of these practices and services are not found in other areas in Beirut, thus, they worked as magnets for outsiders, bringing customers in, and contributing economically to the livelihoods of the low-income residents of Karantina.

The Port of Beirut, which borders Karantina from the north and the west is an important magnet for two reasons: it connects Karantina to the economy of Beirut as a whole. The slaughterhouse serves as another important magnet. Many residents, especially the Arab Al Maslakh tribes, perceived the former practice of meat trading as an active economic hub that extended its operations as far as Tripoli in the north of Lebanon. A previous employee of the slaughterhouse mentioned during an interview that “we were recognized as the best butchers in Beirut who provided good quality, service, and price”.<sup>5</sup> Yet the slaughterhouse was closed in 2014. The slaughterhouse was not only a source of income for many residents in Karantina but also had developed as a major employer in Beirut.

Another magnet that attracts clients from Beirut and beyond is the fish market, which is located at the northern periphery of Karantina, as is evident from the visits to the market and conversations with the fishermen (Figure 27). The fish market provided work opportunities for people in Karantina, particularly the Arab tribes. Karantina’s Government hospital also attracts people to the area (Figure 28). Crowds of people and cars were observed around the hospital during the fieldwork visits.

Other kinds of economic connectors were either present or emerged in Karantina over the past years and functioned as cultural magnets. Local businesses that attracted people with different interests and from different age groups include the Sfeir Semler and KanZaman galleries, and entertainment places (the Urban Park, Forum Du Beirut, KED, and B018), and graphic design and architectural offices. These businesses engaged with city life and introduced leisure and entertainment to Karantina. However, after the port blast, these businesses were threatened and several of them closed or are waiting for compensation for repairs; these include Forum du Beirut and the Urban Park.



Figure 27. The fish market. Source: Ali Ghaddar, 2021.



Figure 28. Karantina’s government hospital. Source: Abir Cheaitli, 2021.

### B. Isolated Economic Islands

“ There are a lot of public and private companies, and we did not benefit from them in terms of work<sup>6</sup>  
يوجد الكثير من الشركات العامة والخاصة ونحن لم نستفد منهم من ناحية العمل

There is a diversity of economic activities in Karantina. They range from industrial manufacturing of steel to micro-scale shops that sell arts and crafts. While this variety in type and scale can be considered a positive attribute of life in Karantina, the unharmonious development of the economic activities inside Karantina contributed to the existing social fragmentation and disintegration, not only among the businesses but also within the local communities in Karantina. Micro enterprises that create a pedestrian flow to Karantina but do not relate to its character in terms of function, job opportunities, and service provision, are mostly galleries (Sfeir-Semler gallery), artisan shops (KanZaman, Boutique du Monde), and leisure facilities (B018 and Forum du Beirut). These businesses can mitigate the negative labels of Karantina as an impoverished and informal area. However, these businesses do not employ the residents and do not target high-end clients from outside of Karantina. Hence, they do not contribute to the economic growth of Karantina in a sustainable way that benefits both the business and the locals. The Beirut Urban Lab team surveyed 83 businesses in Karantina in 2020. 69% of the businesses mentioned that they were attracted to Karantina simply because the rent is cheaper compared to nearby areas in Beirut, while 85% mentioned that it is because of ease of accessibility and strategic location next to the port (Figure 29). It is worth mentioning that out of the 83 businesses surveyed, 48 mentioned that they want to stay in Karantina because of the social fabric and their feelings of attachment. This is explained by the fact that 30 out of the 48 shop owners already live in Karantina.



Figure 29: Reasons why businesses want to stay in Karantina. Source: The Beirut Urban Lab, 2021.

Employment opportunities at these shops are minimal. The household questionnaire in 2020 by The Beirut Urban Lab team revealed that there is a high level of unemployment among residents. Only 29% of the residents are employed, and 10% of them work inside Karantina (Figure 30). Therefore, most of the businesses operate in isolation and do not improve social conditions or contribute to sustainable socio-economic growth.

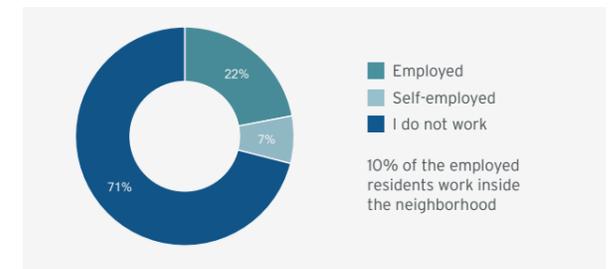


Figure 30: Employment rates. Source: The Beirut Urban Lab, 2021.

Besides, if unregulated, the agglomeration of certain types of businesses (arts and galleries) may lead to the gentrification of Karantina and the displacement of people, a notable problem in the nearby neighborhoods of Beirut (Mar-Mikhael)<sup>7</sup>. The answers to the questionnaires showed that in addition to the disconnection between the typology of businesses and the community groups in Karantina, there is poor communication and networking among the businesses themselves. Businesses that have a similar scope and scale of work also operate independently. There has not been any initiative from local authorities or the community to create business collectives that can bridge between people. Yet, the analysis showed that the smaller micro businesses like mechanic shops are connected to the activities of the freight companies in Karantina that ship cars directly from the port. Networking can help overcome spatial, economic, and social divisions, disconnection, and tensions by encouraging resource exchange, local employment, and business opportunities, in addition to the exchange of knowledge.

<sup>5</sup> Interview with Mr. Fakir al-din Shihadeh on 27 May 2021. He was a previous employee at the slaughterhouse.

<sup>6</sup> K.A.A. (23 January 2021), (George Antoun Tatarian, Interviewer)

<sup>7</sup> Refer to transversal issue III for more details on the relationship between economic practices.

### C. Missing Economic Connections

Although Karantina hosts a wide range of industrial and commercial activities, it still lacks some vital businesses. The fieldwork and mapping of the current businesses in Karantina showed that there are no banks, stationery shops, pharmacies, gas stations, restaurants, coffee shops, electronics shops, and nurseries. During the first Town Hall meeting on 11 April 2021, people complained about the lack of investments and the absence of primary businesses for daily needs. The absence of banks, gas stations, pharmacies, and leisure activities required the residents to rely on adjacent areas. For example, there is only one pharmacy in Karantina that was closed for repairs since the port blast.

“ There is a hospital in the area that has a history, but it does not provide good service; we are compelled to commute to other areas get the needed treatments<sup>8</sup>

في مستشفى إليها تاريخها بس منّا منيحة ومنروح مدري لوين لنتداوى

“ I would like Karantina to have a school so Syrian kids don't spend all day on the streets<sup>9</sup>

حبب شوف فيها مدرسة للأولاد السوريين يلي بضلن بالشارع

“ There is no school for the children of Karantina to learn and stay close to their home<sup>10</sup>

ما في مدرسة تحتوي أولاد المنطقة ليضلن قريبين من بيوتن

The household questionnaire showed that Karantina also lacks health services and educational facilities. Even though there is a government hospital in Karantina, 60% of the residents mentioned that they do not get their healthcare at the Karantina hospital: 40% mentioned that it is expensive, 73% said it is underserved, and 50% mentioned that the quality of healthcare that it provides is poor (Figure 31). There is only one clinic for the Maronite league in Karantina, which services many people in Karantina and provides consultations at low prices. Still, many residents prefer going to the Geitaoui Hospital in Achrafieh, the Rafic Hariri Hospital in Jnah, Al Makassed Hospital in Tarik Al Jadida, and public clinics in Sabra and Bourj Hammoud. School, learning centers, and nurseries are also absent in Karantina. During the second Town Hall meeting on 30 June 2021, a group of Syrian refugee mothers said that their kids do not go to school since they cannot afford the transportation costs, and do not feel safe sending their kids to distant areas. One Syrian refugee woman said: “my daughter is 9 years old and has never been to school.”<sup>11</sup> The residents mentioned that a learning center could help the children in Karantina to overcome illiteracy levels and mitigate the consequences of the absence of a school. They further explained that a learning center could act as a social hub. The learning center will gather students from various neighborhoods and sub-neighborhoods.

The residents explained that while learning and playing, the children communicate with each other and, as a result, improve the connections between the different community groups, and decrease tensions, especially between the Syrians and Lebanese. Consequently, the absence of specific businesses and services imposes high costs of transportation on the residents, which many are not able to afford, and it exacerbates the sense of isolation in Karantina.

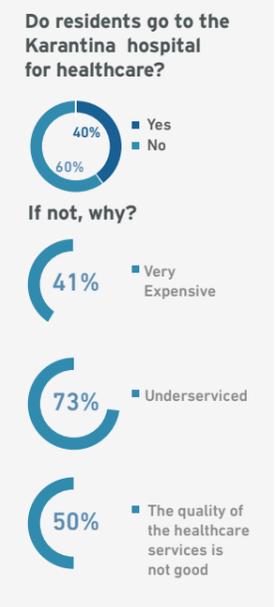


Figure 31: Relation between residents and the Karantina Government hospital. Source: The Beirut Urban Lab, 2021.

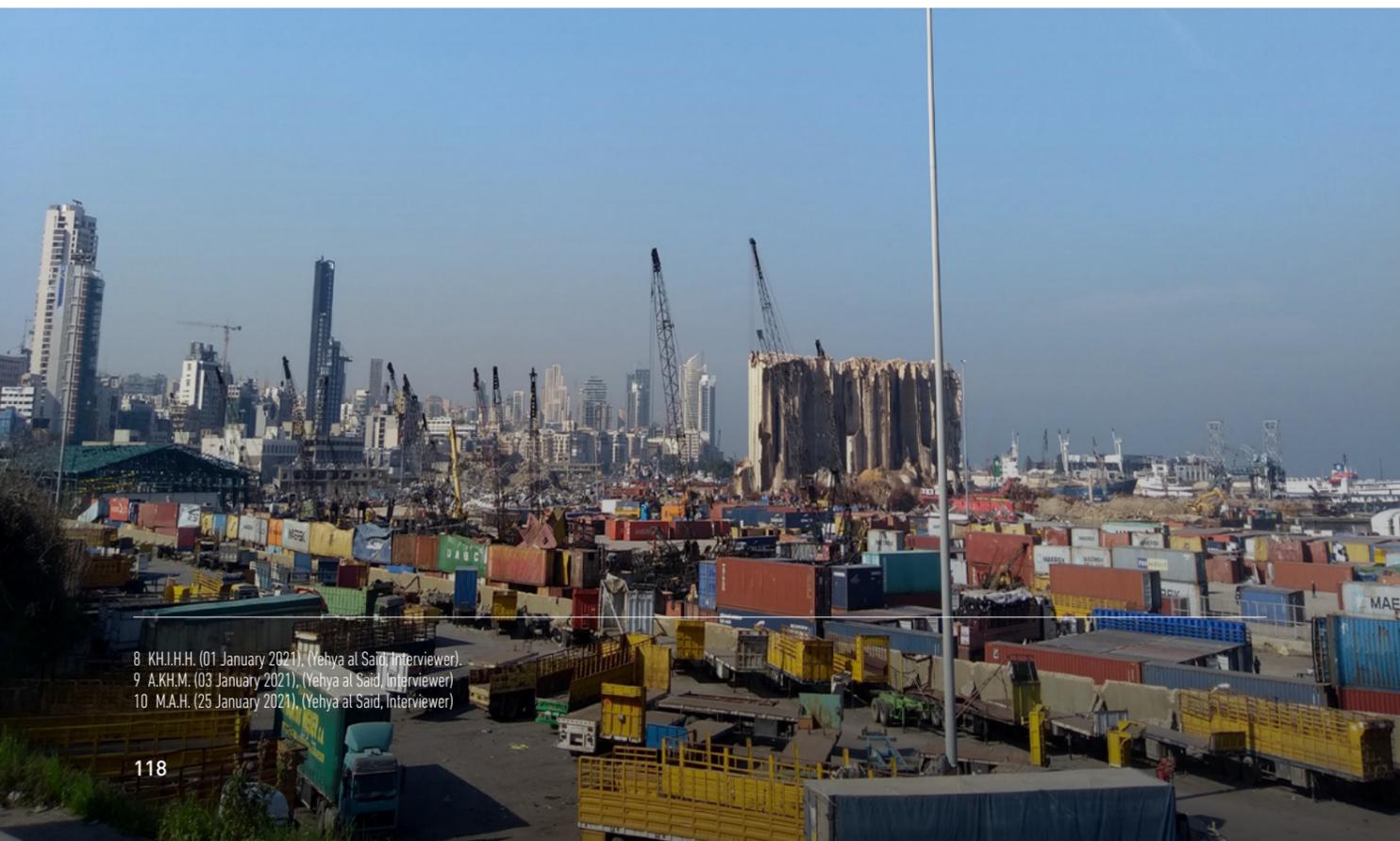
### D. Unsustainable Practices

“ The area is polluted from the smells of the slaughterhouse, the Beirut port, and the landfill<sup>12</sup>  
المنطقة ملوثة من روائح المسلخ والمرافأ ومكب النفايات

In addition to the inward fragmentation, the neighborhood profile of Karantina showed that some of the businesses and industries negatively affected the environment due to various unsustainable practices. Environment degradation may be driven by many factors due to the dynamic interplay between socio-economic, institutional, and technological activities (Union Budget, 2021). Research also found that the negative impacts of pollution lower property values and divert the interest of developers elsewhere (Liu, et al., 2018).

In business, sustainability refers to “doing business without negatively impacting the environment, community, or society as a whole” (Spiliakos, 2018). In Karantina, the analysis of the data shows that some of the private and public businesses (the old slaughterhouses, the waste management facilities, and the steel industries) caused pollution, health problems, and stigmatization in Karantina, labeling it as a polluted, unhealthy, and hostile site and contributing to its spatial marginalization.

The residents do not only perceive Karantina as polluted, but its reputation as an hygienic area exceeds its boundaries. Karantina has always been tagged as ‘an area that stinks’ and this perception remained even after the closure of the slaughterhouse and the opening of the landfill in 2015.



8 K.H.I.H. (01 January 2021), (Yehya al Said, Interviewer)  
9 A.K.H.M. (03 January 2021), (Yehya al Said, Interviewer)  
10 M.A.H. (25 January 2021), (Yehya al Said, Interviewer)

11 A Syrian mother during the town hall meeting on 30 June 2021.  
12 M.A.S. (22 January 2021), (George Antoun Tatarian, Interviewer)

During the thematic group discussion on ‘the quality of the urban environment’ on 20 April, 2021 several residents mentioned that Karantina is still stigmatized because of the placement of the landfill. One of the residents said, “Karantina is considered as the junkyard of Beirut, and no one would like to visit it”<sup>13</sup>.

After the port blast, the large load of construction and demolition waste caused by the explosion was dumped in a designated area inside Karantina, emphasizing its stigmatization as the junkyard of the city (Figure 32). Figure 32 shows how the debris formed a massive hill, and the residents are worried that this hill with time will become a permanent site in Karantina as the landfill in Saida and Tyre. In addition, even though the Port of Beirut is a major economic infrastructure that has positively affected Karantina on multiple levels, its proximity to Karantina has dilapidated its infrastructure, road networks, and environmental quality. The cargo transit of trucks frequently causes traffic jams inside the streets of Karantina, threatening the safety of children playing on the streets, damaging public spaces, causing air and noise pollution, and degrading the quality of the environment.



Figure 32. Accumulation of construction and demolition waste after the port blast. Source: Abir Cheaitli, 2021.

The association for Sustainable Development Goals (SDGs) states that unsustainable practices of businesses and developments can cause air, soil, water, and sound pollutants, in addition to endangering the health and wellbeing of the residents especially if the operation process does not comply with the required standards (SDGs, 2021). The absence of a sustainable strategy for the urban development endangers the health and wellbeing of residents and stigmatizes Karantina as an unwelcoming and unhealthy environment, hence, exacerbating its isolation and segregation<sup>14</sup>.

The previous sections of this report showed how Karantina suffered from spatial and economic fragmentation due to the infrastructural breaks, the deteriorating quality of the built environment, the militarization of land, and the unregulated industrial and economic activities. However, there was a clear social connectivity, especially at the scale of each sub-neighborhood.

### 5.3. Social Connectivity

“Whenever I leave the area, I feel like a fish removed from the water, and will instantly die”<sup>15</sup>  
 بس اطلع برا المنطقة بحس حالي سمكة بلا مي، بموت دغري

Social connectivity is broadly defined as the relationships that individuals have with the people around them. They may be close in terms of family, friends, and co-workers, or more distant in terms of casual acquaintances (Healthwise, 2021). This report defines social connectivity as how an individual links to their neighborhood and how the neighborhood as a social unit engages with the broader community through social magnets. These interactions can happen along with different types of networks such as familial ties, neighborhood ties, religious ties, and institutional or business ties.

In the report, each type of network was examined along three different scales: at the scale of the sub-neighborhood, at the scale of Karantina, and at the scale of the adjacent neighborhoods. Additionally, the analysis of the spatial connectivity revealed that Karantina is also socially fragmented.

“The word ‘hay’ means to me good company, it’s like a small country were my relatives and close ones live together in harmony”<sup>16</sup>

الحي كلمة تعني لي العشرة الجميلة كأنه وطن  
 مصغر ففيه يعيش أقاربي وأهلي

“The neighborhood is socialization between people, love of neighbors, and companionship between family and people”<sup>17</sup>  
 الحي هو اجتماعيات بين الناس محبة الجيران عشرة طويلة بين الأهل والناس

The perception of the residents of the sub-neighborhoods - Hay<sup>18</sup> “الحي”, and their boundaries showed that there is a connection between conceived spatial boundaries and the social makeup of the sub-neighborhoods. This was evident in the findings from the household questionnaire, whereby social connectivity is strong at the scale of each sub-neighborhood but not at the scale of Karantina as a whole. Most of the residents referred to their sub-neighborhood as the boundary that hosts their own social group or the community that they belong to. As mentioned before in the report, Karantina has three sub-neighborhoods: Al-Khodor, Al-Saydeh, and Al-Senegal. The first reading of the sub-neighborhoods showed that they can be characterized by according to religious and familial ties.

**The household questionnaire asked questions to measure the level of connectivity. The questions were:**

- To what extent do you agree/disagree that you belong to the neighborhood?
- To what extent do you agree/disagree that your friendships and relationships with people in the neighborhood are meaningful?
- To what extent do you agree/disagree that if you want some advice on something, you can go to someone in the neighborhood?
- To what extent do you agree/disagree that you could borrow items and exchange services for you and your neighbors?
- To what extent do you agree/disagree that you can stand up and talk to people in the neighborhood?
- To what extent, do you agree / disagree that people in the neighborhood are willing to help their neighbors?
- To what extent, you agree/disagree that you can trust the people of the neighborhood?

The analysis showed that social connection to the neighborhood and sense of belonging is at its highest in an Al-Khodor sub-neighborhood recorded at 71 %, while Al-Sayed sub-neighborhood at 58% and Al-Senegal sub-neighborhood at 52% (Figures 33,34,35,36).

Sub-neighborhoods	Strongly agreed	Agreed	Total % of positive response
Al-Khodor	30%	41%	71%
Al-Saydeh	9%	49%	58%
Al-Senegal	16%	39%	52%

Figure 33. Summary of the analysis in figures 34, 35, and 36 on social connectivity. Source: The Beirut Urban Lab, 2021.

<sup>13</sup> A resident of Al-Khodor sub-neighborhood during the thematic group discussion on ‘the quality of the urban environment’ on 20 April 2021.

<sup>14</sup> This section of the report is detailed in Transversal Issue V ‘quality of the built environment’.

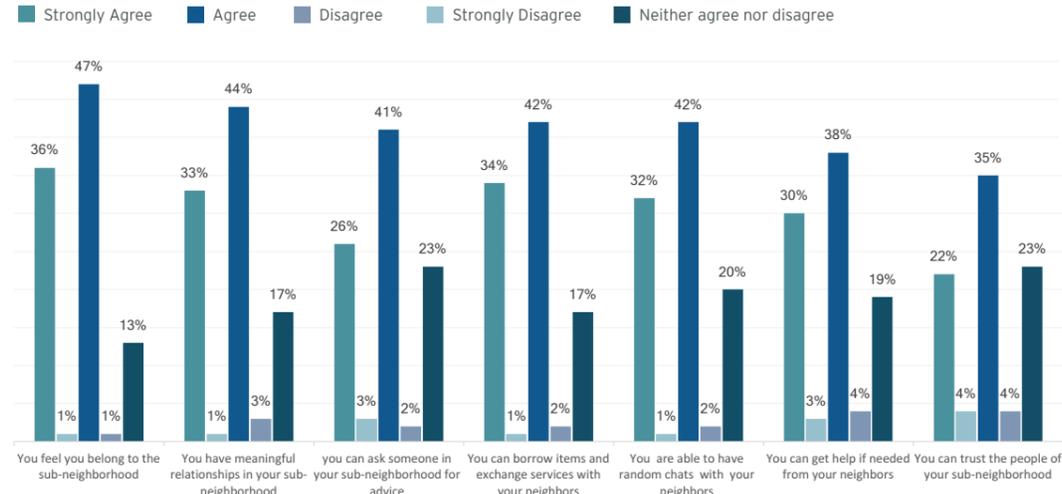
<sup>15</sup> M.H.H. (09 January 2021), (Yehya al Said, Interviewer)

<sup>16</sup> A.S.A.A. (08 January 2021), (Wafaa Alshahadah, Interviewer)

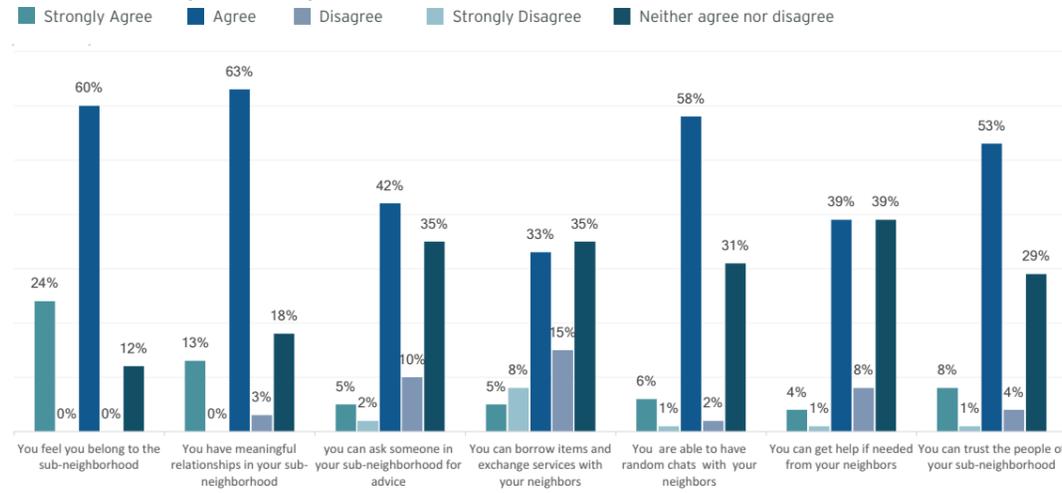
<sup>17</sup> Z.H. (24 December 2020), (Mohamad Amshah Tatarian, Interviewer)

<sup>18</sup> Hay/Ahyaa “حي/أحياء” can be translated as: “section/s (of a city)”, “quarter/s (of a city)”, or “(neighborhood/s)”.

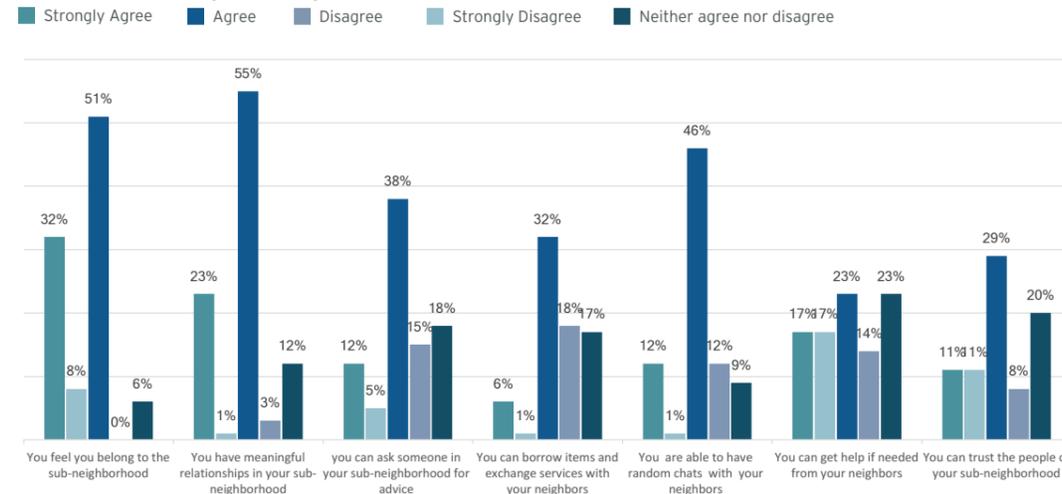
**Social ties in Al-Khodor sub-neighborhood (350 families)**



**Social ties in Al-Saydeh sub-neighborhood (130 families)**



**Social ties in Al-Senegal sub-neighborhood (65 families)**

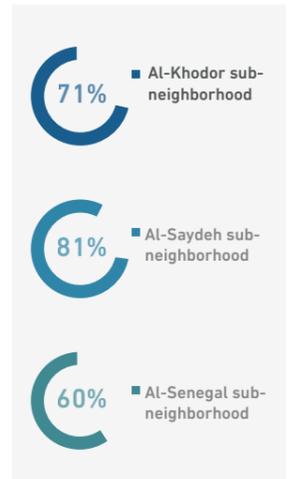


**Figure 34, 35, and 36:** Various levels and methods of social connectivity in each sub-neighborhood. Source: The Beirut Urban Lab, 2021.

## A. Familial and Tribal Ties

Social ties at the neighborhood level influence the decisions of people to leave or stay in an area (Dawkins, 2006). The social composition of the sub-neighborhoods in Karantina is the result of several events that triggered certain patterns of settlement. The field visits and interviews showed that there are familial and kinship ties inside the three sub-neighborhood and that kinship has influenced social relation where people lived and with whom they got married.

Findings showed that familial ties are a strong asset in the sub-neighborhoods. Most of the residents responded to the household questionnaire that they spend their free time with family members inside Karantina and across the three sub-neighborhoods (Figure 37). Nevertheless, as is mentioned in Transversal Issue I, the densest sub-neighborhood is Al-Khodor. One can note that social connections are nurtured in public spaces. While walking during the day through Karantina and the inner alleys, the research team noted that many social practices animated public spaces such as people sitting, chatting, and eating together, children playing football, cycling, or running, and the elderly watching from the balconies (Figures 38).



**Figure 37:** Time spent with family members across the three sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

This pattern of engagement was present in the other sub-neighborhoods but with less frequency and a lesser number of residents per gathering. For example, it was rare to see children on the streets of Al-Saydeh and Al-Senegal.

The analysis showed that 83% of the residents of Al-Khodor have a sense of belonging to the sub-neighborhood. This was also clear in the narratives and the ways that the residents of Al-Khodor described their sub-neighborhood and their close relationships with the locals. During the chats with the residents about the relationship between the members of the same sub-neighborhood, the residents of Al-Khodor used words such as 'family', 'siblings', and 'uncles', and they emphasized that they all know each other through familial or tribal ties. Several of the residents also mentioned that they were born and raised in Al-Khodor and got married to a family member that was also born and raised on the same street. Some quotes that illustrate these familial ties included:



**Figure 38.** Social gatherings and practices in Al-Khodor. Source: Abir Cheaitli, 2021.

“ There is a familial atmosphere as in villages; we all know each other and are relatives.<sup>19</sup>

في جو عائلي مثل أجواء القرى كلنا منعرف بعض ومنقرب بعض

“ I like the kinship relationships in the area, as we all are relatives in some way, even if that relation is distant<sup>20</sup>

أحب صلة القرابة الموجودة في المنطقة حيث اننا كلنا تربطنا علاقة قرابة حتى وإن كانت بعيدة بعض الشيء

<sup>19</sup> Z.A.S. (01 January 2021), (Yehya al Said, Interviewer)

<sup>20</sup> A.N.I.H. (22 December 2020), (Yehya al Said, Interviewer)

“ We are a group of relatives that live in the same area<sup>21</sup>  
نحن مجموعة من الأقارب يسكنون نفس المنطقة

In some cases, familial ties overpower economic interests and benefits. For example, in the thematic group discussion on housing, a woman from Al-Khodor sub-neighborhood stated that لو لم أكن عمته لكان طردني على الفور “if I weren’t his aunt, he would have evicted me instantly”. Thus, social relations have formed over time a community which members support one another even in critical times.

However, the research team did not note these forms of familial bonds and quotes from the other sub-neighborhoods. The reason behind this difference among the sub-neighborhoods is that the social composition of Al-Khodor stems from communal tribes in addition to religious similarities. The household questionnaire showed that 141 families belong to an Arab tribe in Al-Khodor, four families in Al-Saydeh, and four in Al-Senegal. Arab tribes such as Arab Al Maslakh were mostly present in Al-Khodor and promoted a keen sense of belonging, social connective, and security.

Moreover, familial ties and kinships generated a sense of safety among the residents. The collected data showed that across the three sub-neighborhoods, more than 60% feel safe or very safe to live in Karantina (Figures 39 and 40). The narratives of women in Al-Khodor attributed safety to the familial and tribal ties. Women in Al-Khodor mentioned that everyone in the sub-neighborhood knows each other. As a result, mothers feel safe walking on the streets at any time during the day. They also feel safe leaving their children to play on the streets at night, while the sense of safety and security in Al-Saydeh and Al-Senegal are attributed to the presence of the military bases.

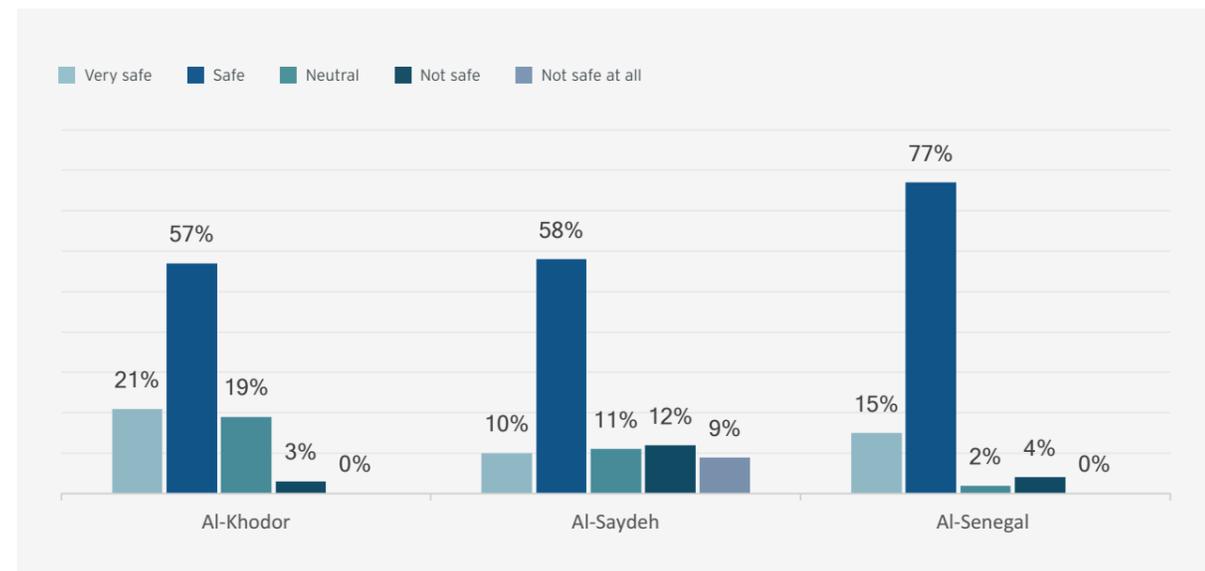


Figure 39: Sense of safety and security during the night across the three sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

21 A.W.M.. (26 January 2021), (Wael al Said, Interviewer)

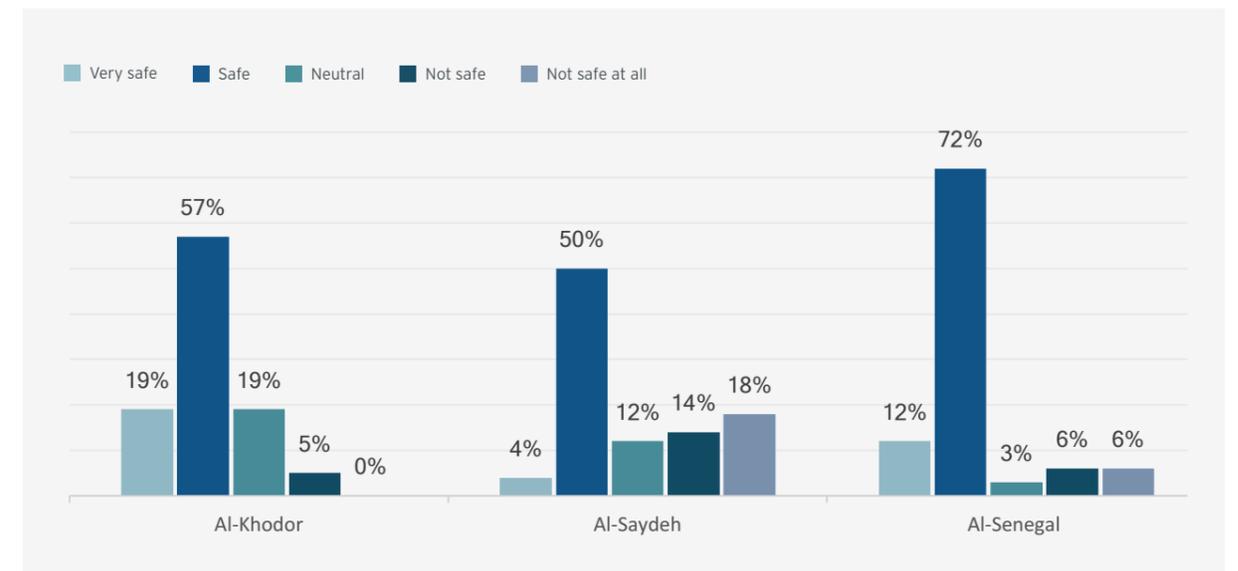


Figure 40: Sense of safety and security during the day across the three sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

B. Neighbors

“ Like the quote says: a neighbor is as important as one’s home<sup>22</sup>  
مثل ما بقول المتل: الجار قبل الدار

The sub-neighborhoods in Karantina are aligned by residential buildings that are separated by narrow streets and alleyways (Figure 41). People often chat to one another from their balconies. However, the interaction of neighbors differs between the three sub-neighborhoods. Neighbors in Al-Khodor are, in most cases, not from the same family, which is different in Al-Senegal and Al-Saydeh sub-neighborhoods. This was evident to the citizen scientists when they were collecting data in January 2021. The experiences of data collection and knowledge of their neighborhoods were different across the researchers who came from the three sub-neighborhoods. The citizen scientists from Al-Saydeh and Al-Senegal sub-neighborhoods commented that while doing the interviews, they were surprised by the people they met for the first time. They said that they have been living in the sub-neighborhood since they were born and were not aware of the presence of many of the people they encountered during their fieldwork.



Figure 41: Inner alleyways in Al-Khodor sub-neighborhood. Source: Abir Cheaitli, 2021.

However, in Al-Khodor, familiarity and social tightness were highly noted by the citizen scientists. They felt comfortable while conducting the interviews with the residents that they already know. The words ‘الفه’, and acquaintance and trust were also mentioned by citizen scientists from Al-Khodor while they were describing the relationship between the neighbors.

22 A.W.M.. (18 January 2021), (Wael al Said, Interviewer).

### C. Religion

As was evident in the neighborhood profile, the socio-spatial compositions of the three sub-neighborhoods were the result of historic events and compounded crises that happened in Karantina (waves of incoming refugees and the civil war) which led to religious fragmentation among the different communities in Karantina. While at the level of each sub-neighborhood, religious affiliation led to social cohesion and a sense of trust. The data that was extracted from the household questionnaire showed a clear correlation between the definition of the sub-neighborhoods and attachment to religious sites. 41 families out of 130 mentioned Al-Saydeh Church as a space of significance in Karantina. Those families live in Al-Saydeh or Al-Senegal sub-neighborhood, while 39 families out of 350 in Al-Khodor mentioned the mosque as a meaningful social space. During the field visits, it was evident that the names of the sub-neighborhoods came from the local religious landmarks. For example, to the west of Karantina, there is Al-Saydeh Church in the predominantly Christian Al-Saydeh sub-neighborhood.

There is a dominant perception that Al-Saydeh sub-neighborhood relates to the Mar Mikhael neighborhood. This perception firstly is because Al-Saydeh sub-neighborhood was once connected to the Mar Mikhael neighborhood but was spatially separated because of the Charles Helou Highway, and second because of the religious connection to the Christina residents of Mar Mikhail. While Al-Khodor sub-neighborhood, which is predominantly Muslim, is close to Khaled ibn al Walid Mosque but takes its name from Al-Khodor Mosque that is currently located in Mar Mikhael (Figure 42).



Figure 42. Al-Khodor Mosque in Mar Mikhael. Source: www.culturalreligious tourism.com.

In contrast to Al-Saydeh sub-neighborhood, interviews with residents from Al-Khodor did not show any interest in being associated with Mar Mikhael, which could be associated with religious differences. Al-Senegal sub-neighborhood includes a population mix of both religions that contributes to its diversity (Figure 43).

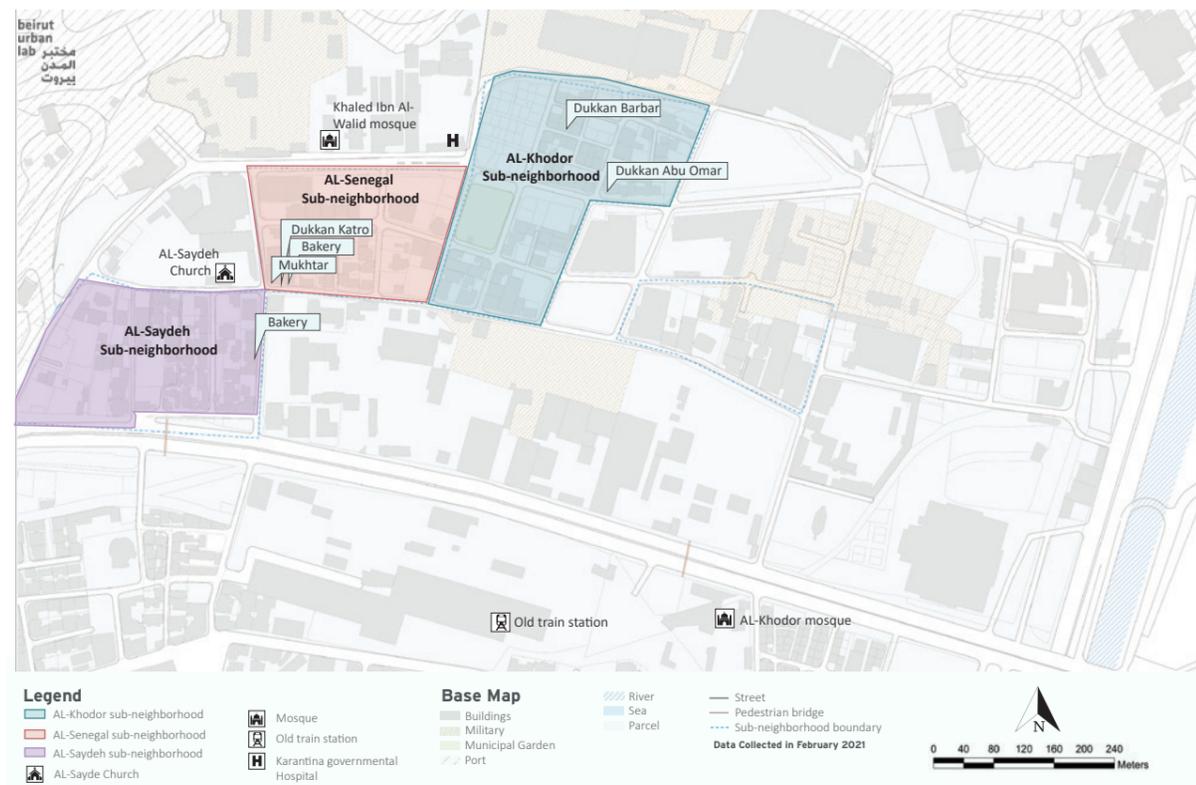


Figure 43: The three sub-neighborhoods, Karantina Source: The Beirut Urban Lab, 2021.

“ Some say that Muslims and Christian in this area are not supposed to be living together in harmony<sup>23</sup>

مسلم ومسيحي بهل منطقة ييعتبرونا ما لازم نعيش سوى

Furthermore, according to the narratives of some of the residents, Karantina is socially divided because of the grouping of people who share the same religion, cultural background, and political identity. The feeling of being connected with the other sub-neighborhoods or with Karantina in general is missing. This can be attributed to the historical event of Karantina’s massacre due to the civil war in 1976 that created fear among people. This fear was translated spatially through the relative isolation of the sub-neighborhoods and caused a rift and a socially fragmented urban fabric. As a result, Karantina until now has sectarian tensions, social breaks, and stigmatization, thus, not benefiting from any attempt for integration. Nevertheless, the sub-neighborhoods are not characterized by formal boundaries that are, in this case, symbolic and mental (Figure 44). Symbolic and mental boundaries are “the lines that include and define some people, groups, and things while excluding others”, expressing similar “normative interdictions (taboos), cultural attitudes and practices, and patterns of likes and dislikes” (Lamont, Pendergrass, Pachucki, 2001).



Figure 44. Religious landmark in Al-Senegal sub-neighborhood. Source: Abir Cheaitli, 2021.

### D. Institutions

Institutions are places that can act as foundations for civic engagement, intellectual resources, economic vitality, and cultural power (Cagney, et al., 2013). Studies suggested that neighborhood institutions are important for community stability, social control, collective efficacy, and social democracy. They highlight the important role of local institutions and public spaces in the development of trust and social relations in communities (Curley, 2010). Another study mentioned that political and civic institutions play a role in providing “access to a variety of resources and public goods, representing local interests, enhancing, and reproducing local identity, and creating opportunity in the civic sphere” (Brown and Schafft, 2011). Through these institutions, communities plan, manage civic life, educate, socialize with youth, and protect public health and safety.

This section of the report considers institutions to be physical locations where some form of organized social activity takes place. Other than the Karantina government hospital, the area does not have a library, a local community foundation, a school, or a cultural organization such as an art center. The household questionnaire, the community meetings, and thematic group discussions revealed how strongly the residents advocate for the presence of such institutions. After the port blast, several NGOs worked to set up temporary institutions as was mentioned in the descriptive memory report.

23 A Resident from thematic group discussion on connectivity on April the 27<sup>th</sup>.

“ There are no good schools nearby. We must send our children to far areas for them to get a good education<sup>24</sup>

ما في مدرسة منيحة للأولاد يعني  
منظر نبعث ولادنا عآخر الدني كرمال المدارس

To map the locations of where children in Karantina go to school, the household questionnaire asked parents where their children commute to get to school. The analysis of the answers to the questionnaire revealed that children in Karantina go to 21 different schools (Figure 45).

School location	Sub-neighborhood			Total
	Al-Saydeh (14 households with school-aged children)	Al-Senegal (20 households with school-aged children)	Al-Khodor (135 households with school-aged children)	
Achrafieh	3	9	49	61
Burj Hammoud	3	1	4	8
Basta	–	–	7	7
Bedawi	1	1	–	2
Badaro	1	2	–	3
Choueifat	–	–	2	2
Dekwaneh	–	2	–	2
Dawra	1	–	–	1
Furn El Chebbak	–	–	1	1
Gemmayzeh	2	–	–	2
Hadath	–	–	1	1
Jnah	–	–	1	1
Kaslik	1	–	–	1
Mousaitbeh	1	–	–	1
Mansourieh	–	–	1	1
Nehmeh	–	–	1	1
Ras El Nabeh	–	1	25	26
Sin El Fil	–	2	3	5
Tariq Al Jadideh	–	–	6	6
Verdun	–	2	–	2
Zarif	–	–	2	2
Dropped out of school	1	1	8	10

Figure 45: Locations of the schools where the children of Karantina currently study. Source: The Beirut Urban Lab, 2021.

The children of Karantina got to a wide range of schools outside of the area. This does not contribute to developing a close-knit community. A school is a facility that not only provides learning opportunities but is also a space that establishes social relations and networks across different age groups, nationalities, and religious and political backgrounds.

Moreover, since the sub-neighborhoods house people of the same religion clustering in the same area, the analyses aims to examine if the religious institutions enhanced social connectivity. The household questionnaire included a question that asked the residents how much they trust the local religious institutions. Only 18 % of the respondents mentioned that they trust religious institutions (Figure 46). The interviews with the residents showed that the church and the mosque offer events for community engagement. A resident from Al-Saydeh sub-neighborhood mentioned that a priest used to arrange events for children in Karantina inside the park when it was open. However, in general, events in religious institutions mostly attract people from the same congregation.

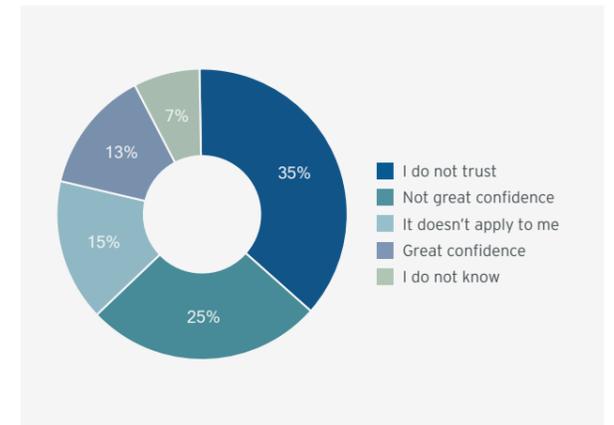


Figure 46: Levels of trust among the residents of Karantina towards the religious institutions. Source: The Beirut Urban Lab, 2021.

### E. Businesses

The analysis of economic connectivity showed that the relationship among various mixed-used businesses in Karantina is fragmented since the businesses operate as isolated islands with no relationship with the surrounding communities or between the businesses themselves. However, in-depth field surveys inside the sub-neighborhoods showed that there is a pattern of social connectivity between the smaller micro businesses that the residents of the same sub-neighborhood operate.

“ I like Dour’awi’s Dukan, and I spend all my free time sitting there<sup>25</sup>  
أحب دكان الدرعاوي الذي أمضي فيه كل أوقات فراغي

When residents were asked in the household questionnaire ‘where do you go to spend your free time?’ and ‘what is the significance of the place for you?’, some referred to the Arabic term dukan<sup>26</sup>. The field visits showed that these micro-scale grocery shops such as Dukan Barbar, Abu Omar, Aldirghawi, Walid, Katro, and Jamil work as anchor points for people to gather and socialize. Figures 47 and 48 were taken in Al-Khodor sub-neighborhood in March 2021 and they show how the residents gather in front of the local, smaller micro businesses and sit on plastic chairs to exchange conversations with people in the streets. This practice was observed across the three sub-neighborhoods. The research team also sensed a bond between the shop owners and neighbors on the professional and personal levels.

During the field visits, The Beirut Urban Lab research team became familiar with these smaller micro businesses and were greeted on several occasions and invited for coffee or a chat. The people were welcoming and warm and provided a place for comfortable conversations. For the residents, these rooted places are symbolic landmarks in the three sub-neighborhoods and catalysts for social engagement.

<sup>25</sup> T.Y.M. (02 January 2021), (Mohammad Amshah, Interviewer).

<sup>26</sup> A dukanna is a small grocery shop commonly found in every neighborhood in Lebanon and functions at the scale of a neighborhood or a hay. In general, these shops are operated by their owners who often live in close proximity to the shop.

<sup>24</sup> H.O.H. (22 December 2020), (Yehya al Said, Interviewer).



Figure 47 and 48. Local, micro-scale shops in Al-Khodor sub-neighborhood where residents meet and socialize. Source: Abir Cheaitli, 2021.

“ My Hay’s (sub-neighborhood) boundary is from Katro’s dukan till Abu Omar’s dukan<sup>27</sup>  
حدود الحي من دكان أبو عمر الى دكان كاترو

“ My Hay’s (sub-neighborhood) boundary is from Soulaiman’s Bakery till Dour’awi’s Dukan<sup>28</sup>  
حدود الحي من فرن سليمان الى دكان الدرعاوي

The answers to the household questionnaire showed how people use the locations of these local shops as some of the markers of the boundaries of the sub-neighborhoods. When people were asked ‘What are the boundaries of your neighborhood?’, 74 households out of the total 545 used the words dukans and bakeries to describe the limit of their sub-neighborhood.

Moreover, during a visit to Al-Khodor sub-neighborhood, the research team noted a bicycle shop (Figure 49). The owner of the bicycle shop mentioned that she and her husband live in Al-Khodor and they opened the store in early 2021. She and her husband noticed that more children play in the streets these days during the current pandemic situation, the economic crisis, and the increase in the number of incoming Syrian refugees. As such, they seized the opportunity and opened a rental bike store next to their house. She also mentioned that she was grateful to be part of the Al-Khodor community since the residents supported their new business. Another woman beside her said: “We are glad this shop opened; we come to this store, drink coffee with our neighbors, while our children play.”



Figure 49. A rental bicycle shop in Al-Khodor sub-neighborhood that opened during the Covid-19 pandemic crisis. Source: Abir Cheaitli, 2021.

However, the social ties that developed between the micro-scale shops and residents do not extend beyond the boundaries of the sub-neighborhood. The residents from each sub-neighborhood prefer to use the coffee stores, dukan, bakeries, and barbershops within their sub-neighborhood. Thus, social connections are limited to a perceived boundary between people.

27 H.O.A.B. (22 December 2020), (Mohammad Amshah, Interviewer).

28 T.Y.M. (02 January 2021), (Mohammad Amshah, Interviewer).

## 6. SYNTHESIS AND RECOMMENDATIONS

Connectivity allows for spatial, economic, and social networks that enable inclusive growth and sustainable development (World Bank, 2013). Karantina has ruptures at multiple levels. Karantina currently remains marginalized due to the trajectory of previous events, which resulted in critical spatial, economic, and social challenges.

The literature livability depends upon has stated that “livability depends upon three key interdependent spheres of social life: the economy, social well-being, and the environment” (National Research Council., 2002, p.32). This was also evident in The Beirut Urban Lab analysis of Karantina which revealed that there are connections between the spatial, economic, and social qualities of Karantina that are examined in this report.

### FINDINGS

01 Many of the highways in the Egli and Ecochard transport plans for Beirut that were implemented between the 1950s and 1960s acted as ‘infrastructural breaks’; a term that refers to the “irregular urban conditions resulting from the imposition of traffic arteries on inner cities fabrics” (Haidar & Amin, 2016, p.vi). These infrastructural breaks worked as “catalysts of urban change by cutting the spatial continuity between adjoining districts, changing the confines and structure of neighborhoods, creating residual spaces, and truncated parcels and blocks” (Haidar & Amin, 2016, p.2) (Figure 50). The Ecochard transport plan for Beirut primarily focused on facilitating accessibility to Beirut and did not engage with social and cultural needs. The implementation of the Charles Helou Highway disrupted the social fabric of the different neighborhoods in Medawar and ruptured the spatial continuity between Karantina and the rest of Beirut.



Figure 50. The concept of infrastructural breaks illustrated through sections of Beirut's 1964 cadastral map. It highlights the impact of the break on the urban fabric caused by the construction of urban highways. Top: Sassine Square, Alfred Naccache Avenue, and independence Avenue cutting through Achrafieh. Bottom: Charles Malek Avenue cutting through Rmeil. Source: Stopthehighway.wordpress.com.

02 Two overpasses were added after 30 years and after many deaths and accidents were reported. Yet these overpasses do not provide accessibility for people with special needs. They are not maintained, and do not provide shade from the sun nor shelter from the rain. They also attract burglars since they do not have a lighting structure. An overpass can be more than just a crossing structure; it can be a piece of artwork and a gateway that connects different communities (University of North Carolina, 2016).

03 Karantina is also located at the edges of the taxi's and bus drivers' routes in Beirut.

**04** Spatial fragmentation and isolation resulted from the block typologies and land-use in Karantina, which until now prevent a certain degree of porosity along the edges of the area. Porosity or permeability refers to the extent to which urban morphology permits or restricts the movement of vehicles and people (Marshal, 2005; National Transport Authority, 2015). The edge conditions of Karantina are clearly defined and confined within harsh borders and lot typologies that work as a barrier, preventing pedestrian and vehicular accessibility and visual connectivity. They are defined by the Port of Beirut, the Charles Helou Highway, the Beirut River, and the security elements from the military in Karantina.

**05** The streets, sidewalks, and in-between spaces are not safe for people to meet, or for kids to play, and they do not operate as urban elements that link the three sub-neighborhoods in Karantina. The fragmented and degraded urban fabric played a role in increasing the levels of discontinuity between the sub-neighborhoods and in decreasing social connectivity among the residents. They do not invite people to pose and enjoy or encourage and trigger spontaneous encounters beyond the perceived boundaries of the sub-neighborhoods. Public spaces do not follow urban design principles and urban furniture to animate the sidewalks and activate street frontages. One main street element that is missing is streetlights; a resident of Karantina mentioned that several residential frontages on the ground floor turn on their light to illuminate the streets at night. Another urban element that is missing is litterbins; as a result, littering is common in many open spaces and damages the aesthetic quality of the space<sup>29</sup>.

**06** The analysis showed that some businesses act as active magnets, but the majority act as isolated economic islands while others engage in unsustainable practices that pollute the urban environment. The analysis also showed that there are missing economic chains such as banks that can connect Karantina to a larger network of services in Beirut. The old slaughterhouse, the fish market, and the Port of Beirut function as economic catalysts that provide job opportunities, enhance pedestrian flow, and social networks. These businesses extended patterns of networking to other areas through exclusive services that create economic and social connections that the residents boast.



**Figure 51.** The interior space of a building in Karantina that is rented out to the Sfeir-Semler Gallery. Source: [www.sfeir-semler.com](http://www.sfeir-semler.com).

On the other hand, other facilities work as introverted and isolated islands. They were attracted to the strategic location of Karantina, its rental market, and the typology of buildings including galleries, showrooms, industrial corporations, and storing accommodations (Figure 51). The analysis also showed that Karantina lacks a bank, a gas station, and a restaurant. These businesses can be easily found in other areas in Beirut. Institutions and community centers are also missing in Karantina. Karantina does not have cultural centers, sports facilities, or education amenities that can provide people with opportunities to come together and engage with the community. These institutions can be considered as services to the community but can also boost the economic sector.

**07** On the social level, connectivity was studied in the sub-neighborhoods rather than at the level of Karantina as a whole, and each sub-neighborhood exhibited different patterns of social networks. There are patterns of links among residents of the same sub-neighborhood. Networks of interpersonal ties that developed through familial, religious, or connections between neighbors provide sociability, support, information, a sense of belonging, and social identity. Nevertheless, there was a pattern of disintegration between the residents of the different sub-neighborhoods.

They also perceive the boundaries of the sub-neighborhoods in different ways. During the interviews, the thematic group discussions, and the Town Hall meetings, the residents questioned the names and the boundaries of the different sub-neighborhoods. It was challenging to draw one common boundary that represents all the residents. The perception of boundaries can produce social connections or isolations. The analysis showed that the residents' perception of boundaries was associated with the following categories:

**Edges**  
"من نهر بيروت إلى جسر شارل الطلو"

**Religious Landmarks**  
"من الكنيسة إلى جامع الخضر"

**Neighborhoods**  
"من مار مخايل إلى برج حمود"

**Communities**  
"المنطقة التي يسكن فيها العرب"

**Institutions**  
"من المستشفى إلى المسلح"

Sometimes the boundaries were a combination of different components such as:

"من مار مخايل إلى ثكنة الجيش"

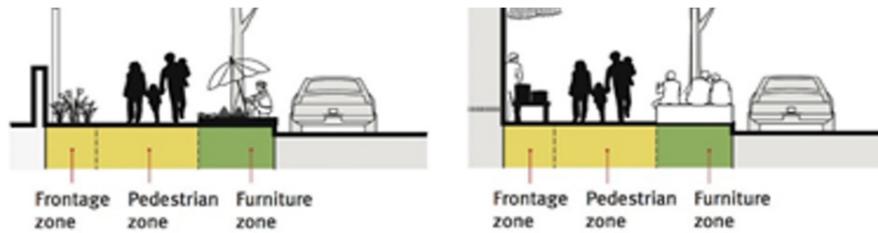
"من الرابطة المارونية حتى مدخل البور"

"من جامع الخضر إلى ثكنة الجيش المدفعية ومن شركة الغاز إلى تمثال المغتربين"

## RECOMMENDATIONS

- 01** Footpaths have the potential to stitch the urban fabric of Karantina, not only to reconnect Karantina to adjacent communities but to also attract new people. Accordingly, the existing overpasses must be redesigned according to urban design guidelines for accessibility, inclusivity, and safety for all users, as well as introduce new urban furniture that adapts to seasonal and day and night conditions.
- 02** Public transport can decrease the level of isolation in an area by creating connections between spaces and people (Bai, 2015). Accordingly, there is a need to connect Karantina to the taxi and informal bus routes in Beirut and introduce bus stops at strategic nodes. On the long term, Beirut also needs a public transport system that can further benefit Karantina. This will reduce the perception of isolation and stigmatization in Karantina and the commuting pressure on employees, the elderly, and people with disabilities.
- 03** The edges should be redesigned to become more porous. For example, the concept of 'short blocks' that Jacobs developed in 1961 (Jacobs, 1961) can be used to promote permeable morphology, interconnectivity, and synergies between the different agents in Karantina. This concept can be implemented in the large lots that the Municipality of Beirut owns. There is also a need to enhance accessibility to the sea, which was reduced with successive stages of the expansion of the port. The sea before the expansion of the port operated as a leisure and important cultural asset for the residents of Karantina and the surrounding neighborhoods. Reactivating this edge will attract people to Karantina and boost socio-cultural activities.
- 04** Public spaces need to be designed in the form of linkages that can enhance physical and visual connectivity in the urban fabric and, as a result, improve movement and accessibility (Ewing, 2013). The upgrading and enhancing of public spaces will activate street frontages and create interaction between people walking on the streets, the residents, and the businesses (Figure 52).

<sup>29</sup> Refer to Transversal Issue V 'quality of the urban environment' for further details.



**Figure 52.** Sidewalk frontages should operate as buffer zones between different land-uses and accommodate underground utilities, trees, and furniture that can reduce obstacles to walkability. Source: ITDP's Better Streets, Better Cities, 2011.

- 06** If appropriately selected and placed, street furniture (pedestrian-scale streetlights, fountains, benches, special paving, and public art) can draw people to outdoor spaces; they encourage walkability and create spaces of encounter for people to sit, rest, and eat, hence, they boost the economy and break patterns of social fragmentation. People do not need elaborate interventions to use a space; rather, they are likely to sit where there are places to sit (Whyte, 1980).
- 07** There is a need to regulate the industrial sector in Karantina that contributed to its stigmatization and increased the levels of pollution in the urban environment at multiple levels. A connected network of businesses should operate in collaboration with public officials, stakeholders, and residents to align the economic activities in Karantina with the strategic goals of sustainable development growth. This strategy could support long-term economic growth without negatively affecting the social, environmental, and cultural aspects of the community.
- 08** The smaller micro businesses provide opportunities for entrepreneurs and jobs for locals, and they operate as community places for the residents to gather. As such, they have the potential to reinforce a community identity that is rooted in place while providing sustenance and improving vitality (Gartenstein, 2019). Future investments should also focus on local micro businesses, which as evident in the analysis, are essential elements of social connectivity. The aim is to improve economic competitiveness through reliable access to services and employment and educational opportunities for the communities and businesses in Karantina.
- 09** Steps need to be taken to ensure that the sub-neighborhoods are more integrated as a whole and that they equally receive the resources that they need. The community developer, Maurice A. Jones (2018), mentioned that in strong communities, local interests can converge, and people are more likely to share information, form networks, and take collective action on local issues with investors and government departments to advocate for their needs. As such, it is important to understand that Karantina has social, economic, and cultural layers that are intertwined with the daily lives of people in each sub-neighborhood. The key is to form social and strategic connections that can empower the residents of Karantina and foster a culture of equal participation. This can be achieved through the implementation of community centers and landmarks that can help mitigate social fragmentation and act as social catalysts for community cohesion, sense of belonging, and cultural diversity.

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# Cultural and Economic Vitality in Karantina

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# 1. INTRODUCTION

This section of the report presents the strategic diagnosis of the cultural and economic vitality in Karantina, one of the five transversal issues that were generated at the end of the descriptive memory report.

The descriptive memory report provided a general understanding of the key economic drivers in Karantina with a brief on the local cultural activities. Lebanon is currently experiencing a sharp decline in the activities of the economic sector due to the economic meltdown since 2019<sup>1</sup>, ongoing political instability, the global outbreak of the COVID-19 pandemic, and the recent port blast in 2020. The port blast exacerbated the vulnerability of businesses and households in the impacted neighborhoods, including Karantina where 70% of the population is unemployed<sup>2</sup> (Beirut Urban Lab, 2021). In this context, this section aims to present a more focused understanding of the economic and cultural activities through an in-depth profile of the business sector and cultural practices in Karantina. It builds on the diagnosis of their status in relation to the components of vitality and the relevant trends of transformation in Karantina.

## Position

The term vitality was widely discussed in the literature and defined by Shaffer and Summers (1988) as “the ability to survive, to persist in generating desired outcomes.” (p. 1). Many scholars linked the definition to three main sectors; economy (Shaffer & Summers, 1988; Mountlake Terrace County, 2015; Berk Consulting Inc., 2015), culture (Cole, 2019), and urban space (Jalaladdini and Oktay, 2012).

In this regard, economic vitality can be defined as the capacity of a social group or community in a given area to having decent jobs, viable businesses, and/or profitable investments, with very few people at a poverty level (Shaffer & Summers, 1988; Mountlake Terrace County, 2015; Berk Consulting Inc., 2015). However, cultural vitality of a place corresponds to the distinctive identities and sense of place that create opportunities for cultural participation, social interactions and business development among the local community groups (Jackson, Kabwasa-Green, & Herranz, 2006; Duxbury, Gillette, & Pepper, 2007). In an urban setting that encompasses the social, economic, cultural, and spatial aspects, it is important to know what factors influence the survival and the reproduction of the urban spaces, economic units, social groups, and cultural practices and spaces (Shaffer & Summers, 1988; Jalaladdini & Oktay, 2012). This is possible by observing successes, failures, challenges, and opportunities from which inferences may be made.

In the context of this study, the term vitality is anchored in the diversity, intensity, and sustainability of economic and cultural practices. Cultural practices are communal practices that are linked to a group of people and is sustained over time to form a ‘culture’. It can operate at multiple spatial scales. However, some cultural practices are limited to the residents who are geographically distributed among three different residential sub-neighborhoods in Karantina, while others attract people from outside Karantina. As such, some cultural practices are associated with economic activities while others are associated with the daily practices of the residents. In some cases, social and economic activities intersect. This will be further explored in the analysis in this report.

The components of economic vitality that are investigated in this report included: (1) economic sustainability through land tenure, key services, financial support, and human resources (2) the diversity and intensity of businesses by type, size, age, locality, and inclusion of business owners by class, sect, gender, and nationality (3) connectivity to customers, serviceability of businesses, and their relation to the surrounding neighborhoods. Similarly, cultural vitality in Karantina is also examined through the components of sustainability, diversity, and intensity of the cultural practices. The analysis includes the types of practices, their intensity, and how they are related to the residents of Karantina and people from the rest of Beirut. Accordingly, this section explores the current conditions of cultural and economic vitality in Karantina by analyzing sets of qualitative and quantitative data.

<sup>1</sup> According to the World Bank, Lebanon's GDP plummeted from about US\$55 billion in 2018 to a projected US\$20.5 billion in 2021, while real GDP per capita fell by 37.1 percent.

<sup>2</sup> This does not account for take into account child labor.

## Hypothesis

Karantina has long experienced a decline in its economic and cultural activities that was exacerbated by the port blast. The cultural activities were reduced to everyday socio-spatial practices in the sub-neighborhoods and were limited to some of the artistic practices in the Industrial Zone. Previously, the socio-economic and recreational practices were more vibrant in Karantina, especially before the closure of the slaughterhouse in 2014, which was considered as an integral part of the lives of the residents of the Arab tribes<sup>3</sup>, and the closure of many recreational and leisurely hubs due to the port blast. Besides, Karantina hosts land-uses that are directly connected to the port, including a diversity of commercial and industrial facilities that were impacted by the port blast.

# 2. METHODOLOGY AND DATA COLLECTION

The diagnosis of economic and cultural vitality in Karantina is based on the analysis of primary data<sup>4</sup> from answers to questionnaires, interviews, thematic focused group discussions, town hall meetings, and spatial mappings between January and June 2021. The primary data was also compared to some of the secondary data that is available on specific topics, for example, the closure of the slaughterhouse, and validated by information from the one-on-one interviews and the thematic focused group discussions. The data helped the research team form an in-depth understanding of the economic and cultural activities in Karantina, define problems and shortcomings, and identify historical trajectories for these activities. It is important to note that the analysis was carried out in relation to a definition of the term ‘vitality’ that is specific to the context of Karantina.

## SOURCES OF DATA COLLECTION

### PRIMARY DATA

#### 1. Semi-structured Questionnaires

Face-to-face and online interviews were conducted to obtain the required information on 83 out of the 140 local businesses. The interviews were divided as follows:

1. 62 micro businesses were interviewed by the citizen scientists from the three sub-neighborhoods of Al-Khodor, Al-Saydeh, and Al-Senegal.
2. 21 micro, small, to medium-sized businesses in the Industrial Zone were interviewed by The Beirut Urban Lab research team.

The questionnaires were divided into eight sections, including: **(1)** the profile of the business owner, **(2)** general information on the business, **(3)** information on the property or store, **(4)** information on the size and financial situation of the business, **(5)** the scope of assessment, aid, and relief after the port blast, **(6)** the quality of the sub-neighborhood, **(7)** the social and political trust among the business owners, and **(8)** the vision for the sub-neighborhood vision.

The data was georeferenced and statistical charts and graphs were generated for comparative analysis across the sub-neighborhoods.

<sup>3</sup> Also known as Arab al maslakh (عرب المسلخ). “Al maslakh” means the Slaughterhouse. The term is associated with the Arab tribes because they used to work in the business of slaughtering animals.

<sup>4</sup> The primary data was collected after the blast due to the absence of an in-depth profile of the socio-economic situation in Karantina.

## 2. Thematic Focused Group Discussions

One of the thematic focus group discussions on cultural and economic vitality was held in April 2021 and covered some of the critical issues that emerged from the preliminary results of the questionnaire, such as the phenomena of evictions after the port blast, the increase in rent prices, and new small to medium-sized companies in the Industrial Zone after 2019. The focus group discussion brought together business owners from the three sub-neighborhoods (Al-Khodor, Al-Senegal, and Al-Saydeh), and the Industrial Zone with different socio-economic backgrounds (Figure 1). It included the smaller micro businesses (including minimarkets and tailor shops), the larger micro businesses (including shipping services and mechanic shops), and small and medium-sized industries (including freight services and furniture shops) with a diversity of tenure (old versus new rent) and ownership types.



**Figure 1:** Group of business owners discussing different issues during the focused thematic discussion at the UNDP Office- Karantina. Source: Ali Ghaddar, 2021.

The meeting was considered as an opportunity for the attendees to listen to the stories of each other, understand the status of current business activities, and form an idea about their pressing needs.

## 3. One-on-one Interviews

One-on-one interviews were conducted with two attendees of the thematic focused group discussion. The first interviewee was with Naji Obeid<sup>5</sup> who played a role in transforming the economy of Karantina and planned to attract small and medium-sized companies (logistic companies, car showrooms, and recreational centers) to the Industrial Zone. The other interviewee represented businesses that are rooted in Karantina and inherited the profession from his family members. He had previously worked in the slaughterhouse. The aim was to understand the process of the transformation of the old businesses and how the trend of declining and emerging businesses is transforming the economy and culture in Karantina.

## 4. Field Mapping and Field Observations

The relevant data was collected through site visits, field observations, walk-through assessments, and informal conversations. Subsequently, the collected data was discussed with the members of the research team to further validate the findings. In addition to the physical mapping (for example, the mapping of buildings), the team mapped socio-spatial practices in Karantina, the involved users, and their intensity by location and time during the day to understand their role in enhancing cultural vitality. The mapping was supported by data that was extracted from the household questionnaire regarding the number of users, type of socio-spatial and leisure activities, and their relationship between the residents and public spaces.

## SECONDARY DATA

In addition to the primary sources, the analysis of data also relied on secondary sources such as: **(1)** historical maps that show the historical development of key businesses in Karantina, **(2)** articles and documents about the activities of the key economic drivers in Karantina, including the slaughterhouse and fish market, and **(3)** the Urban Snapshot report (Descriptive memory) of Karantina that The Beirut Urban Lab produced after the port blast. The Urban Snapshot report included a general profile of Karantina that guided the preliminary findings. The report located the effect of the port blast within the larger urban trends in Beirut that influenced the development of Karantina over the past three decades.

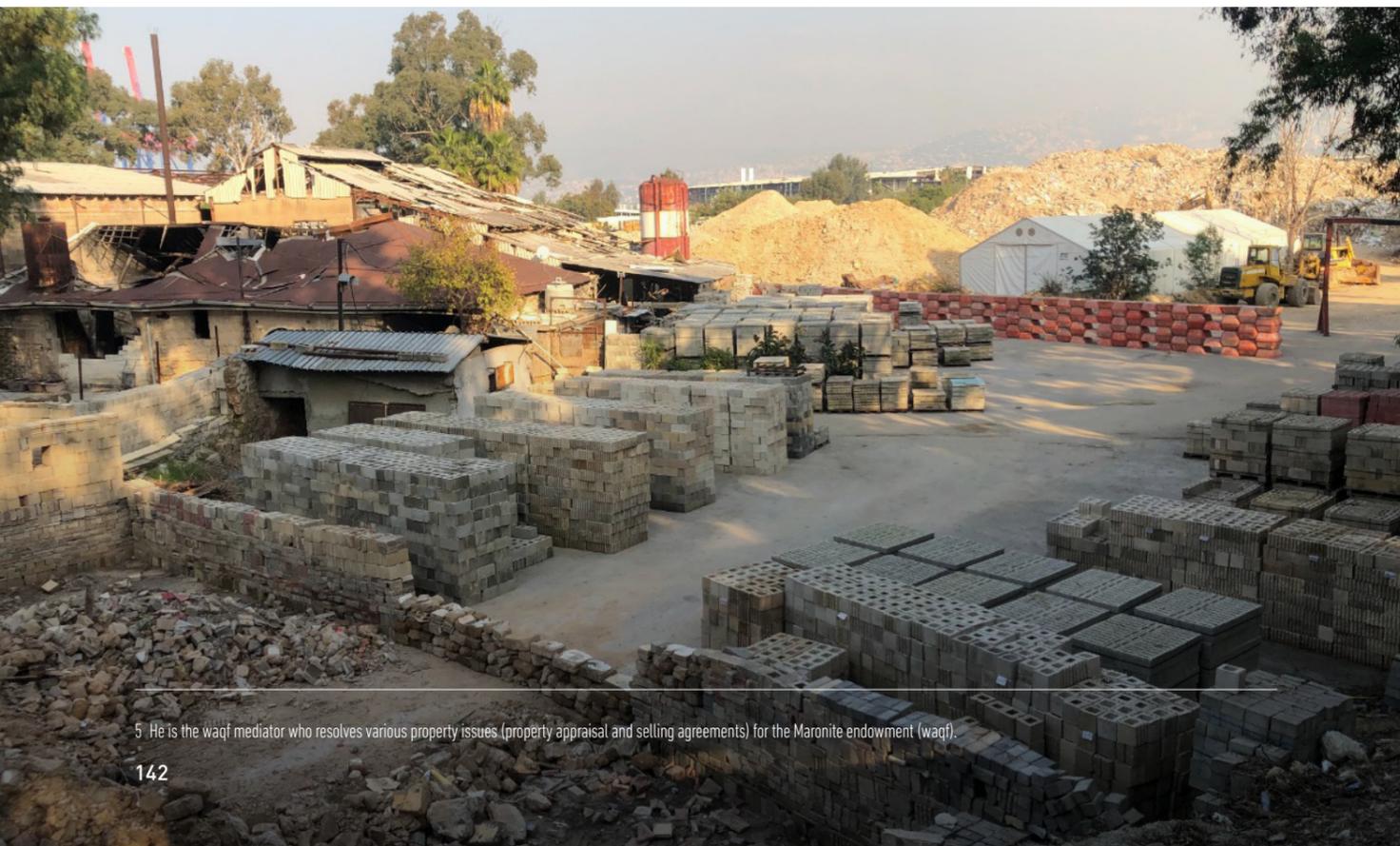
## METHODS OF ANALYSIS

This section of the report used statistical analysis to analyze in-depth the economic activities by profiling the business and business owners, exploring efforts to distribute compensations and conduct repair after the port blast, and studying access to business services and funds. Statistical analysis was also used to measure cultural vitality by understanding the interest of the community groups in public spaces, the types of daily practices, and the availability of art and crafts facilities. The research also relied on comparative analysis to understand the different patterns of businesses, their sizes, and the nationalities and socio-economic profiles of their owners across the three sub-neighborhoods. Spatial analysis was crucial to explore the various types of socio-spatial practices in Karantina, the tenure patterns, changes in land-uses, and fluctuations in rent prices in the sub-neighborhoods. Cross-referencing information was also important to explore multiple spatial correlations such as the increase in the number of eviction suits for businesses in relation to tenure type, rent increase, and the status of repairs. The data gathered was located and spatialized using the mapping software ArcGIS.

# 3. IN-DEPTH PROFILE OF THE ECONOMIC AND CULTURAL ACTIVITIES IN KARANTINA

The descriptive memory report showed that Karantina serves as a reservoir of cheap labor that supports the activities of the port and neighboring industries, and it includes large lots that host many services and facilities that serve the city at the local and regional scales.

It includes SUKLEEN, a waste management facility, the closed slaughterhouse, a closed commercial market, the fish market, the governmental hospital, and a large parking space for the municipality. It also accommodates new and emerging businesses that spilled from the surrounding neighborhoods into Karantina; these include shipping services and creative industries. Additionally, various companies took advantage of the morphology of the lots in the Industrial Zone and the proximity of Karantina to the port to set up their warehouses; examples of these companies include Key Freight and Key Net Logistics, Gezairi Transport, and Flyp Urban Park (Figure 2).



<sup>5</sup> He is the waqf mediator who resolves various property issues (property appraisal and selling agreements) for the Maronite endowment (waqf).

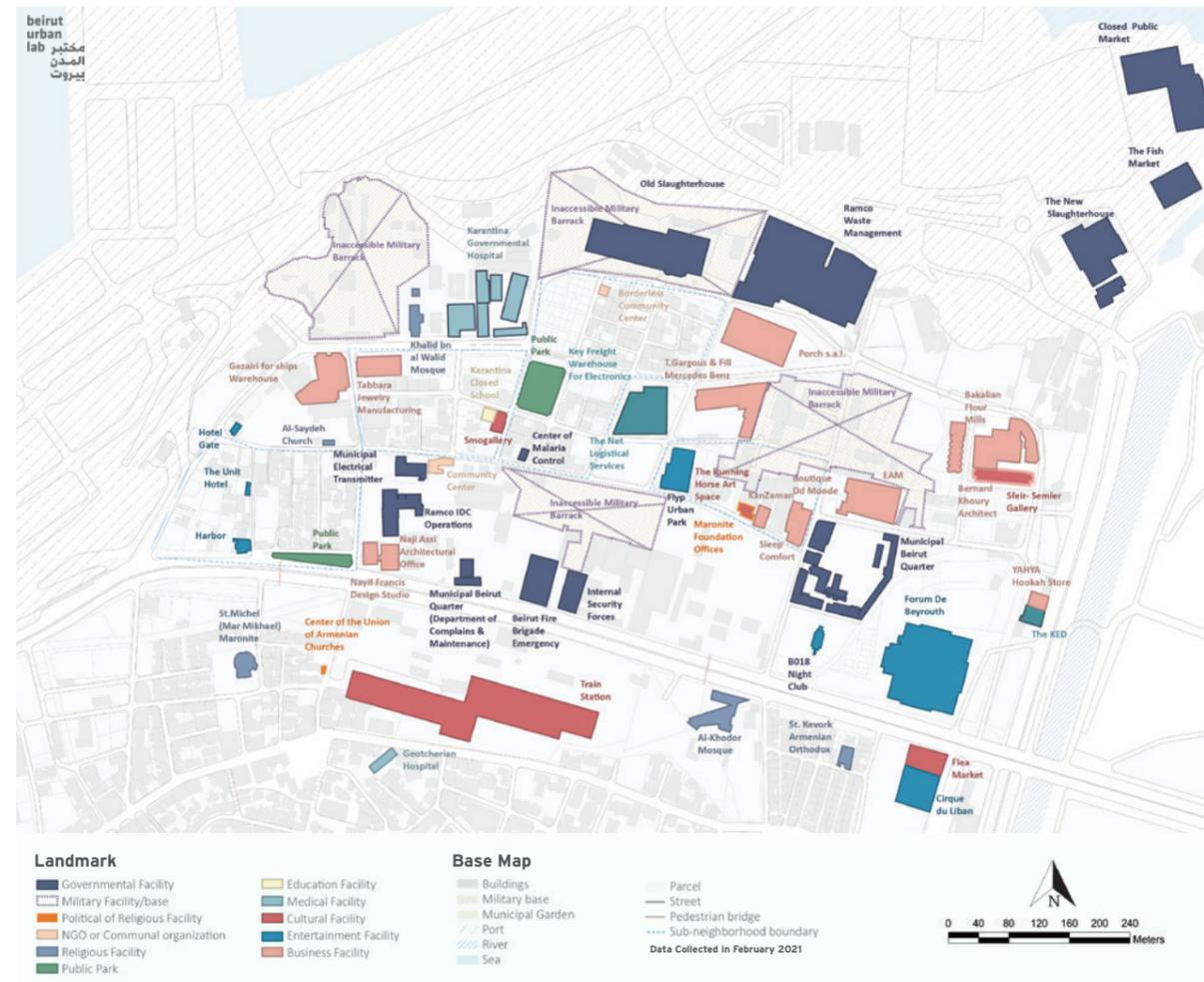


Figure 2: Neighborhood Landmarks in Karantina. Source: The Beirut Urban Lab, 2020.

It is important to note that the descriptive memory report showed that the emerging recreational, leisurely, and cultural activities were attracted by the low rent market<sup>6</sup> for commercial facilities prior to the port blast. These commercial facilities attracted both locals and visitors with diverse backgrounds. However, the emerging businesses did not provide job opportunities for the residents of Karantina who were treated as cheap labor with no expertise and skills. Furthermore, many residents are under the threat of potential displacement and gentrification on the long term due to the emergence of new creative industries.

The descriptive memory report also explored the main professions of the residents of Karantina who work in unskilled jobs; they work as delivery people, taxi drivers, and daily workers at the port. Currently, the residents are impacted by the collapse of the national economy and the devaluation of the local currency. Some of the residents previously worked in the slaughterhouse which closed in 2014 for political and hygienic reasons. The closure of the slaughterhouse affected many families in the Al-Khodor sub-neighborhood; they were named 'Arab al maslakh' after the slaughterhouse.

The following section provides an in-depth profile of the economic activities in Karantina and a reading of the current socio-spatial practices that are crucial to enhancing cultural vitality. The in-depth profile is based on information from the results of the questionnaires and spatial mappings that complement the general views in the descriptive memory report and support the analysis through quantitative data.

The in-depth profile includes: **(A)** the profile of the economic activities in Karantina, including the backgrounds of business owners (nationality, place of living, level of education, and gender), the types and sizes of businesses, the types of tenure, and the aid that was distributed to the business owners after the port blast; and **(B)** the profile of the cultural activities in Karantina that was supplemented by detailed mapping of the current socio-spatial practices divided by type and intensity.

### 3.1. IN-DEPTH PROFILE OF THE ECONOMIC ACTIVITIES IN KARANTINA

#### A. The Profiles of Business Owners

“ We are very upset from this neglect to this area’s community<sup>7</sup> نحنا كثير مستائين من إهمال المجتمع يلي بهل المنطقة

#### Nationalities and their Distribution in the Sub-neighborhoods

90% of the surveyed business owners in Karantina are mainly Lebanese, and they constitute 75 business owners out of the total 83. 26 of the business owners are from the Arab Tribes who live mostly in Al-Khodor sub-neighborhood. The Syrian business owners are limited to a few in comparison to the large number of Syrian households in Karantina. Only 9% of the surveyed businesses are owned by Syrians who arrived to Karantina before the start of the Syrian in 2011.

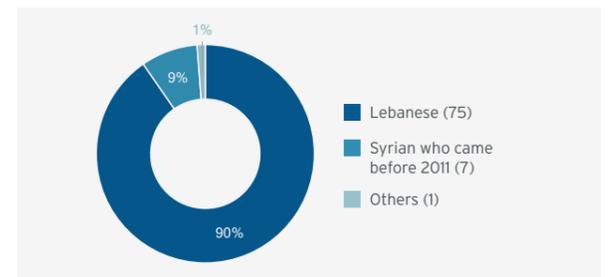


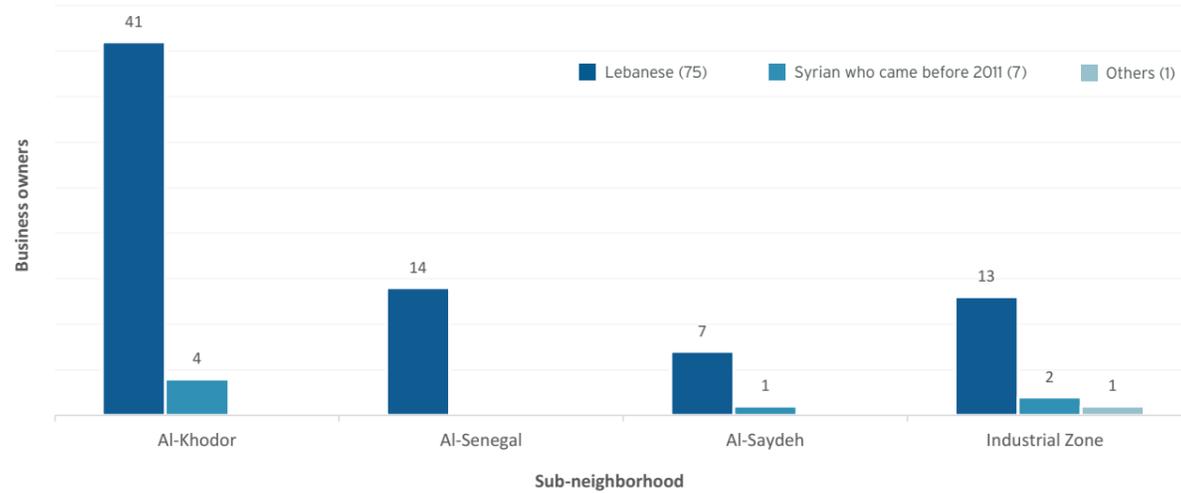
Figure 3: The nationalities of the business owners. Source: The Beirut Urban Lab, 2021.

They own business such as garages for mechanic repairs, machine repair shops, minimarkets, and furniture showrooms. Hence, Syrians refugees who arrived to Karantina after 2011 did not open their own local businesses (Figure 3).

Most of the surveyed business owners are Lebanese with the highest percentage in Al-Khodor sub-neighborhood, and they constitute 41 business owners out of the total 73. Although the number of Syrian businesses is little, Syrians have more businesses open in Al-Khodor than in the other sub-neighborhoods. This is due to the fact that the Syrian households are more concentrated and welcomed in Al-Khodor sub-neighborhood. Additionally, only one of the business owners is Lebanese-German and runs a gallery in the Industrial Zone. The gallery attracted many leisure and commercial activities to open in Karantina (Figure 4).

<sup>6</sup> The rental market is low relative to other areas in Beirut, especially, surrounding the neighborhoods surrounding such asin Mar- Mikhael and the Beirut Central District.

<sup>7</sup> First Town Hall meeting, Karantina, (2022-April-11).

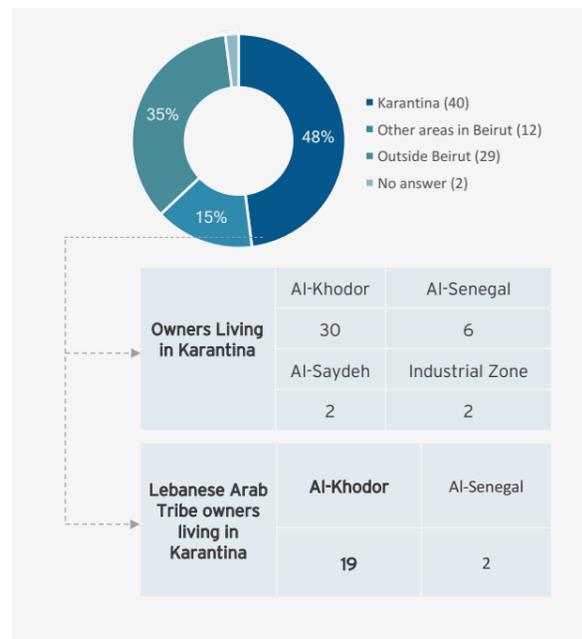


**Figures 4.** The distribution of nationalities of business owners across the sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

### Place of Living

Half of the surveyed business owners live in Karantina, constituting 40 business owners out of the total 83, while 29 live outside Beirut, and 12 live in other areas in Beirut (Figure 5). Most of the medium-sized businesses and chain companies, such as the logistics, food wholesale, and creative industries, are owned by people who live outside of Karantina. Hence, Karantina attracts investments and has become a destination for commercial and trade activities.

Most of the business owners who reside in Karantina live in Al-Khodor sub-neighborhood, constituting 30 business owners out of the total 40; the majority are from the Lebanese Arab Tribes. 19 of these business owners reside in Al-Khodor while the remaining 2 reside in Al-Senegal (Figure 5). As such, Al-Khodor sub-neighborhood accommodates many of the Arab Tribe families who live and work there. Additionally, most of the business owners who live outside Beirut come from areas in Greater Beirut such as Khalde, Jdeideh, Jnah, Fanar, Halat, and Zalka. The business owners who live in Beirut but outside Karantina are mainly from neighboring areas such as Achrafieh, Al Zarif, Sanayeh, Hamra, and Salim Salam.



**Figure 5:** The location of business owners and distribution of the occupation of business owners per locality. Source: The Beirut Urban Lab, 2021.

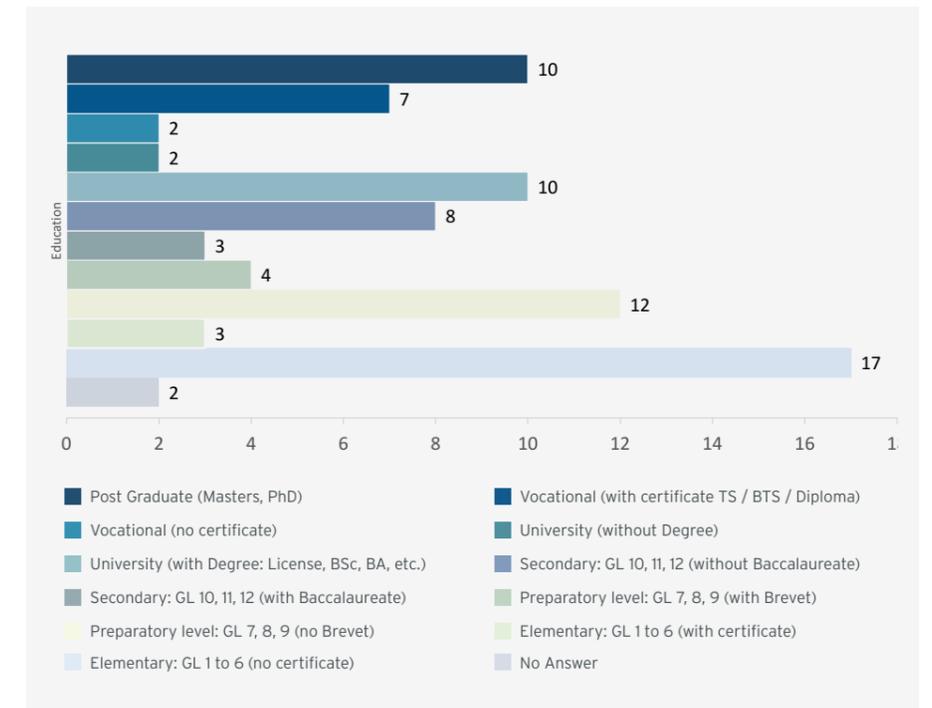
### Level of Education

The research team also analyzed the level of education of the surveyed business owners. The data showed that almost 40% of business owners did not complete their education or attend university. This is attributed to different reasons including the outbreak of the civil war and the local levels of poverty (Figure 6). The data further showed that most of the business owners attended elementary school but did not attain a school certificate (17 business owners).

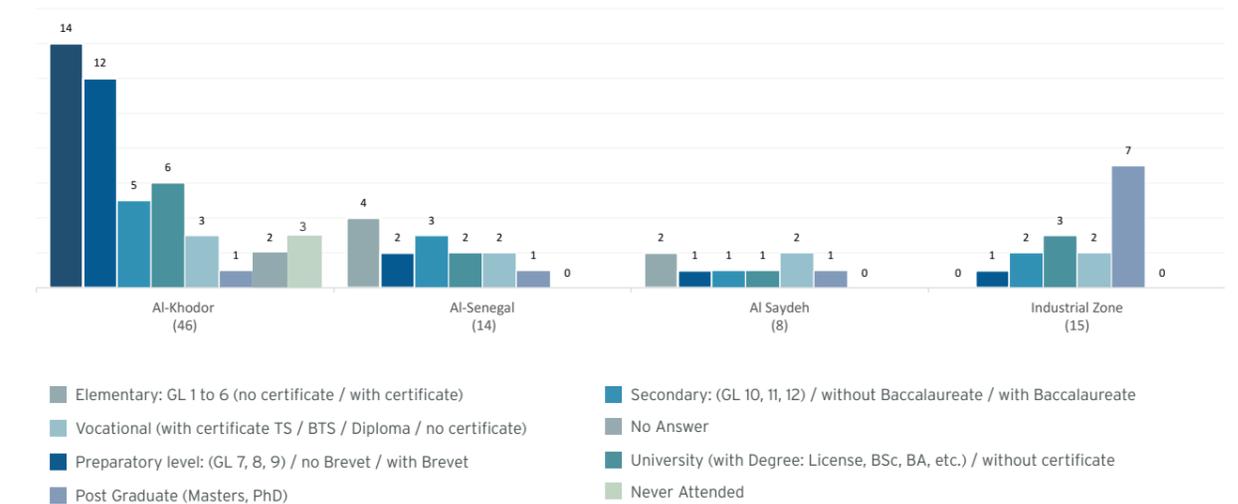
A big number of the business owners also attended preparatory school without holding a brevet certificate (12 business owners), some completed post-graduate degrees (10 business owners), while only 3 business owners never attended school (Figure 7 and 8).



**Figure 6:** The level of Education of the business owners. Source: The Beirut Urban Lab, 2021.



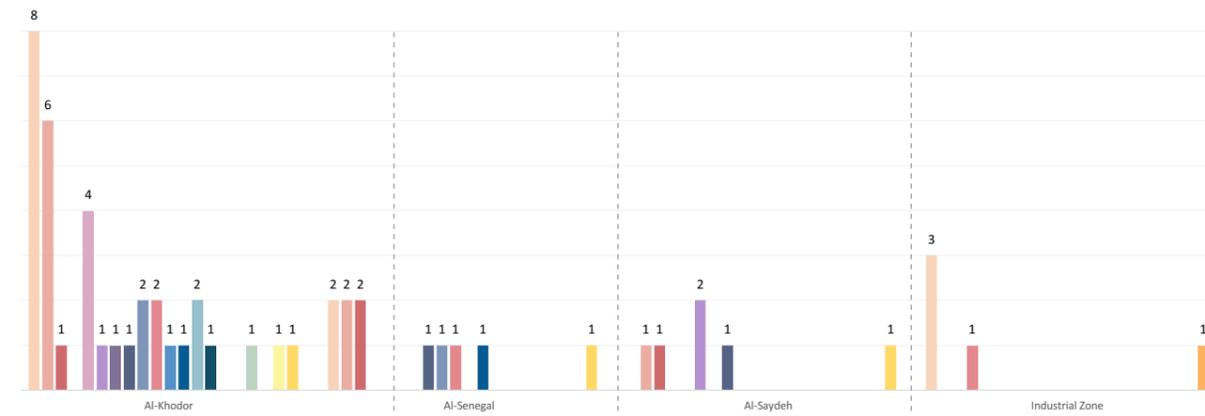
**Figure 7:** The level of Education of the business owners. Source: The Beirut Urban Lab, 2021.



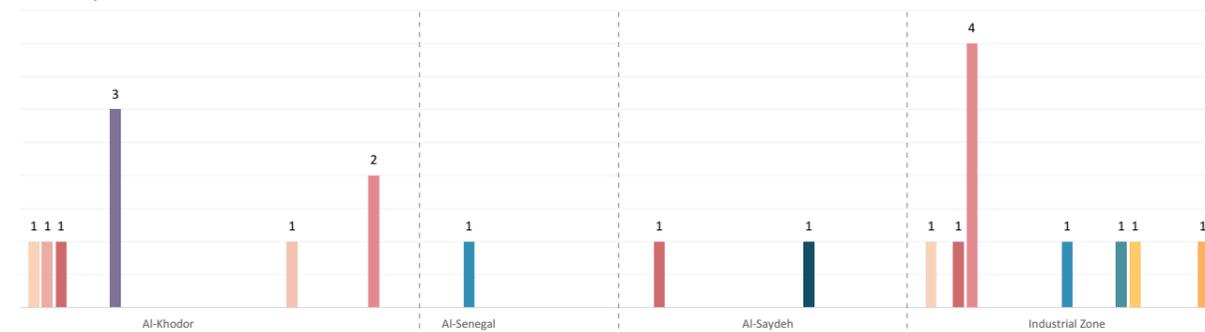
**Figures 8.** The level of education of business owner in the sub-neighborhoods and the Industrial zone. Source: The Beirut Urban Lab, 2021.

The level of education of business owners was also studied in each sub-neighborhood. The majority of the 46 business owners in Al-Khodor attended elementary and preparatory school while a few completed post-graduate degrees. The majority of the 14 business owners in Al-Senegal attended elementary school while a few completed post-graduate degrees. The majority of the 8 business owners in Al-Saydeh completed vocational training (with a TS/BTS/Diploma) or attended elementary school. The majority of the 15 business owners in the Industrial Zone completed post-graduate degrees while a few only attended preparatory school (Figure 9).

Elementary, Preparatory, Secondary, and Vocational Levels



University and Post Graduate Levels



Never Attended School



Figures 9. The level of education of business owners in relation to their type of work and location in the sub-neighborhood. Source: The Beirut Urban Lab, 2021.

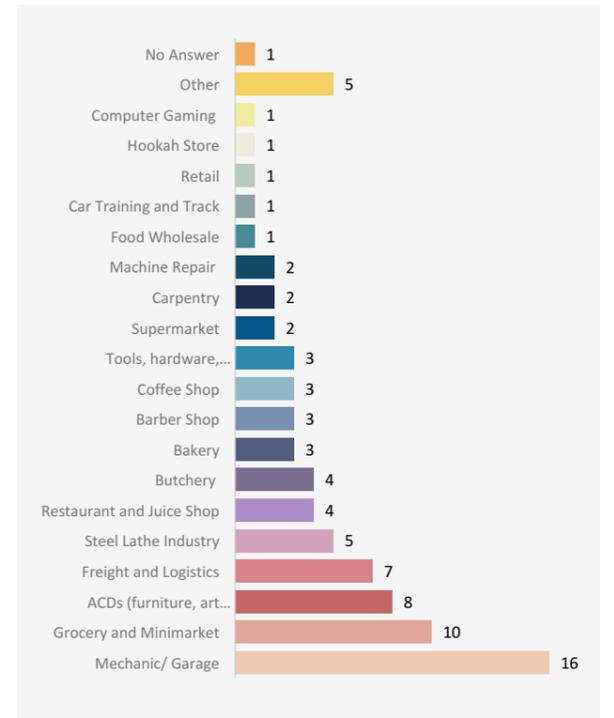
The level of education of the business owners was further explored according to the main economic activities in each sub-neighborhood (Al-Khodor, Al-Senegal, and Al-Saydeh) and the Industrial Zone. Figure 9 shows that most of the business owners who did not attend or finish high school run micro-scale trade and commercial shops (mechanics shops, grocery stores, minimarkets, and steel lathing workshops) and are mostly located in Al-Khodor sub neighborhood. Additionally, most of the business owners who attended university and completed post-graduate studies run businesses that do not require a school or university degree; these include butchery stores and minimarkets in Al-Khodor. However, many of the businesses that require a university degree are in the Industrial Zone; these include key freight, logistics, art galleries, food wholesale, and mechanics shops.

B. Types of Businesses

A. Private Sector (Micro, small, to medium-sized enterprises)

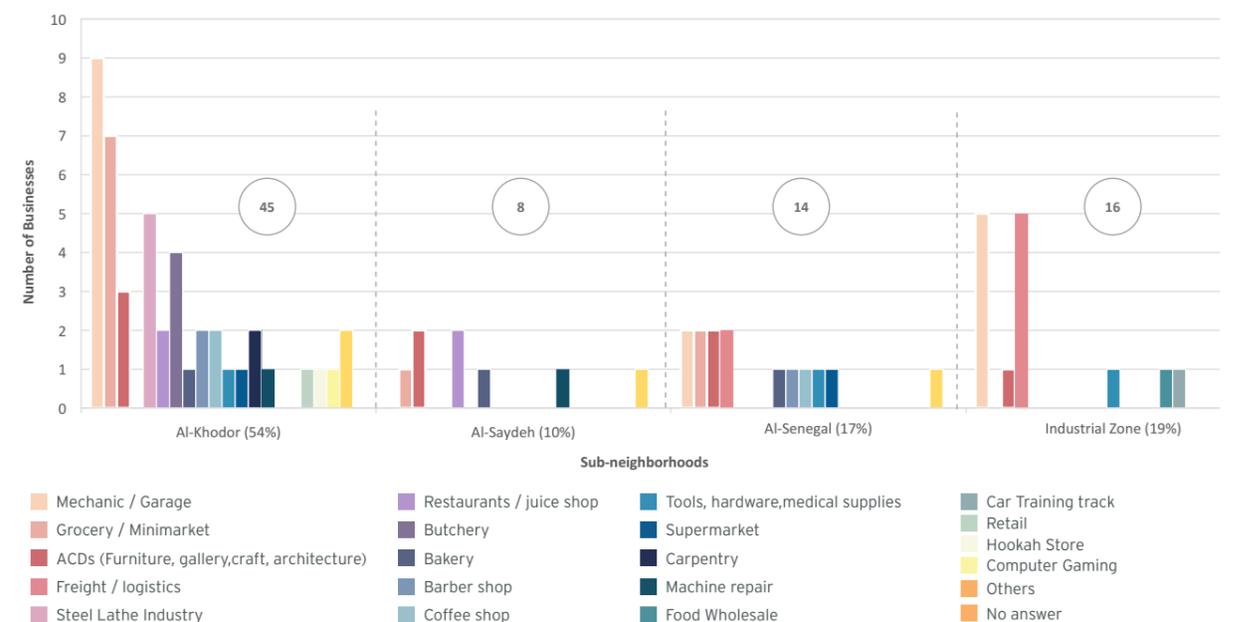
Some of the businesses are related directly or indirectly to the activities of the port. The answers to the questionnaires showed that 19% of the surveyed businesses are mechanic shops and garages. This high percentage is due to the high number of transit trucks and vehicles in Karantina. Additionally, 8% of the surveyed businesses provide freight, logistic and shipping services. A few businesses provide equipment and machine repairs. Additionally, Karantina attracted art galleries, showrooms, and architectural offices, constituting 10% of the surveyed businesses. However, leisure and recreational spaces are scarce in Karantina; there are 3 coffee shops, 1 computer gaming shop, 1 hookah store, and 1 car training track. Other businesses include food wholesale companies, carpentries, and steel lathing workshops (Figure 10).

The distribution of business types in the sub-neighborhoods showed that there are 9 mechanics and garage workshops, 7 grocery and minimarkets, and 2 food shops and 2 coffee shops in Al-Khodor, while there is one business of each of these categories: bakeries, hookah stores, and furniture showrooms.



Figures 10. The numbers of the surveyed businesses by type. Source: The Beirut Urban Lab, 2021

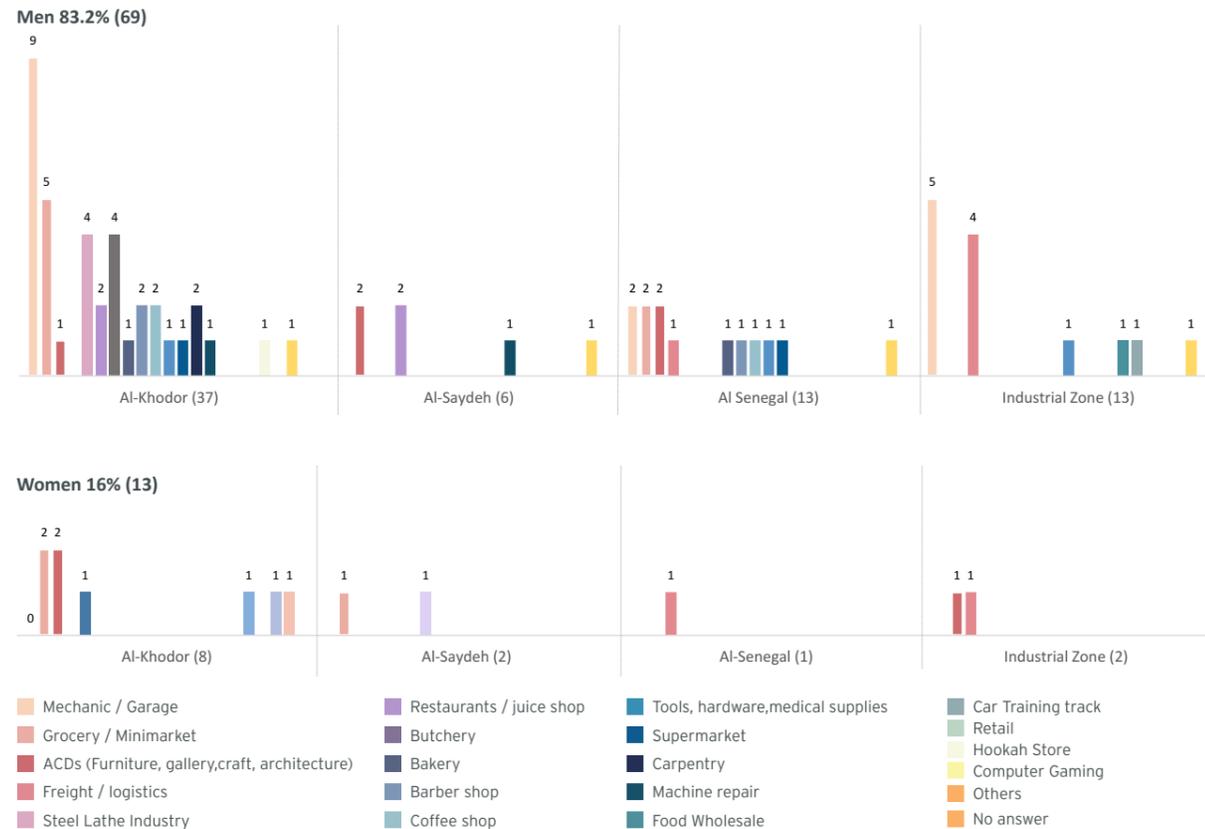
Al-Senegal contains freight and logistics services, garages, minimarkets, supermarkets, coffee shops, barber shops, and crafts and retail stores. The percentage of the businesses in the Industrial Zone is divided equally between garages and freights and logistics services with some food wholesale stores, retail stores, galleries, and storage for tools and medical supplies. There are a few restaurants, grocery stores, bakeries, and furniture showrooms in Al-Saydeh (Figure 11).



Figures 11. The distribution of business types and their density in the sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

## Gender

Many of the business owners are men, constituting 69 business owners out of the total 83. Most of the male business owners work in commercial, leisurely, and industrial activities such as garages, logistics, restaurants and supermarkets, while female business owners work across different trades, primarily in the creative industries, freight and logistics services, retail, and minimarkets (Figure 12). The business activities of women inside the residential clusters is primarily in food production (such as “mouneh- مونة”)<sup>8</sup>, grocery stores, and bakeries.



Figures 12. The distribution of business types in relation to the gender of business owners in the sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

## B. Public Sector: The Slaughterhouse, the Fish Market, and the Public Market

“ Many businesses that used to provide employment for the area, like the slaughterhouse (al-Maslakh) and the public market were closed<sup>9</sup> كثير من الأعمال يلي كانت تأمن وظائف بالمنطقة مثل المسلخ والسوق الشعبي تسكروا

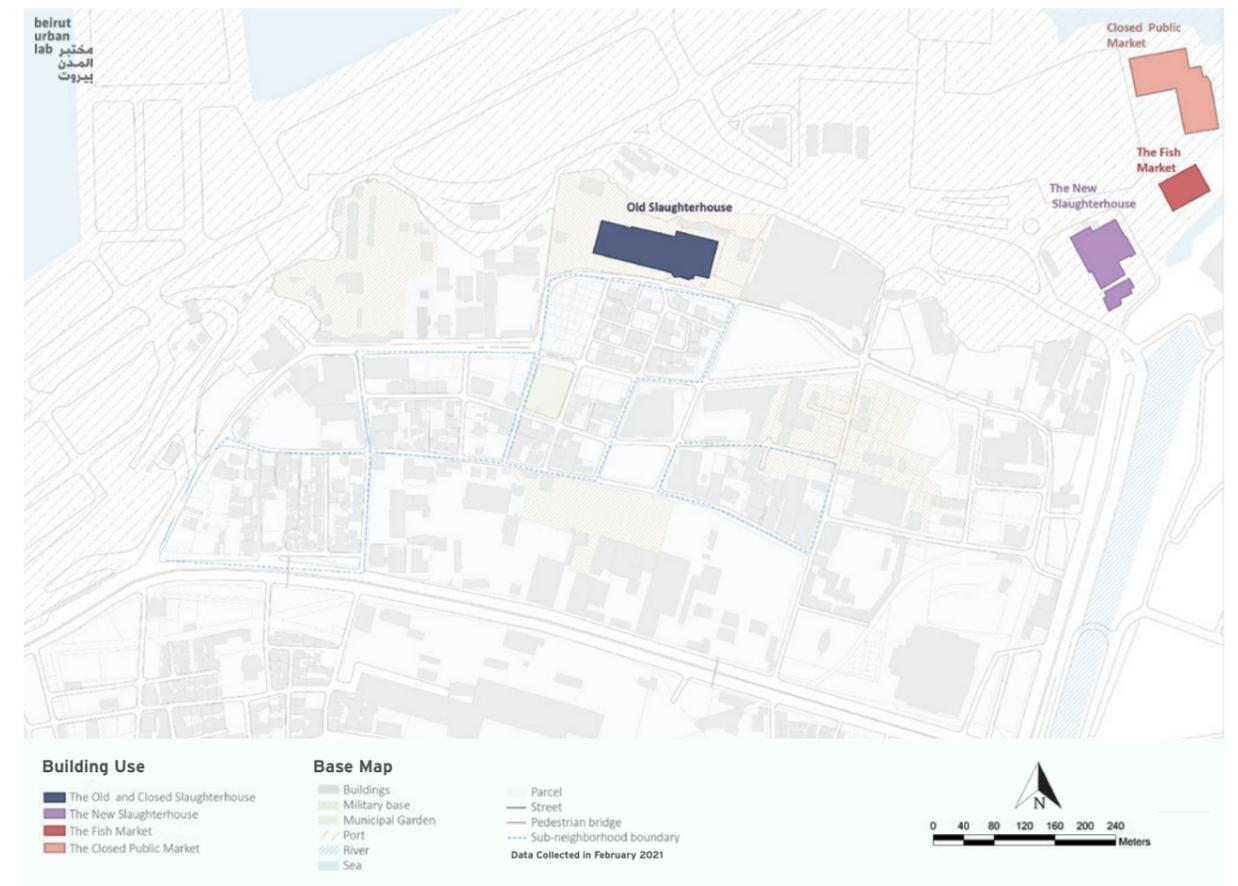


Figure 13: The location of the slaughterhouse, the fish market, and the public market. Source: The Beirut Urban Lab, 2021.

## The Slaughterhouse

The Karantina slaughterhouse is the largest in Lebanon and attracts trade and commerce activities from all over the country (Ecocentra, 2015). It was established in 1910 and developed incrementally by individual traders and merchants who settled in Karantina<sup>10</sup>. The main transformation of the slaughterhouse was in 1964 when a German company refurbished the structure according to high standards of public safety and health. Eventually, the slaughterhouse was closed during the civil war (1975-1990) and was occupied by Lebanese militia forces until the army took over.

During the civil war, the slaughterhouse was relocated to Al-Madina Al-Riyadiya to the south of Beirut. In 1992, after the end of the civil war, the slaughterhouse reopened but in a new location on the periphery of Karantina (Figure 13). However, The Governor of Beirut and the Minister of Public Health and Safety closed the slaughterhouse in 2014 (Figure 14). It was closed temporarily because it did not meet the minimum health and hygiene requirements. Several reports showed that 19 employees in the slaughterhouse died from cancer over a period of seven years (Ecocentra, 2015)<sup>11</sup>.



Figure 14: The statement of the Governor of Beirut regarding the closure of the slaughterhouse. Source: www.lebanonfiles.com.

<sup>8</sup> Mouneh is an old Lebanese tradition that involves the annual processing of fruits, vegetables, herbs, flowers, and animal by-products. It is done naturally according to availability during each season  
<sup>9</sup> First Town Hall meeting, Karantina, (2022-April-11).

<sup>10</sup> Interview between The Beirut Urban Lab research team and Fakir al-din Shihadeh (2021-May-27). Fakir al-din Shihadeh was previously employed at the slaughterhouse.  
<sup>11</sup> https://ecocentra.wordpress.com/2015/01/21/the-disaster-that-is-the-karantina-slaughterhouse/.

Before the port blast in 2020, there were plans to partially re-open the slaughterhouse after its rehabilitation and due to pressures from the residents of Karantina (Al Akhbar, 2020). However, after the port blast, the outer areas of the slaughterhouse were used as dumping grounds for the rubble of the destroyed buildings (figure 15). This caused further physical damage to the slaughterhouse and extended the closure period. The slaughterhouse employed many of the residents of Karantina, especially some of the Arab Tribe residents of Al-Khodor sub-neighborhood. The closure left many of the residents unemployed, especially those who inherited the profession from their parents. Additionally, slaughtering animals is considered an important practice for the Arab Tribes and a prime source of income. As a result, the closure of the slaughterhouse reduced the number of merchants and customers who used to come to Karantina and removed an important part of their socio-economic practices.



Figure 15. The outer space of the closed slaughterhouse that was transformed into a dump after the port blast. Source: Ali Ghaddar, 2021.

### The Market

The public market in Karantina opened for the first time in 1996 (Figures 13 and 16) and closed after four years<sup>12</sup>. It reopened in 2014 and operated for another few years before it closed again. The market was built on a 45,000 square meter lot and has a floor area of 3,500. It also accommodates the fish market. The market has around 100 shops, and each shop has an area of 18 square meters. The monthly rent of each shop was set at 286,000 Lebanese Pounds in 2020. The bills were included in the rent and cover water, electricity, and security. Additionally, a designated shuttle bus used to provide free transportation for visitors from the market entrance to the market. The shuttle bus attracted and facilitated the movement of customers and visitors. The market attracted merchants and customers from Karantina and Greater Beirut. The market employed more than 300 people, including administrators, workers, and cleaners. Many of these employees are Lebanese from different backgrounds and locations in Lebanon, including Beirut, south, and north Lebanon. According to Fakir al-din Shihadeh, the market was one of the economic drivers that employed several residents, including women who used to sell their own products or were hired to run the shops of other people. The closure of the market negatively affected many of the residents of Karantina who became unemployed.



Figure 16. The abandoned public market near the fish market. Source: Cristina Gosen, 2022.

<sup>12</sup> Annahar. (2014-December-22). The opening of the public market in Karantina. Retrieved from Annahar newspaper: <https://www.annahar.com/arabic/article/199885-%D8%A7%D9%81%D8%AA%D8%AA%D8%A7%D8%AD-%D8%A7%D9%84%D8%B3%D9%88%D9%82-%D8%A7%D9%84%D8%B4%D8%B9%D8%A8%D9%8A%D8%A9-%D9%81%D9%8A-%D8%A7%D9%84%D9%83%D8%B1%D9%86%D8%AA%D9%8A%D9%86%D8%A7>

### The Fish Market

“ We are afraid they close the fish market. The area is being hijacked by outsiders who want to exploit it, and they are killing the area by that<sup>13</sup>  
 نحننا خايفين انو يسكروا سوق السمك. المنطقة عم يتم اختطافها من قبل الغربا يلي بدن يستنزفوها وبهل شي عم يقتلوا المنطقة

Karantina has a wholesale and retail fish market that serves the entire city of Beirut (Figure 13). The fish market is in front of the public market on a 45,000 square meter lot. It has a floor area of 1,200 square meters. It is directly accountable to the Lebanese Council of Ministers through the Prime Minister. Before the civil war (1975-1990), the fish market was in Beirut Central District (BCD), on the same site of the current ESCWA building in front of the Fouad Chehab Highway. After the civil war, the fish market was demolished according to the reconstruction masterplan for the BCD and opened in 1995 in its current location on the periphery of Karantina next to the Beirut River. A few reports mentioned that the fish market sells fresh and frozen fish to many restaurants in Beirut. The fish market is currently facing a rapid decline in its activity (Figure 17).



Figure 17. The conditions of the internal space of the fish market in Karantina. Source: Cristina Gosen, 2022.

<sup>13</sup> First Town Hall meeting, Karantina (2022-April-11).

An interview with a market trader<sup>14</sup> showed that the decline dates to before the port blast and was caused by the economic crisis that started in Lebanon in 2019. The economic crisis caused an 80% decline in the activities of the market. For example, fish sales used to reach 20-30 tons per day before the economic crisis; these numbers decreased to only 5-6 tons. Additionally, the market used to close at 10:00 pm and currently it closes at 5:00 pm. It used to accommodate 55 stations for retail and 9 booths for wholesale, and now it has only 10 stations for retail and 10 booths for wholesale. Each booth employs 2 to 4 workers with a salary of 500,000 Lebanese Pounds per week.

Thus, the drop in the number of booths left many of the workers unemployed. It is worth noting that the booths are rented under an official contract that can be renewed every three months for 950,000 Lebanese Pounds per month. Finally, the fish market resorted to using local resources in Lebanon; the market used to import fish from Senegal, Mauritania, Egypt, and Turkey before the economic crisis and the devaluation of the Lebanese Pound.

Moreover, various additional factors contributed to the decline in the activities of the fish market. Firstly, the opening of co-ops and large supermarkets like Spinneys and Carrefour attracted customers and promoted offers that competed with the Karantina market. Secondly, the devaluation of the Lebanese Pound increased the prices of the fish by seven times, which is not affordable to most of the local households from low-income groups. Thirdly, the shortage of gasoline reduced the number of people who can visit and buy fish from the market.

### C. Business Size

The research divided the sizes of the businesses into the following categories: smaller micro enterprises (0-2 employees), larger micro enterprises (3-10 employees), small enterprises (11-50 employees), and medium or chain enterprises (51-150) (Figure 18). The distribution of the different sizes of businesses in the sub-neighborhoods shows that most of the smaller micro are in Al-Khodor sub-neighborhood and mainly include butcheries, groceries, and mechanics shops. However, most of the larger micro businesses, small businesses, and medium or chain businesses are in the Industrial Zone and mainly include arts and crafts and creative industries, logistic, car showrooms, and food wholesale companies (Figure 19).

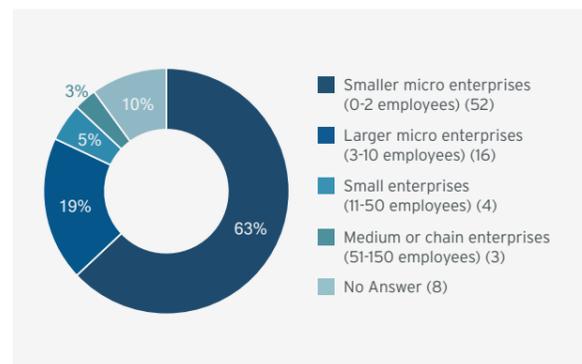


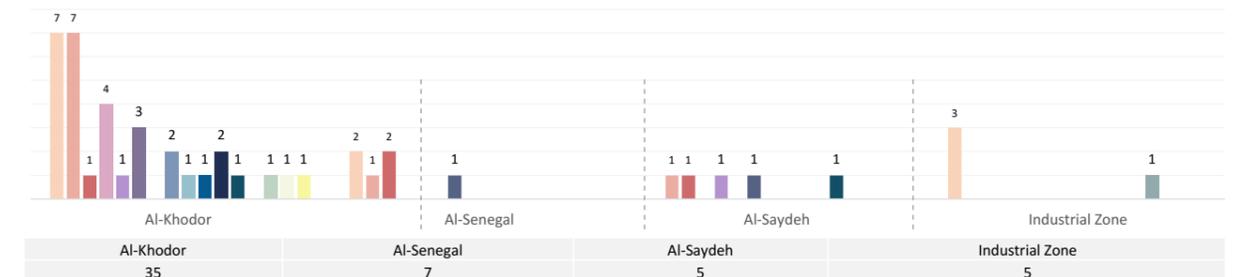
Figure 18: Sizes of businesses. Source: The Beirut Urban Lab, 2021.

In addition to the number of employees, the sizes of the businesses were categorized based on criteria such as employee salaries, the number of branches in and outside of Lebanon, and the total built-up areas (Figures 20 & 21).

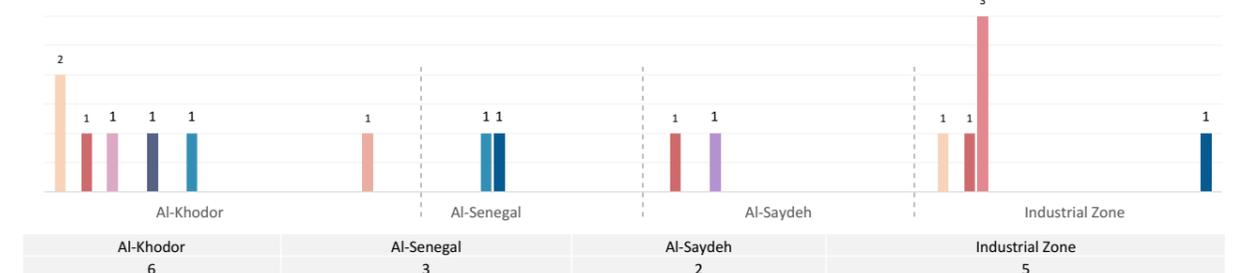
The total built-up area of the businesses varied from 0-50 square meters to more than 5000 square meters. 39 properties were between 0-50 square meters, 19 properties were between 51-100 square meters, 14 properties were between 101-500 square meters, 7 properties were between 501-5000 square meters, and 4 were more than 5000 square meters. Respectively, these businesses were used as follows: minimarkets/garages, butcheries, garages, freight and logistics, and food wholesale/furniture showrooms/facilities for training people to drive cars. Businesses with small areas (between 0-50 and 51-100 square meters) are mostly in the three sub-neighborhoods while businesses with large areas (501-5000 square meters) are in the Industrial Zone (Figure 22 and 23). The small businesses are in buildings that are dedicated for single use.

<sup>14</sup> Interview with Hassan Deeb, a merchant in the fish market (2021-April).

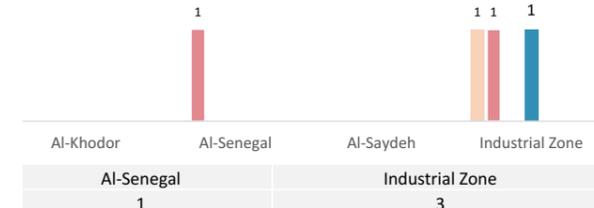
#### Number of smaller micro enterprises (0-2 Employees)



#### Number of larger micro enterprises (3-10 Employees)



#### Number of small enterprises (11-50 Employees)



#### Number of medium/chain enterprises (51-150)



- Mechanic / Garage
- Grocery / Minimarket
- ACDs (Furniture, gallery,craft, architecture)
- Freight / logistics
- Steel Lathe Industry
- Restaurants / juice shop
- Butchery
- Bakery
- Barber shop
- Coffee shop
- Tools, hardware,medical supplies
- Supermarket
- Carpentry
- Machine repair
- Food Wholesale
- Car Training track
- Retail
- Hookah Store
- Computer Gaming
- Others
- No answer

Figure 19: The distribution of businesses in the sub-neighborhoods and the Industrial Zone according to size. Source: The Beirut Urban Lab, 2021.



Figure 20. Smaller micro business (right) and larger micro business (left). Source: Ali Ghaddar, 2021.



Figure 21. Small (right) to medium/chain (left) businesses. Source: Ali Ghaddar, 2021.

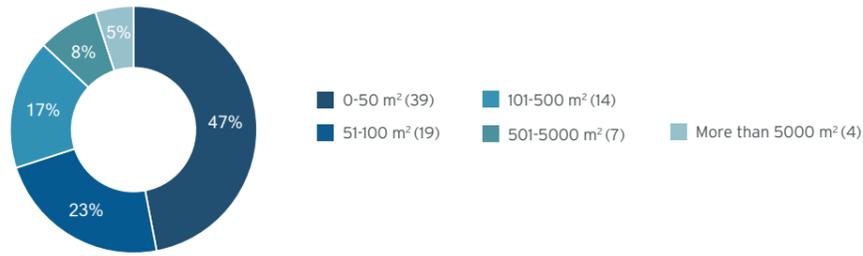


Figure 22. Area of businesses. Source: The Beirut Urban Lab, 2021.

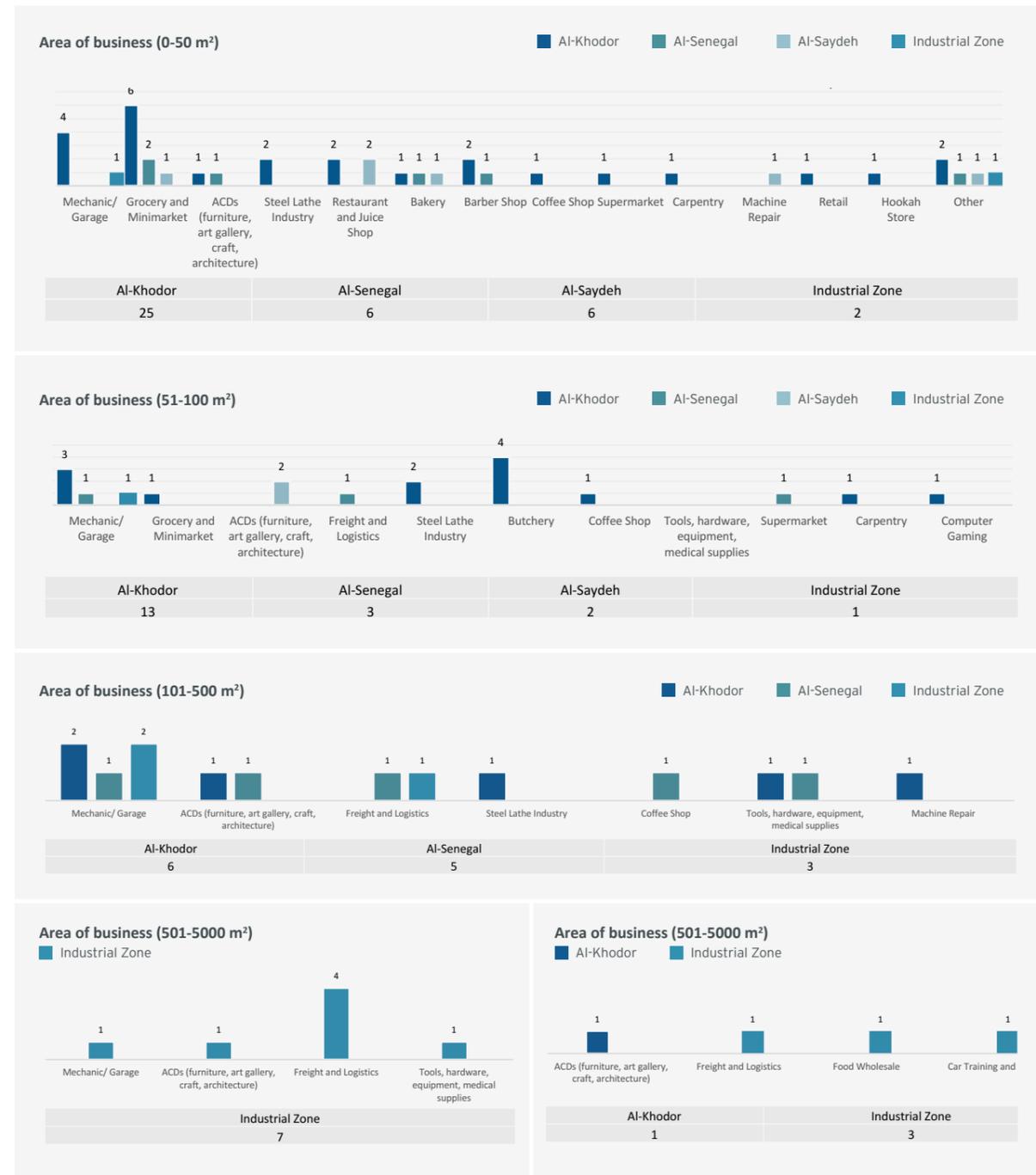


Figure 23. The distribution of businesses in relation to the total built-up areas of the businesses. Source: The Beirut Urban Lab, 2021.

### D. Type of Tenure

Around 70% of the business owners in Karantina have rent agreements. The highest concentration of businesses on new rents is in Al-Khodor, and these businesses are mostly mechanics shops, garages, and grocery or minimarkets. Most of the businesses that are on old rent are located along Al-Senegal Street, and most of them are owned by the Maronite Waqf. Only 15% of the businesses are owned and are located in Al-Khodor sub-neighborhood (Figure 24).

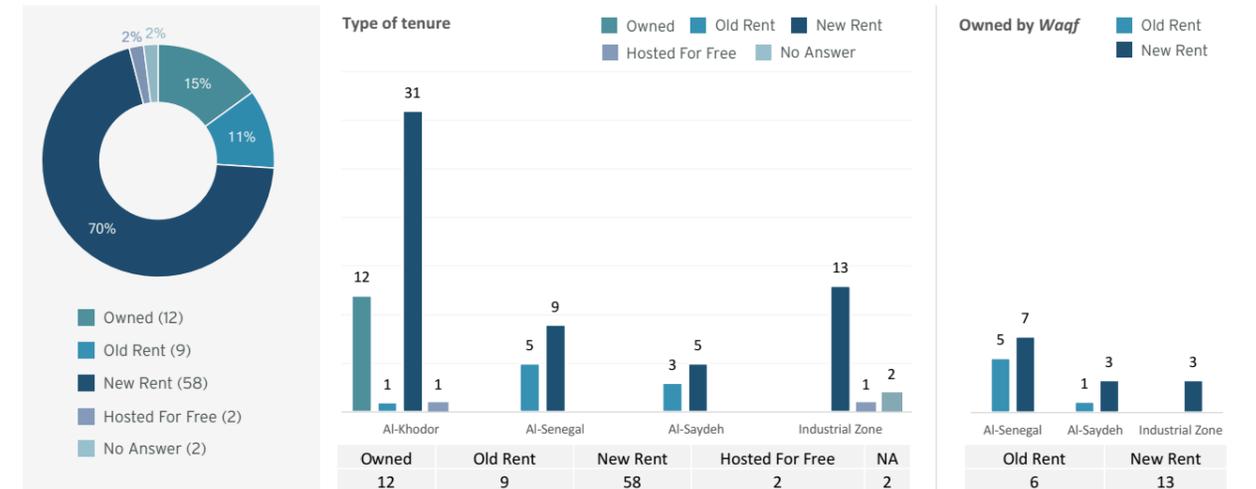


Figure 24. The distribution of the different types of tenure agreements in the three sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

Some of the business owners have formal rent contracts, while others have informal rent agreements. The formal contracts include both old and new rents. The informal agreements include new rents and are mainly in Al-Khodor sub-neighborhood. 46% of the businesses in Al-Khodor have rent contracts, and most of them are new rents. 32% of the businesses in Al-Khodor do not have rent contracts (Figure 25).

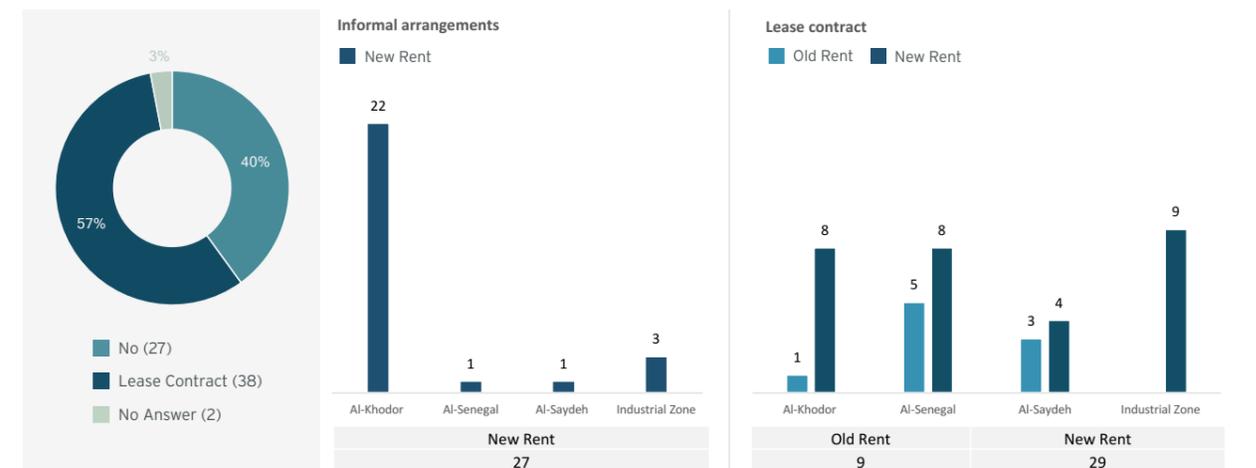


Figure 25. Types of rent agreements. Source: The Beirut Urban Lab, 2021.

### E. Business Status

Most of the surveyed businesses were partially operating, while some of the businesses were closed and not operating due to the port blast. Only a few businesses were fully operating at the time of data collection. Most of these businesses were on new rent contacts or informal agreements (Figure 26).

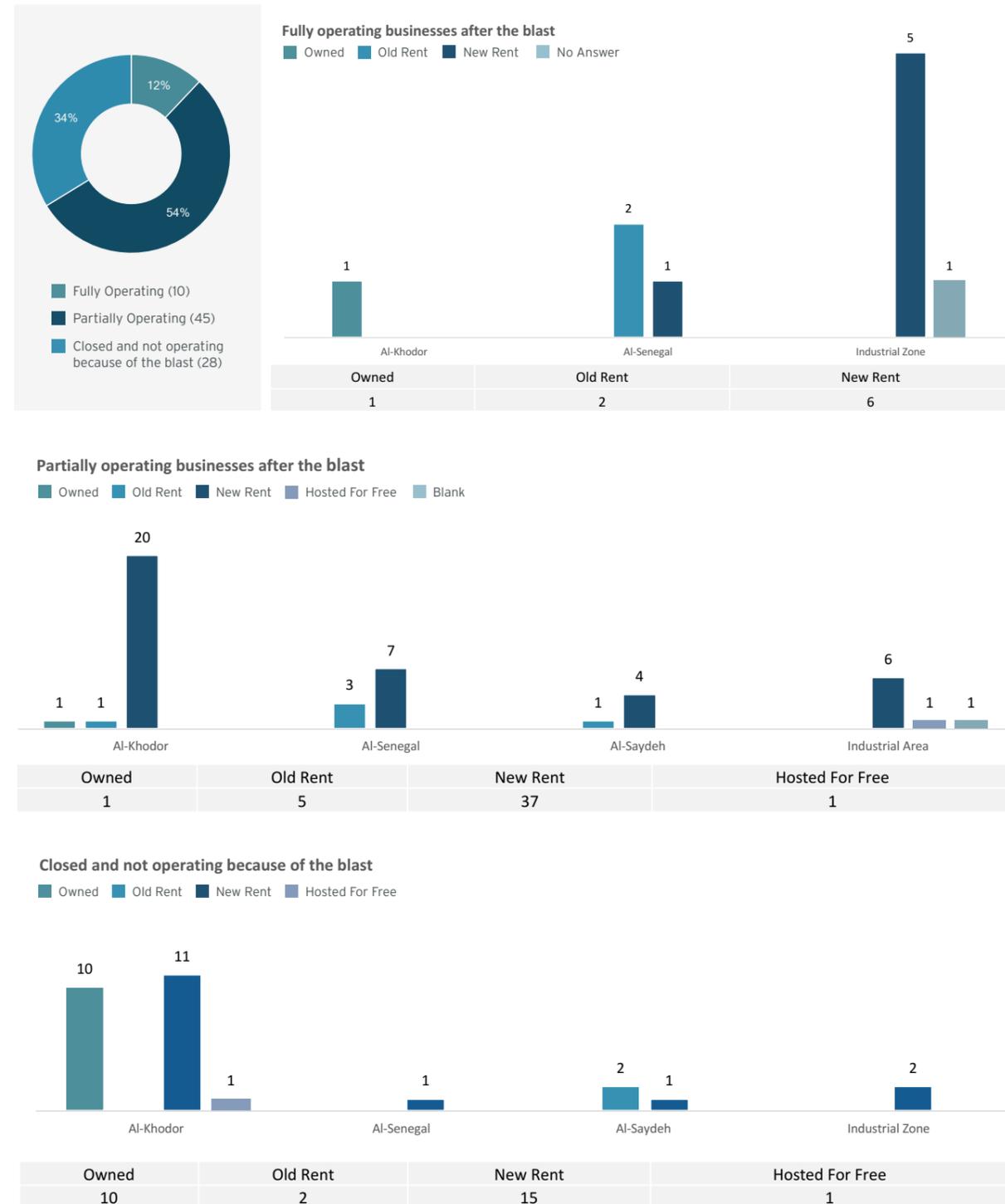


Figure 26: The status and distribution of businesses in Karantina: fully operating, partially operating, and closed. Source: The Beirut Urban Lab, 2021.

### F. Aid after the Port Blast

Most of the business owners did not have insurance to cover the damages from the port blast (70 out of the total 83), and are mostly in Al-Khodor sub-neighborhood, while 9 had insurance and are mostly located in the Industrial Zone (Figure 27). They include small businesses for freight and logistics, food wholesale, and furniture galleries.

Most of the businesses were assessed for damages (49 out of a total of 83); they are mostly located in Al-Khodor sub-neighborhood (Figure 28).

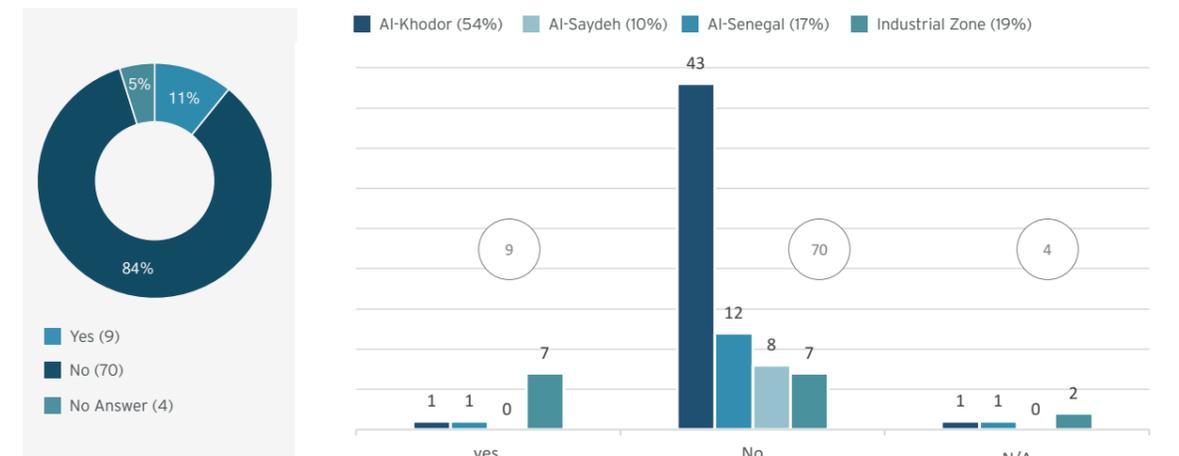


Figure 27: Business owners who have insurance and their distribution in Karantina. Source: The Beirut Urban Lab, 2021.

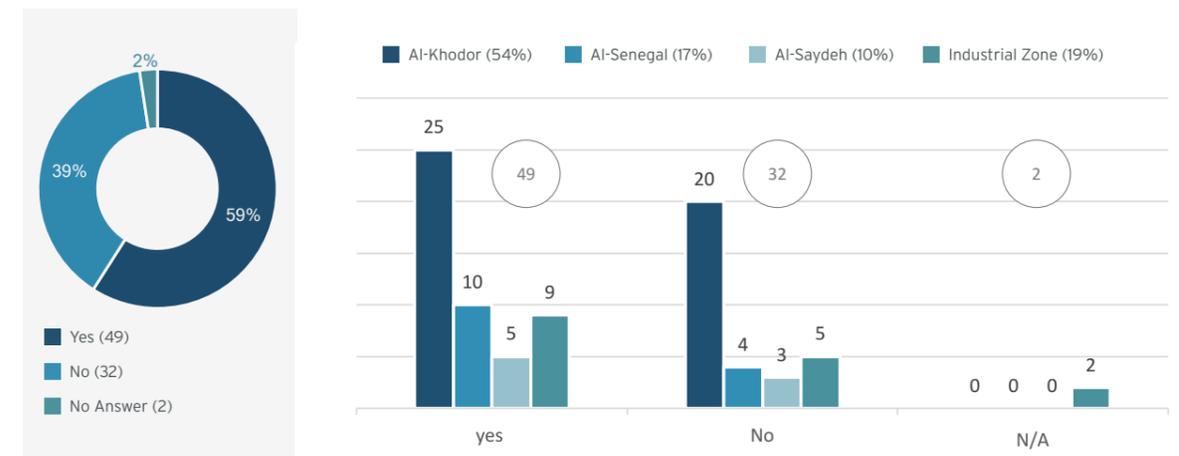


Figure 28: The number of business owners who received assistance, aid, or service and their distribution in Karantina. Source: The Beirut Urban Lab, 2021.

Most of the assessments and surveys were done by the army and other public bodies, while NGOs, INGOs, and philanthropists provided money and services for repairs and new equipment. Figure 29 shows that the assessments by public bodies were more concentrated in the Industrial Zone. This can be attributed to the immense destruction of the warehouses in the Industrial Zone. NGOs and INGOs provided repair services to the smaller micro businesses in the sub-neighborhoods. Repairing the smaller micro businesses, compared to the small and medium-sized ones in the Industrial Zone, required less money but were more urgent.

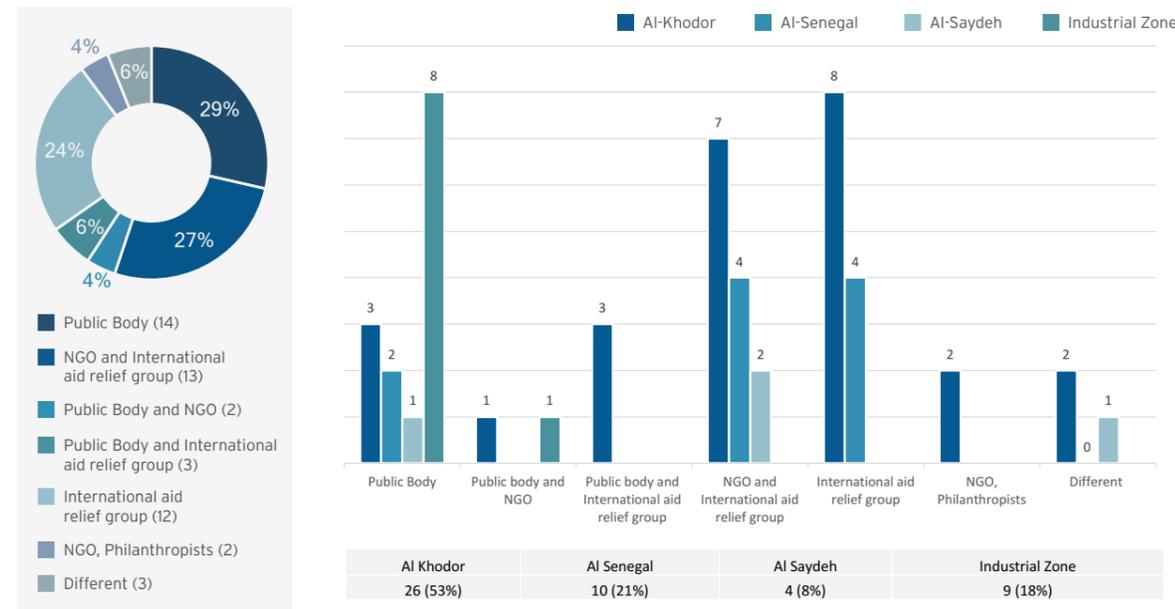


Figure 29: Parties that provided assistance, aid, or service and the distribution of their work in Karantina. Source: The Beirut Urban Lab, 2021.

Most of the business owners repaired their shops at their own expense (41 out of a total of 83). NGOs repaired a few businesses while some of the businesses were not yet repaired in 2020 and 2021 when the research team at The Beirut Urban Lab collected answers to the business questionnaire (Figure 30).

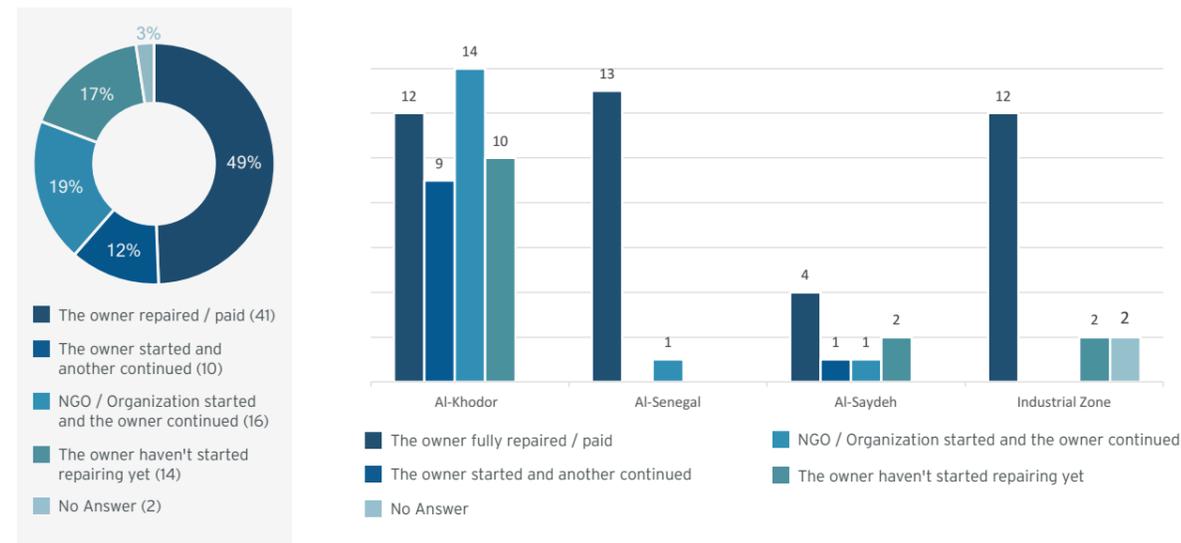


Figure 30: Business owners who were able to repair their facilities across different areas in Karantina. Source: The Beirut Urban Lab, 2021.

Repair works were mostly ongoing in 2021 (53 out of a total of 83), while some of the repair work was completed (14 out of a total of 83) and some did not start (13 out of a total of 83) (Figure 31).

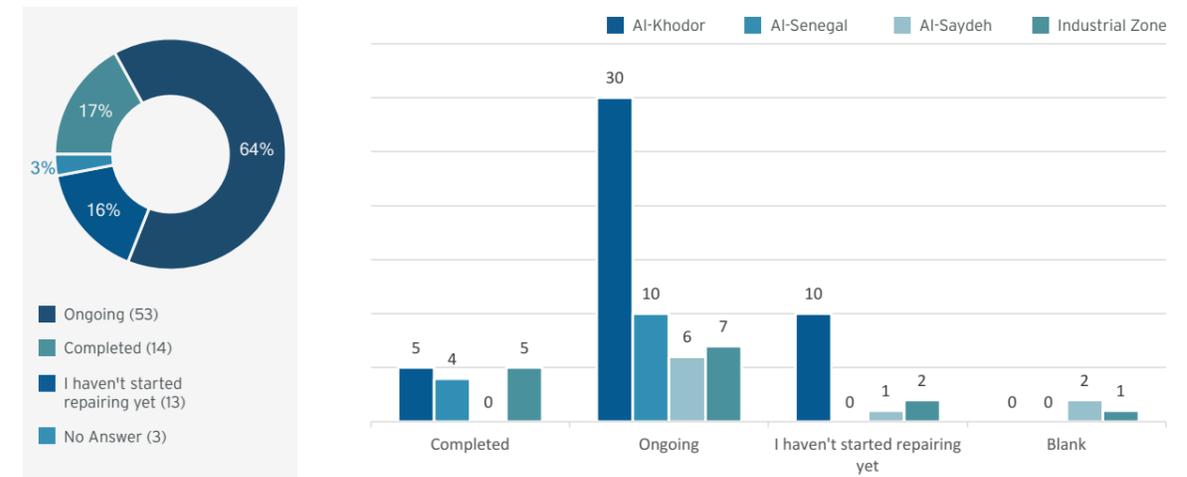


Figure 31: Status of repairs and their distribution in the sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

Most of the surveyed business owners did not receive compensation from the Lebanese government (81 out of a total of 83), while the remaining 2 business owners did not provide an answer in the business questionnaire (Figure 32).

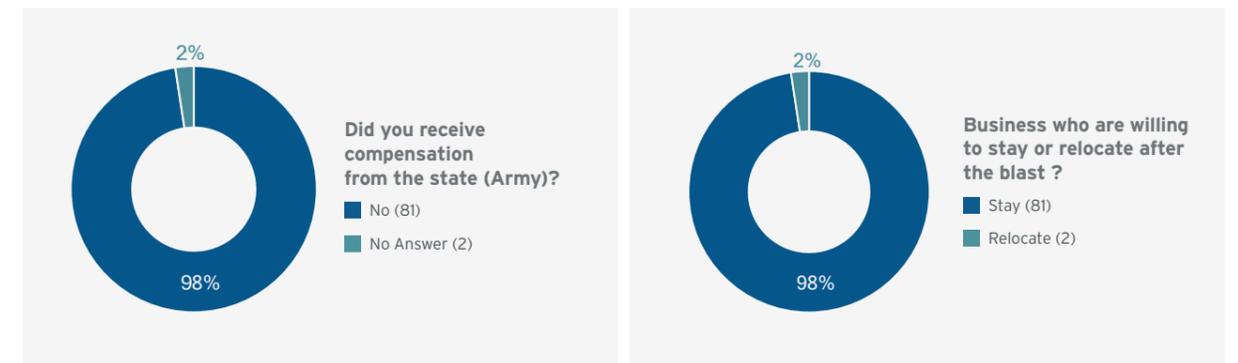


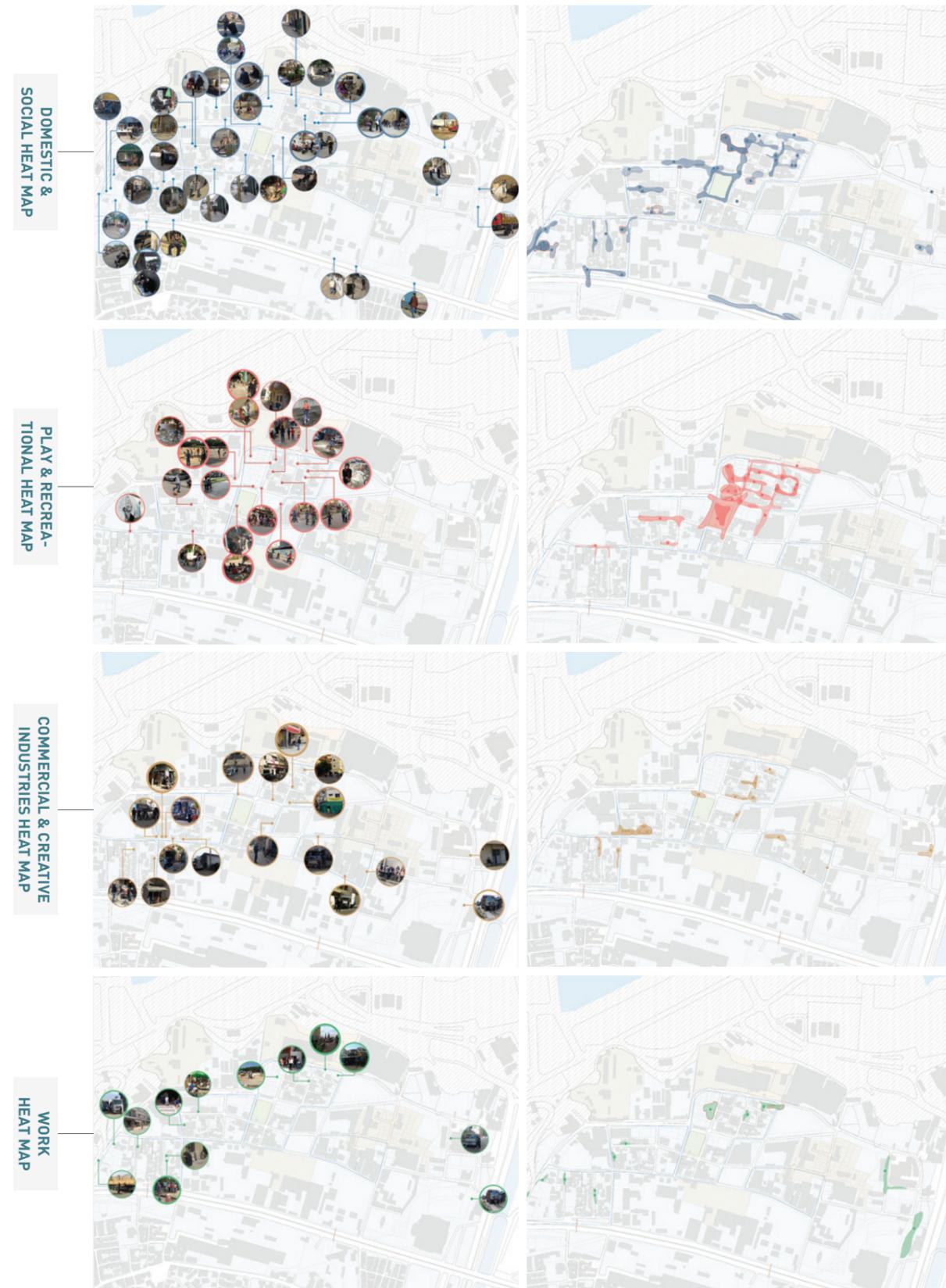
Figure 32: Number of business owners who received compensations from the army and their plans to relocate or stay in Karantina. Source: The Beirut Urban Lab, 2021.

### 3.2. IN-DEPTH PROFILE OF THE CULTURAL ACTIVITIES IN KARANTINA

This section of the report explores the types of cultural practices and analyzes their intensity, type, and how they unfolded spatially. Cultural practices in Karantina can be divided into two categories:

1. Cultural practices that are associated with economic activities.
2. Cultural practices that are associated with the residential clusters.

As mentioned earlier, mapping socio-spatial practices is an integral part of the argument in this section that links vitality to the intensity and diversity of cultural practices and their relationship to the residents and people outside karantina. This section classified socio-spatial practices based on their type and time during the day; they include (Figure 33): domestic/social practices, play/recreational practices, commercial and creative/light industries, and other industries and temporary working spaces. The analysis in the heat map (Figure 34) showed that these socio-spatial practices are mainly in the residential clusters. This is due to the presence of military bases around the sub-neighborhoods which limit the movement and activities of people to the residential clusters and restricts their extension to the Industrial Zone. Additionally, these socio-spatial practices are more intense and concentrated in Al-Khodor that has a higher population number relative to the other sub-neighborhoods, most of which are occupied by Arab Tribes and Syrian refugees.



**Figure 33:** A series of maps that analyses the distribution of different types of socio-spatial practices in Karantina. Source: The Beirut Urban Lab, 2021.



**Figure 34:** Heat map of the existing socio-spatial practices and the physical challenges hindering mobility in Karantina. Source: The Beirut Urban Lab, 2021.

A preliminary analysis of the data showed that the cultural activities in Karantina are limited and mostly associated with daily household activities like family gatherings in the mornings and evenings. Some of the cultural activities are related to the local economic practices such as daily shopping and gathering in front of bakeries or truck drivers gatherings in Karantina during their breaks. In addition to these activities, some temporary activities emerged after the port blast especially by NGOs and INGOs who appropriated some of the vacant lots into on-site workshops for building repairs. These workshops closed after a few months when the NGOs and INGOs finished the building repairs. This demonstrated the potential to use vacant lots for temporary social activities such as cycling, community gathering, and playing.

Moreover, some cultural practices, including art activities, are either absent or limited in the sub-neighborhoods. Some of the cultural practices also disappeared after the closing of the slaughterhouse, the nightclubs, and various other recreational venues. Additionally, some of the cultural practices are tied to religious affiliations and, as a result, are limited to the Christmas and Al-Adha holidays. The large presence of the army and military bases in Karantina also limits the presence of political parties and the use of public spaces for political events. There is only one office for the Lebanese Kataeb Party<sup>15</sup> in Al-Saydeh (Figure 35).



**Figure 35.** Office for the Kataeb Party in a residential building in Al-Saydeh. Source: Ali Ghaddar, 2021.

<sup>15</sup> The Kataeb Party is a Christian political party in Lebanon.

## 4. PROBLEM DEFINITION

In this section, the vitality of Karantina is tied to the operation of the local economic sector and its embedded cultural practices. It is important to note here that Karantina does not have a wide range of social and artistic activities due to its marginalization from the rest of Beirut and the presence of the military bases in the area.

Cultural practices are mostly tied to the economic sector and are reduced to everyday socio-spatial practices. They are limited by space and time and do not form a notable “culture” that is linked to the residents of the sub-neighborhoods. In specific, the closing of the slaughterhouse, one of the key economic drivers in Karantina, had a negative impact on the Arab Tribes in Al-Khodor. The closing of various recreational, nighttime leisure, and art activities that used to bring younger groups of people to Karantina further weakened the connection to the rest of Beirut. As a result, the current local cultural practices are not diverse and are limited to a few. Even the intensity of these practices is low and fragmented between the sub-neighborhoods and the Industrial Zone.

Additionally, the economic sector in Karantina faces different problems due to the accumulation of multiple traumas and crises<sup>16</sup> that led to the decay of old businesses and high rates of unemployment. The economic activities are partially diverse by type, size, and location, but are not intensive and sustainable. Micro businesses that are associated with the port activities faced severe hardships due to the delay in compensations from the government and the insurance companies after the port blast, and the business owners are threatened with potential displacement due to the increases in rent prices and eviction claims. Some of the older and more traditional businesses were closed; these include the public market and slaughterhouse, and other businesses lost many of their clients. In addition, the activities of large businesses, especially the ones that are associated with the port, are declining due to the economic and political instability in Lebanon. As such, assessing the current status of businesses in Karantina requires an exploration of the multiple causes of the economic crises and their impact on the local socio-economic activities and the employment rates.

As a result, the cultural and economic activities in Karantina are undergoing multiple forms of socio-spatial and socio-economic transformations that affect the local levels of vitality. This is further limiting the economic role of Karantina on the local and regional scales. The following section of the report provides an in-depth analysis of the factors that impacted cultural and economic vitality in Karantina.



<sup>16</sup> These crises include the Lebanese civil war between 1975 and 1990, the explosion in the port in Beirut in 2020, and the ongoing economic and political instability in the country. These crises were exacerbated by the spread of the Covid-19 pandemic since February 2020

## 5. DIAGNOSIS TRACKS

### 5.1 ECONOMIC VITALITY IN KARANTINA

#### A. The Economic Sustainability of Businesses

The first component of economic vitality is the long-term sustainability of businesses. Accordingly, the following section of the report investigates economic sustainability by assessing the following sub-components: land tenure, key services, financial support, human resources, and connection to customers at different scales.

##### A.1 Land Tenure

Access to land for economic and social development is problematic in Beirut. The real estate market is influenced by multiple factors such as land speculations, sectarian affiliations, exemptions, outdated urban planning and building regulations, and deregulation. The factors fostered high-end construction and development. Like other sectors in Beirut, businesses in Karantina are influenced by these factors. Businesses face various challenges such as access to affordable property and secure long-term tenure. The answers to the questionnaires and the one-on-one interviews showed that land and property in Karantina are owned or controlled by four main actors:

1. The public sector through the national government and the Municipality of Beirut. They both own many large lots in Karantina that accommodate commercial activities and public services (Figure 36).
2. The private sector through some of the older residents and new developers and investors. The old residents own micro-scale shops, while new developers and investors bought land and properties for redevelopment.
3. Religious Institutions through the Waqf. The Waqf owns multiple large lots in Karantina, especially in the Industrial Zone.
4. Mediators and brokers who have influence and interest with the Waqf and facilitate property and real estate transactions in Karantina.

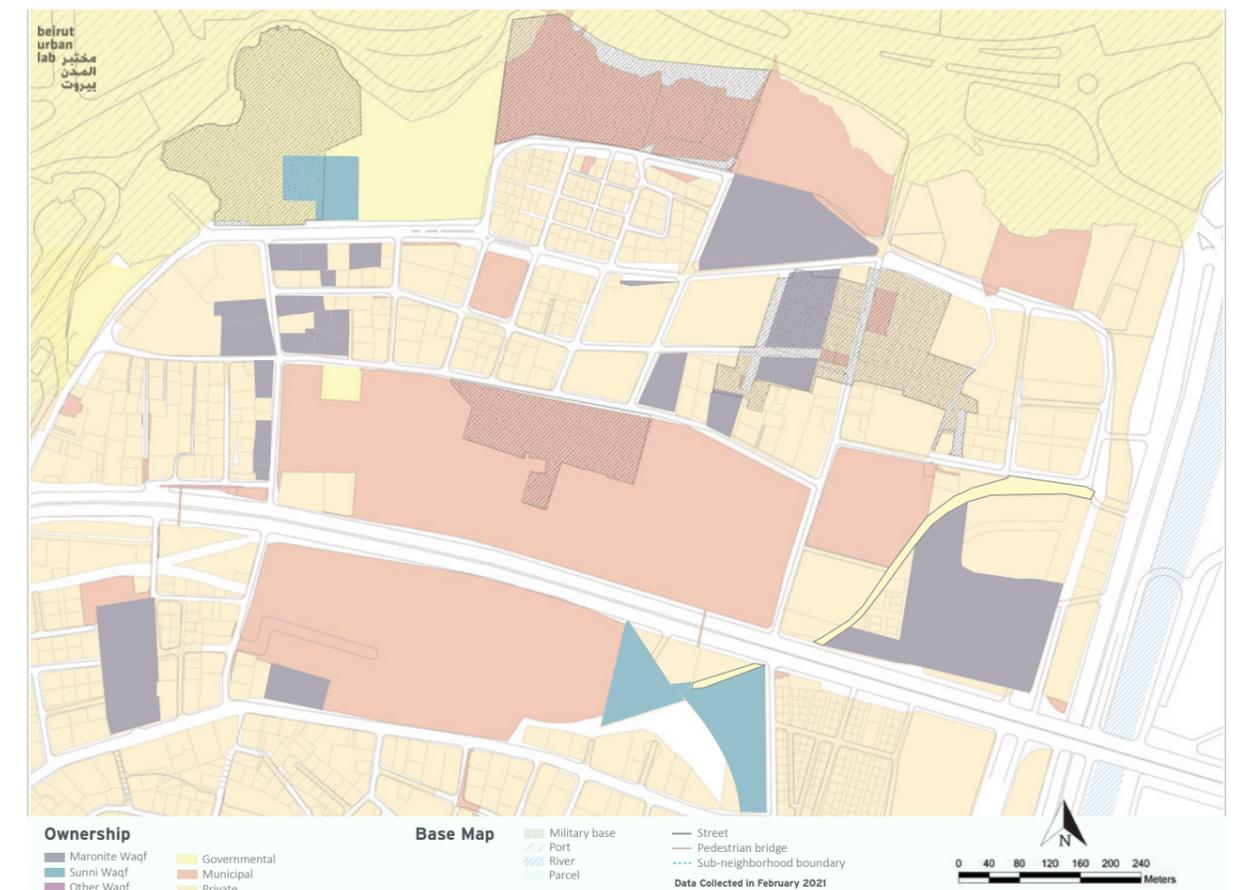


Figure 36: Land ownership in Karantina. Source: The Beirut Urban Lab, 2020.

Many landlords and property owners, especially the Maronite Waqf, used the port blast as an opportunity to raise rents or evict businesses for various reasons including re-development, upscaling to higher-end facilities, the economic crisis, and the need for repairs and compensations from NGOs.

The answers to the business questionnaire and the thematic group discussions showed that businesses find it difficult to secure long term tenure (Figure 37).

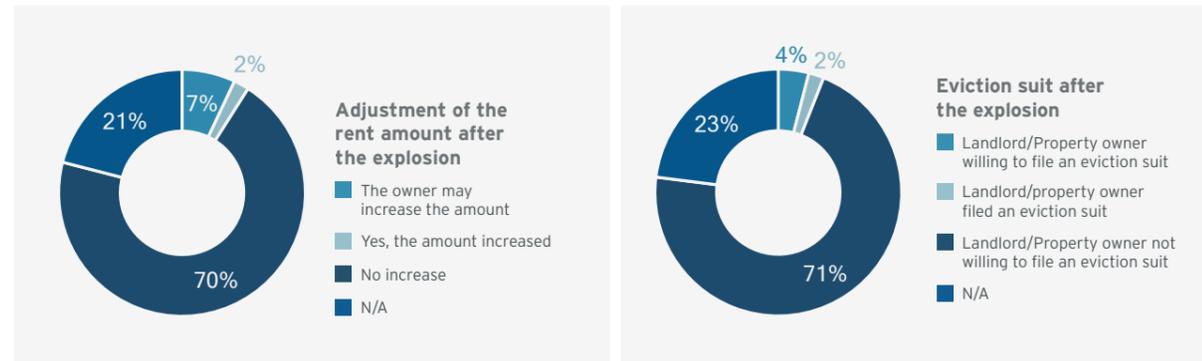


Figure 37: Adjustments in rent and eviction claims after the port blast. Source: The Beirut Urban Lab, 2021.

As such, business owners face various forms of threats: (1) current and potential increase in rent prices, (2) rent increase that is accompanied by a threat of eviction, and (3) current and potential eviction claims by the landlords.

1. The current and potential increase in rent prices are exacerbating the vulnerability of micro sized businesses. Data shows that rents are projected to further increase in the coming months. 6 business owners may face an increase in rent prices; some of them are partially operating and are mainly located in Al-Khodor sub-neighborhood and the Industrial Zone. 3 of these properties are owned by the Waqf. The one-on-one interviews showed that one of the business owners who was threatened by the increase in rent price already received a written letter from the Waqf requesting a higher rent at the rate of 4,000 Lebanese pounds per 1 dollar (Figure 38). Thus, the increase in rents is happening at a rapid pace and threatening many of the smaller micro businesses in Karantina.

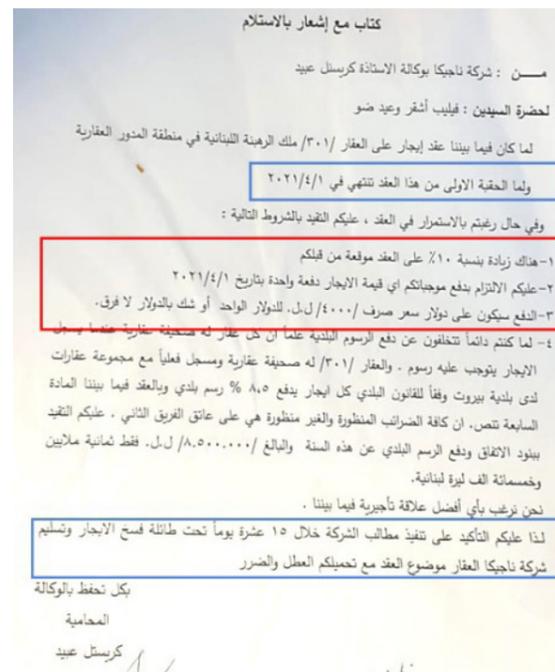


Figure 38: A letter from the lawyer of the Maronite Waqf notifying people about the 10% increase in rent. Source: Ali Ghaddar, 2021.

In this case, the economic crisis and the devaluation of the Lebanese pound prompted landowners to increase the rents. The increase in rents applied to all business sizes, especially the larger micro, small, and medium ones that have a lease contract. The one-on-one interviews showed that most businesses accepted the increase, especially the small, medium, and chain businesses in the Industrial Zone.

Some of the businesses have access to fresh dollars. Other business owners agreed to pay part of the rent at the rate of 1,500 Lebanese pounds to 1 dollar, and the remaining part at the rate of 3,900 Lebanese pounds to 1 dollar. The objective is to sustain the long-term activities of business owners who do not have access to fresh dollars and still pay for the products and raw materials at the Lebanese official rate.

2. Some of the business owners are threatened by both increases in rent prices and eviction claims. They operate informally and on a temporary basis in Karantina without a lease contract; for example, when operating mechanics shops, garages, showrooms, and transit services (Figure 39). Landlords prefer informal rent so they can redevelop the businesses in future or replace them with higher-end ones. Interestingly, some of the lots that accommodate these businesses belong to the Waqf. They are also managed by a mediator who controls the types and activities of the businesses in the Industrial Zone.

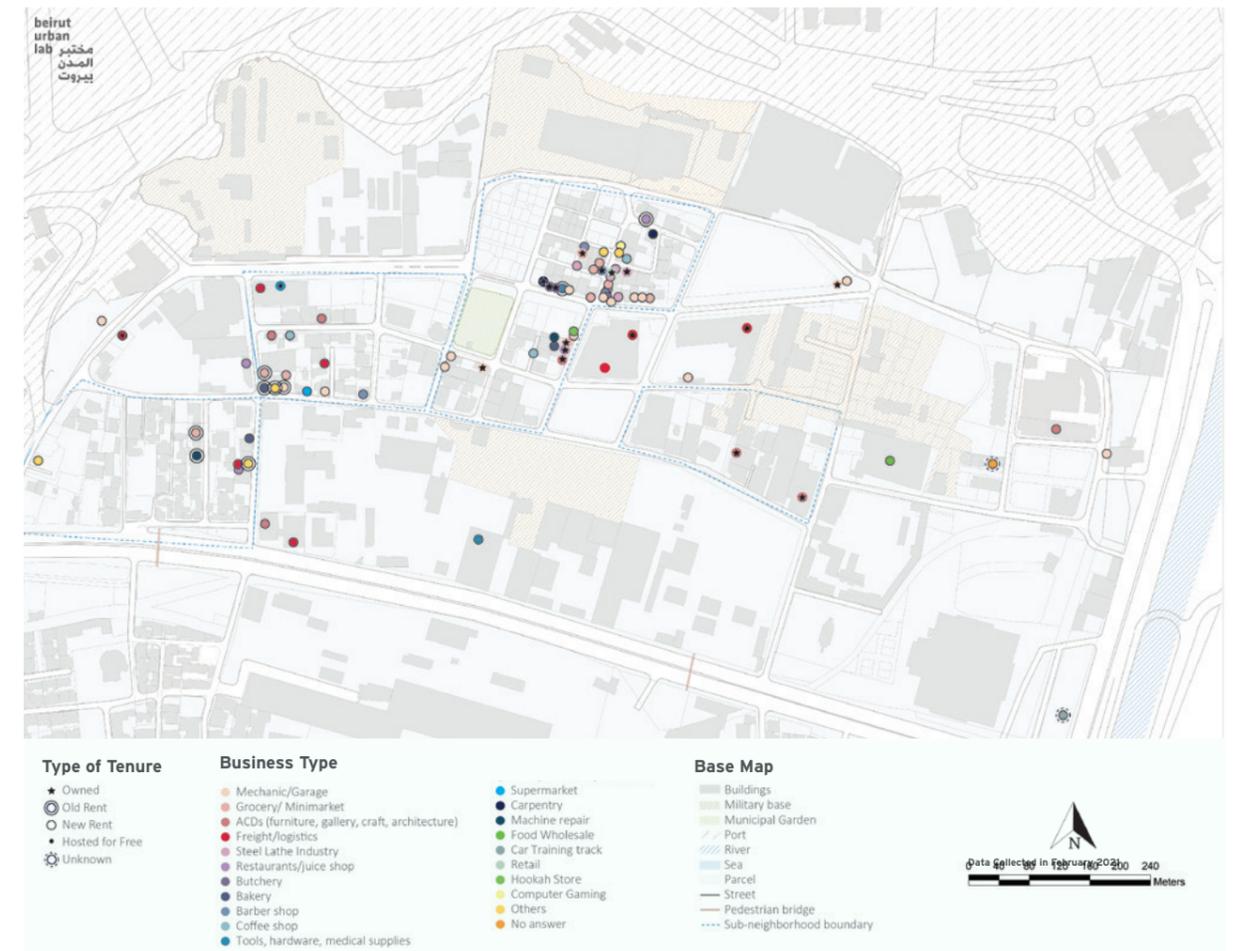


Figure 39: Tenure agreement in relation to the business type. Source: The Beirut Urban Lab, 2021.

In addition to the increase in rent prices, the businesses in Karantina are threatened by eviction claims and displacement after the port blast. 2 business owners already received eviction claims and 3 businesses are likely to receive eviction claims in the near future. Some of the businesses partially operate and others closed after the port blast. Most of these businesses are micro enterprises (barber shop, grocery shops, and mechanics shops) and are distributed across the sub-neighborhoods of Al-Khodor and Al-Senegal (Figures 40 and 41).

Despite these challenges, most of the owners are planning to keep their businesses open in Karantina due to the strategic location near the port, the affordable prices, easy access, and, in some cases, because there is no other alternative. However, the increasing threat of evictions and increase in rent prices may change these plans.

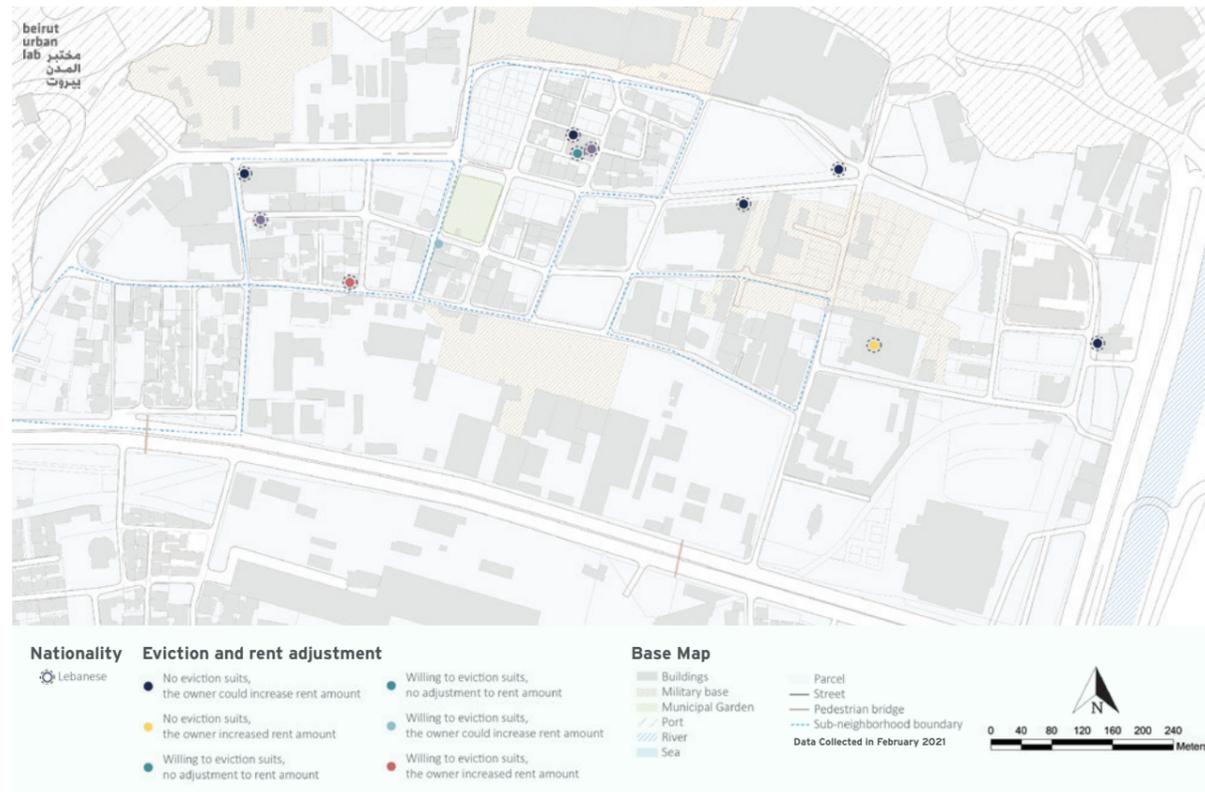


Figure 40: Eviction claims and increases in rent according to nationality. Source: The Beirut Urban Lab, 2021.

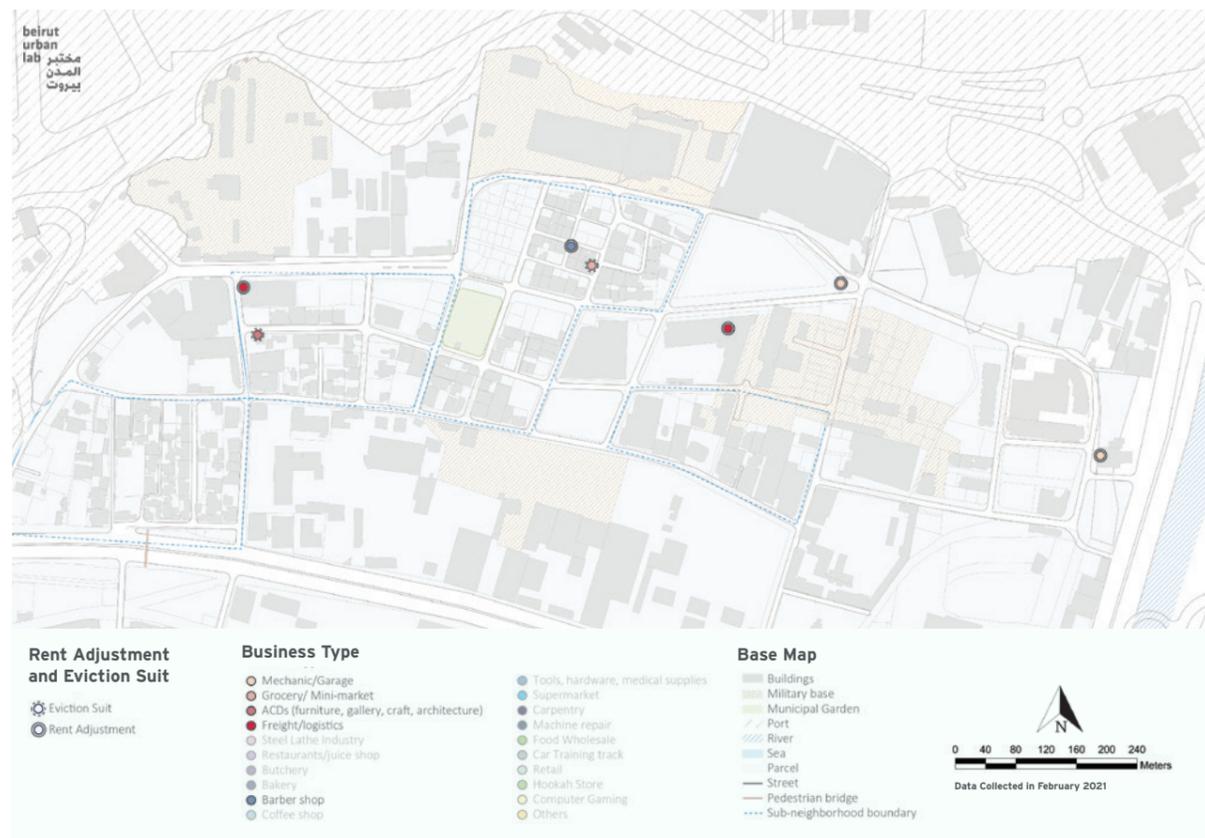


Figure 41: Business types in relation to eviction claims in increases in rent. Source: The Beirut Urban Lab, 2021.

3. There is a slow rate of real estate acquisitions in Karantina compared to other areas in Beirut. However, Figure 42 and the focus group discussions showed that new investors and the local mukhtar proposed to some of the business owners to sell their facilities before and after the blast. Some of the business owners are among the most vulnerable groups in Karantina; they have loans to pay, and do not have other sources of income. Hence, they may sell their businesses and relocate if the economic crisis in Lebanon worsens. After the port blast, some of the business owners that the research team surveyed refused to sell their properties; they prefer to remain in Karantina and maintain their network of clients. However, during the focus group discussion, one of the business owners noted that the local mukhtar approached her before the port blast to sell her business and she declined the offer but mentioned that she may consider future offers. She said: "The local mukhtar offered to buy our business before the port blast and we did not accept. Now I might accept to sell the business because there is no work."<sup>17</sup>

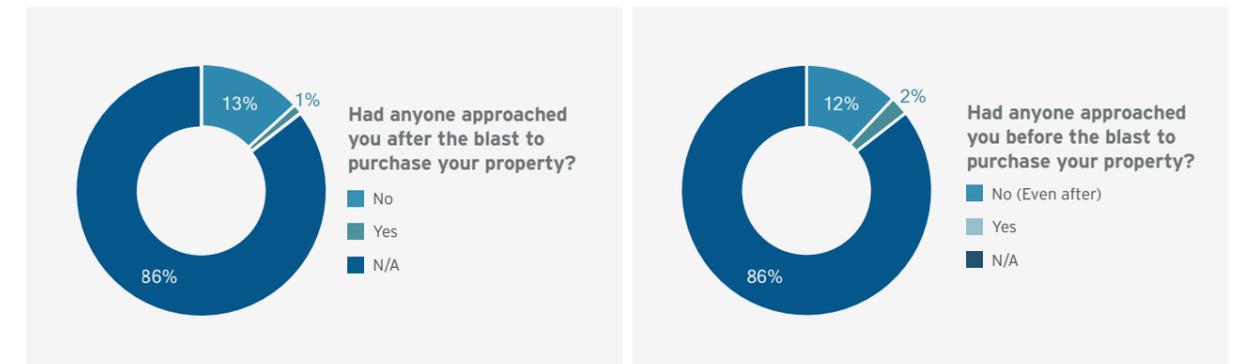
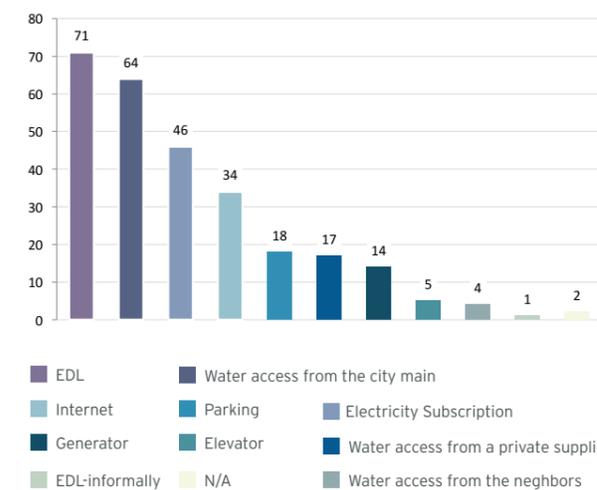


Figure 42: Pie charts that show the number of business owners who received proposals to sell their businesses before and after the port blast. Source: The Beirut Urban Lab, 2021.

### A.2 Access to Key Services

Shortages in the key public services such as electricity, water, and internet are a major problem in Lebanon. Unlike other areas in Beirut, all the residents and business owners in Karantina have access to water and electricity. This is due to the geographic location of Karantina near the Beirut River and the sea and the presence of a water reservoir in Al-Khodor sub-neighborhood. Additionally, the presence of the military bases, the proximity to the port, the Beirut Central District, and the location of an electrical transformer in the Al-Senegal sub-neighborhood maintained the access to electricity. The answers to the questionnaires showed that more than 80% of the business owners have regular access to electricity and water (Figures 43 and 44).



Figures 43. The main services that are available to businesses in Karantina. Source: The Beirut Urban Lab, 2021.

Access To Key Services	Number of Businesses
EDL	71
Electricity Subscription	46
Internet	34
Water Access From The City Main	64
Generator	14
Water Access From Private Supplier	17
Water Access From The Neighbors	4
EDL-Informally	1
Elevator	5
Parking	18
N/A	2

Figures 44. The distribution of services such as electricity, water, elevators, and parking spaces among the 83 surveyed businesses. Source: The Beirut Urban Lab, 2021.

<sup>17</sup> First Town Hall meeting, Karantina (2022-April-11).

However, they are recently suffering from increased power cuts due to the shortage of oil and diesel in Lebanon. This shortage negatively impacts the activities of micro businesses such as mechanic shops and grocery stores that do not own private generators and cannot afford to pay subscription fees to local providers. Data shows that the businesses in Al-Khodor, compared to other sub-neighborhoods, do not have internet subscriptions and formal access to electricity and water. Only 3 business owners have formal access to water and 18 businesses have access to both electricity and water.

Additionally, many of the owners of micro businesses who do not have higher education degrees rely on conventional tools and methods for managing their businesses. They do not use computers or the internet and, as a result, do not rely on e-commerce and online services to buy and sell products. At the same time, small and medium-sized businesses are self-sufficient and able to sustain their activities through private access to services. However, their activities depend on their ability to adapt to the long-term political situation in Lebanon, the devaluation of the Lebanese Pound, and the delay in economic reforms. Surveys showed that most of the small and medium businesses in the Industrial Zone have access to key services and rely on private generators.

Additionally, all the business owners in Karantina suffer from a shortage of electricity in public spaces. The absence of public lighting poles and urban furniture in Karantina forced many of the business owners to install lighting fixtures at the entrances of their businesses. As a result, there is unequal access to key services among the businesses. The shortage of key services is particularly difficult on most micro businesses and threatens their long-term sustainability in Karantina.

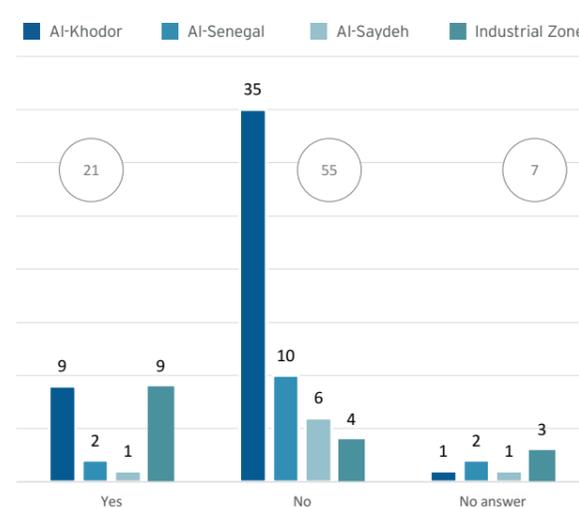
### A.3 Access to Financial Support

Four main modes for financial support were identified among the business owners in Karantina. The modes of support vary between the businesses according to their type, size, and status of registration with the NGOs. These modes include:

#### 1. Cash assistance for businesses that are registered at The Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon.

The chamber supports the registered businesses by providing counseling services, training, economic reports, publications, economic delegations, and business development projects mainly with the European Union<sup>18</sup>. After the port blast, the chamber offered cash subsidies for repairs to the registered businesses<sup>19</sup>.

Figure 45 shows that few businesses are registered at the Chamber of Commerce. These businesses are mainly distributed across Al-Khodor sub-neighborhood and the Industrial Zone. They are various types of the larger micro, small, and medium businesses including furniture companies in Al-Khodor and logistic companies in the Industrial Zone. An interviewee from a larger micro, shipping service business in Al-Saydeh sub-neighborhood mentioned that the Chamber of Commerce issued a limited announcement for the registered businesses to receive financial support; many of the businesses did not notice the announcement and, hence, did not receive any cash assistance. The cash assistance did not cover actual losses and damages and many of the business owners had limited access to fresh dollars for repairs. Therefore, the assistance from the Chamber of Commerce did not cover all the commercial and industrial businesses in Karantina.



Figures 45. The number of businesses that are registered at the Lebanese Chamber of Commerce. Source: The Beirut Urban Lab, 2021.

The activities of the Chamber of Commerce are restricted to the registered businesses and are limited to managerial, counseling and training, and technical services. Accordingly, after the port blast, the work of the Chamber of Commerce was not comprehensive. It did not support all the registered businesses, especially with cash assistance.

Despite these limitations, the Chamber of Commerce had the potential to serve a wide range of businesses and contribute to their long-term sustainability through new forms of support and partnerships between various stakeholders.

#### 2. Cash assistance instead of repairs from NGOs and INGOs.

After the port blast, a few NGOs and INGOs supported businesses with cash payments. Only 7 businesses out of the total 83 received cash payments from international NGOs such as ACTED, Red Cross, and UNDP (Figure 46). Non-profit organizations prioritized support to households affected by the port blast due to the urgent need for families to repair their houses and return to their sub-neighborhoods.

TYPE OF SERVICE	NGO	INGO	Philanthropist	Public Body	Total
Structural Works and Repairs	19	11	2	-	32
Furniture and Equipment	1	4	1	-	6
Financial Assistance	-	7	-	-	7
Assessment or Survey	-	-	-	20	20
Not Determined	-	2	-	-	2
*Some businesses received more than one type of aid provision in addition to surveys					67

Figures 46. Aid provision and the number of beneficiaries in Karantina after the port blast. Source: The Beirut Urban Lab, 2021.

#### 3. Assessment, repair assistance, and direct support instead of cash payments from NGOs and INGOs and various public bodies.

Most of the NGOs and INGOs provided assessment or assistance instead of cash. Our surveys showed the following.

- 49 businesses received assessment, aid, or services after the port blast (Figure 28). NGOs and INGOs provided the most of the assessment and assistance in the repairs (a total of 32 businesses) (Figures 29 and 46). These businesses are mostly in Al-Khodor and Al-Senegal sub-neighborhoods. Additionally, various public bodies assessed the facilities of 11 businesses in the sub-neighborhoods and 9 in the Industrial Zone. Some of these businesses required urgent assessment as they are big in size with concrete structures that can threaten the safety of people. These businesses decided to remain in Karantina and examples include the Bakalian Flour Mills and the DW5 offices.

However, different INGOs preferred direct support and repairs instead of cash payments, especially INGOs that were operating in Al-Saydeh and Al-Senegal sub-neighborhoods. For example, UNDP and USAID supported micro businesses through structural rehabilitation, restocking of products and essential equipment such as fridges, and technical assistance to resume operations and improve productivity.

As such, direct support had a similar effect as cash assistance. It kept several businesses open in Karantina. However, most of the micro businesses in the Industrial Zone such as mechanics shops have not received any aid or support. They encountered difficulties in accessing money, and they demanded financial support and economic stability. Hence, they are struggling to keep their businesses open and operational.

<sup>18</sup> <https://www.ccib.org.lb/en/?p=post&id=3>

<sup>19</sup> According to interviews conducted with different business owners in the area by Ali Ghaddar (2021-March/April)

4. Cash assistance and aid through social networks:

Many business owners relied more on their social networks to collect money to repair their facilities and less on NGOs, INGOs, and public institutions; for example, they were able to access money from family members, their savings, and personal loans.

- In terms of repairs, most business owners relied on social networks to cover the cost of the repairs and secure a quick return and re-operation. 91% of the business owners consider their businesses to be the only source of income and 78% of them are the sole breadwinner for their families (Figure 47). Half of the surveyed businesses repaired their facilities using money from their social networks or from their savings, and these are equally distributed across Al-Khodor, Al-Senegal, and the Industrial Zone (Figures 30 and 48).

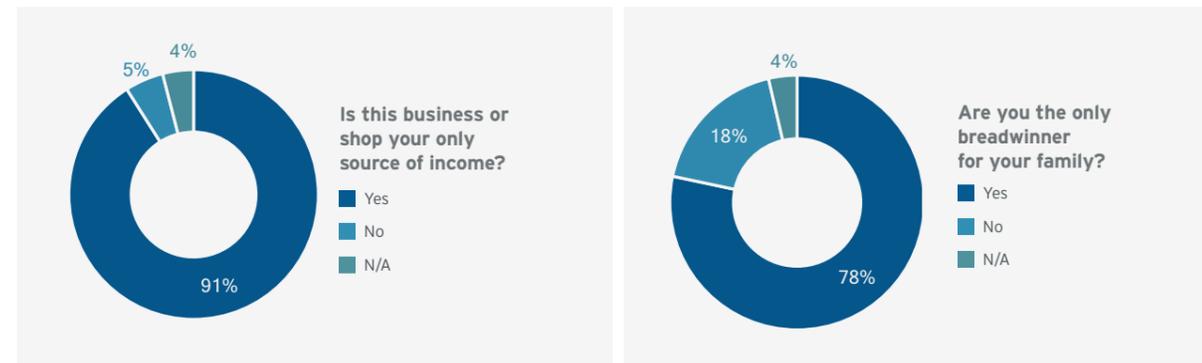


Figure 47: The percentages of business that constitute the only source of incomes for the business owners and their families. Source: The Beirut Urban Lab, 2021.

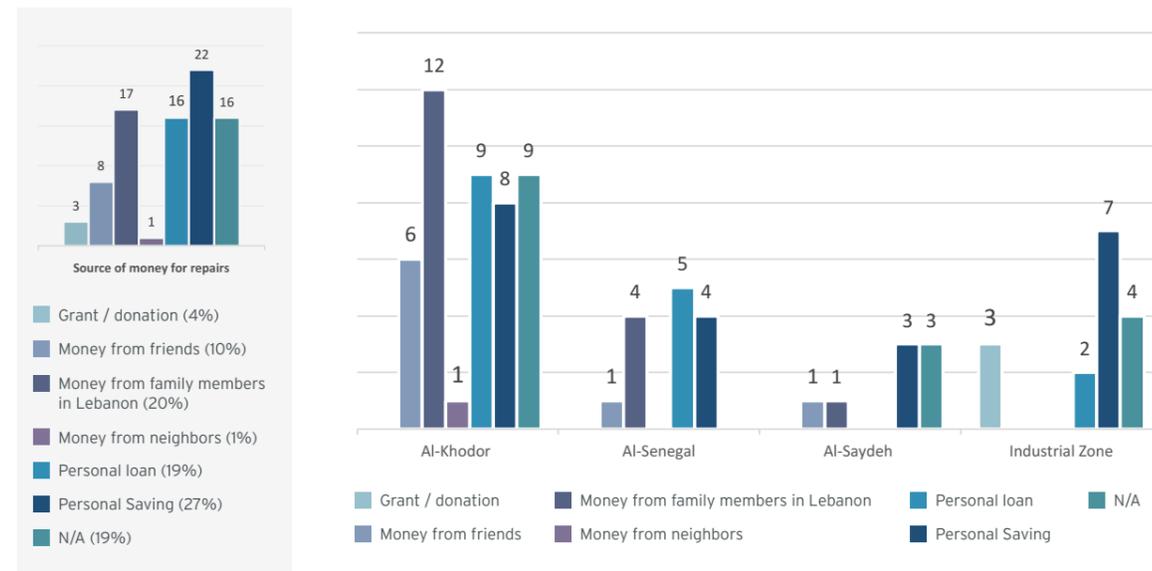


Figure 48: Sources of monetary support for the business owners to repair their facilities. Source: The Beirut Urban Lab, 2021.

Thus, most of the business owners have fully or partially paid for repairs out of their own resources. They relied on the following social networks for money:

- 25 business owners relied on money from family members or friends in Lebanon to repair their facilities. 19 of these businesses are partially operating and 14 of them are in Al-Khodor sub-neighborhood. They are micro-sized businesses such as mechanic shops, steel lathing workshops, barber shops, and hookah cafes. 9 of these businesses are owned by Lebanese from the Arab Tribe. The remaining 5 businesses were closed after the port blast, 4 of which were in Al-Khodor and one in Al-Senegal (Figures 49 & 50).

As such, social networks were a main source of financial support after the port blast. Many businesses relied on these networks to access money and support particularly in Al-Khodor sub-neighborhood (Figure 48).

- Most of the small, medium, and chain businesses relied on personal savings for repairs. 22 business owners repaired their facilities from their savings. Many of them are of the smaller micro businesses category and are in Al-Khodor (8), the Industrial Zone (7), and the remaining are distributed in Al-Senegal (4) and Al-Saydeh (3). The owners of 5 of the larger micro, small, and medium businesses in the Industrial Zone had access to money in personal savings and in bank accounts outside of Lebanon to conduct the needed repairs.

- 16 business owners were able to secure loans. These are distributed in Al-Khodor (9), Al-Senegal (5), and the Industrial Zone (2) (Figure 48).

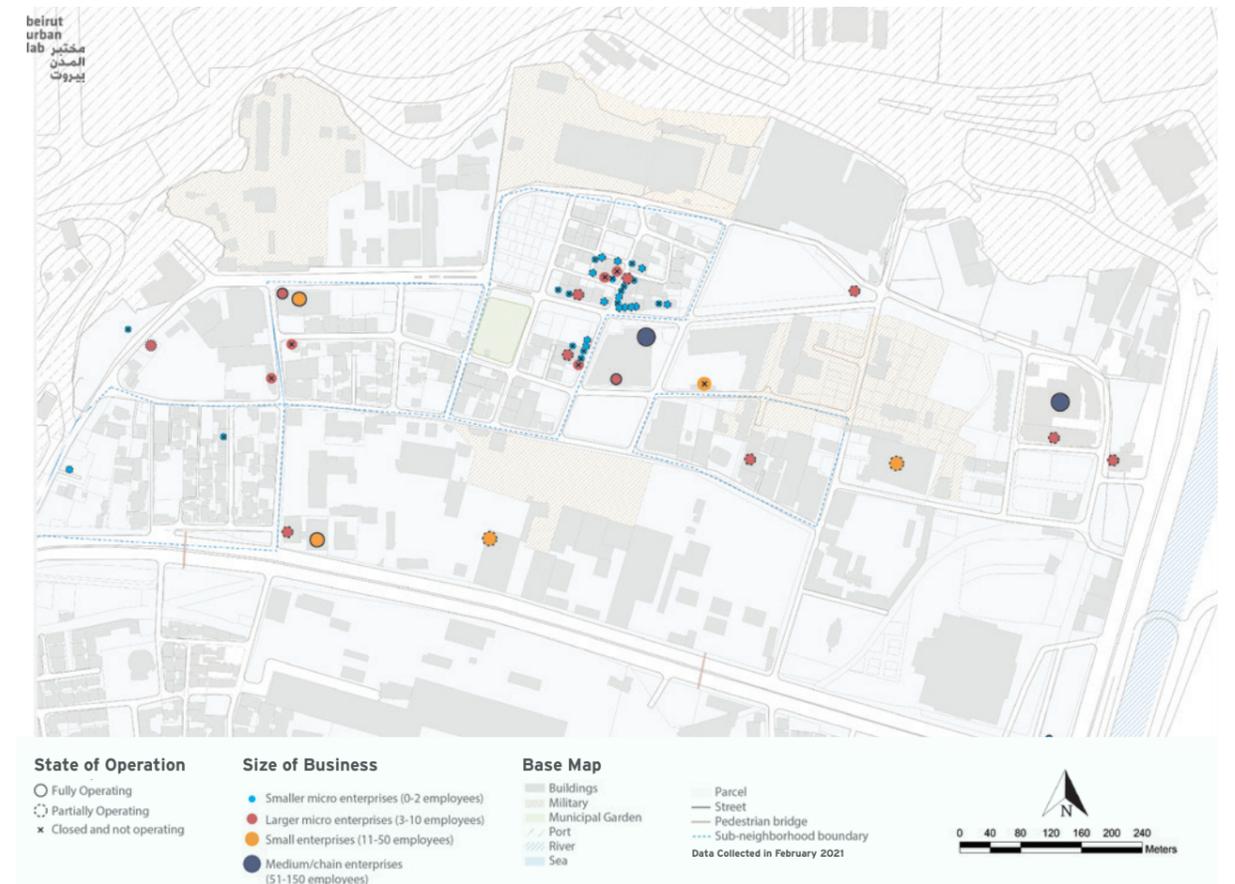


Figure 49: The business status in relation to business size. Source: The Beirut Urban Lab, 2021.

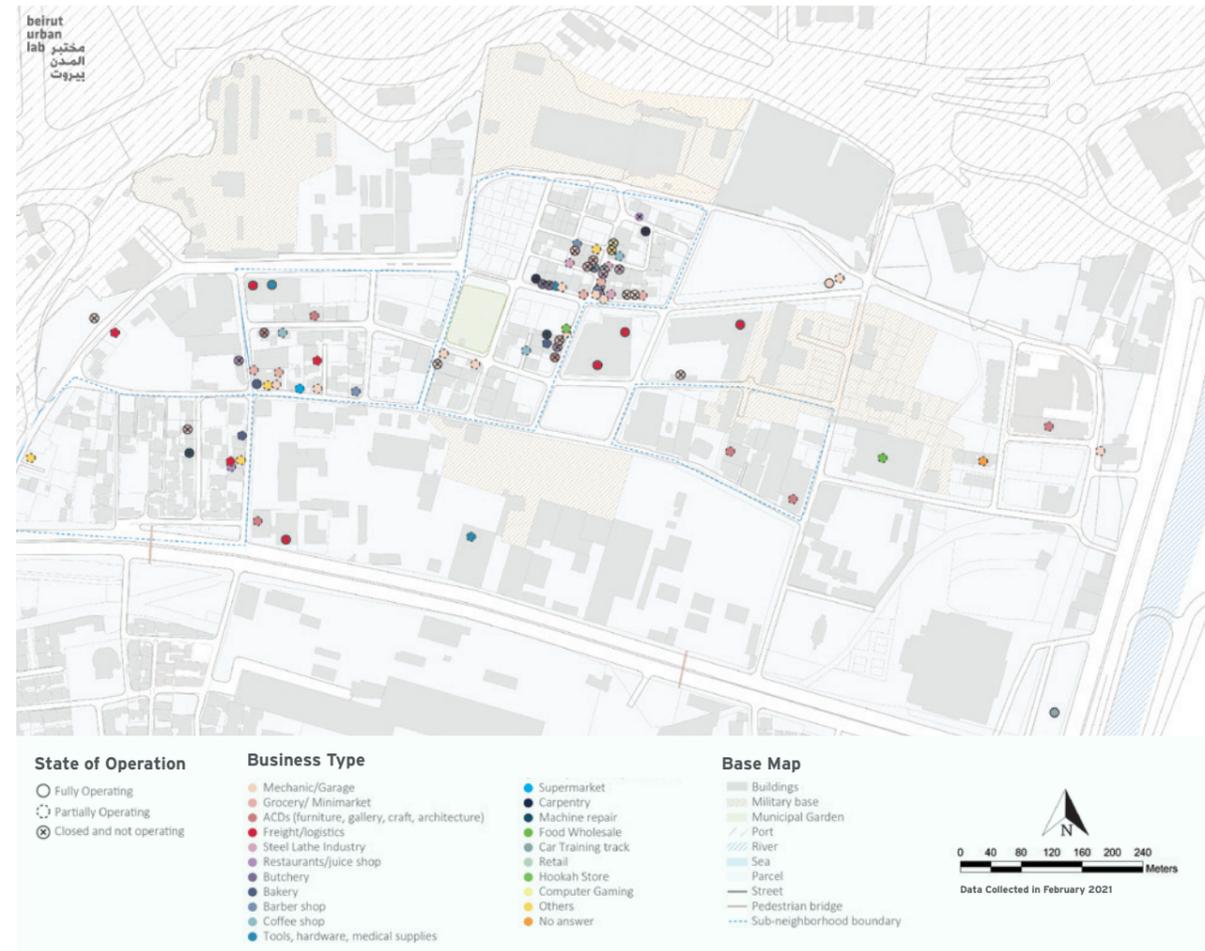


Figure 50: The business status in relation to business type. Source: The Beirut Urban Lab, 2021.

In addition to financial support, many of the business owners were not yet compensated in February 2021 when the questionnaires were conducted, neither by the military nor by insurance companies. Moreover, the devaluation of the Lebanese pound coupled with the implementation of a restrictive monetary policy have exacerbated the levels of financial instability and insecurity.

Micro businesses are the most vulnerable in terms of access to money. They are mainly located in Al-Khodor, Al-Senegal, and the Industrial Zone. Some of these businesses are related to the port such as logistics and mechanics. In contrast, small and medium businesses were able to repair and open their facilities despite the heavy damage to their buildings. Sleep Comfort, Key Freight, The Net Logistics, Gezairi Transport, Bakalian Flour Mills and, recently, Mercedes-Benz (T. Gargour and Fils) had to repair the entire building at their own expense.

As a result, there was a total absence of government and municipal support<sup>20</sup> after the port blast. Most of business owners across all sizes relied on social networks (loans or support from family members) and savings to rebuild their facilities.

They requested financial support, subsidies, tax exemptions, and political stability. They noted that political stability can be achieved through the formation of a new accountable cabinet that can implement reforms and halting the devaluation of the Lebanese pound. These demands can sustain their activities and ensure their long-term recovery.

<sup>20</sup> This includes support from the Ministry of Economy and the Ministry of Finance.

### A.4 Access to Human Resources and the Financial Stability of Employees

Businesses in Karantina have considerable access to human resources. Small, medium, and chain businesses rely on workers and experts from outside of Karantina; family businesses rely on family members while other businesses rely on low-wage and unskilled labor.

The answers to the household surveys showed that the unemployment rate has reached 70% in Karantina in 2021. Residents, especially the younger generations, are unable to find job opportunities both inside and outside Karantina although many of them completed bachelor's and master's degrees. They attribute unemployment to the gap between the needs and skills of local people and small, medium, and chain businesses that do not hire people from Karantina—for example, logistics, entertainment, and galleries.

During one of the town hall meetings, one of the residents said, “There is a lack of communication between us and these companies.” Another resident added, “These companies only accept our job requests in the low-skilled jobs like delivery; now in GCC, for example, there is only one employed person from our area that works in security.”<sup>21</sup> They urged the businesses to re-direct employment opportunities to the sub-neighborhoods of Karantina since a few of them are employed.

Some of the local young men and women decided to address unemployment and the lack of job opportunities by setting up their own micro business initiatives and enterprises; some of these enterprises include retail stores, coffee shops, and gaming hubs in Al-Khodor sub-neighborhood.

### The Financial Stability of Employees

The Beirut port blast has exacerbated the difficult financial situation of people who live and work in Karantina. Many of the business owners decreased the salaries of their employees after the port blast due to the mass destruction and temporary closure, the devaluation of the Lebanese Pound, and the decrease in the number of customers. The decrease in market demand was influenced by the economic crisis in Lebanon and the restrictions of the COVID-19 pandemic; only three business owners from the group that answered the questionnaire decreased the salaries of their employees before the port blast (Figure 51).

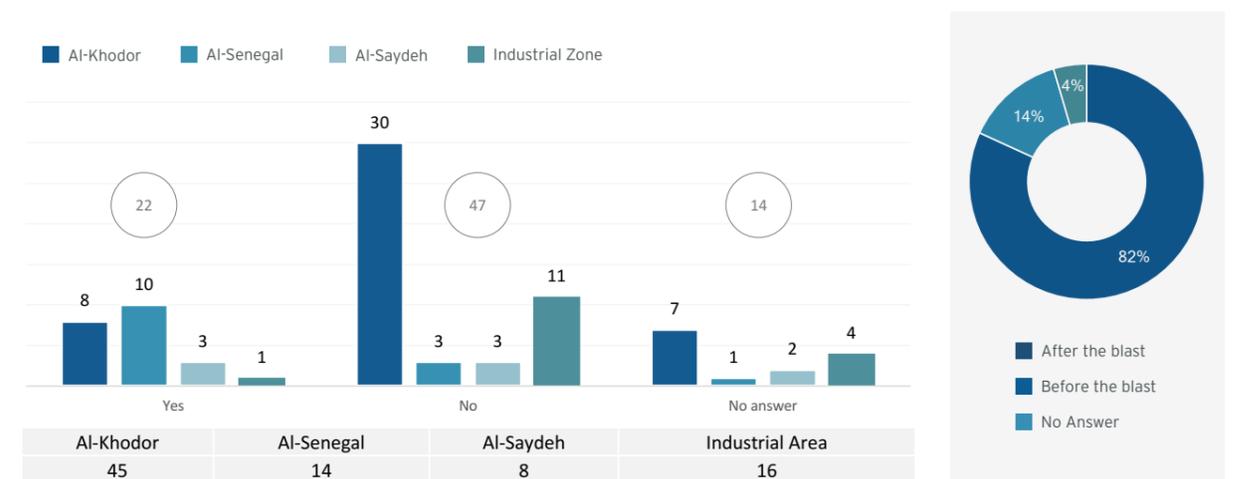


Figure 51: Decrease in salaries in Karantina before and after the port blast. Source: The Beirut Urban Lab, 2021.

In terms of salaries, most of the employees received low salaries that often ranged between 650,000 to 1,500,000 Lebanese pounds, and salaries could sometimes fall under 650,000 Lebanese pounds (Figure 52).

<sup>21</sup> First Town Hall meeting, Karantina (2022-April-11).

These low salary rates were mostly in micro businesses in Al-Khodor sub neighborhood. However, relatively higher salaries - between 10,000,000 to 15,000,000 Lebanese Pounds - were limited to people with university or vocational training and work in larger micro, small, and medium businesses. The higher salaries were distributed as follows (Figure 53): one in Al-Khodor in the furniture industry, and one in the Industrial Zone in food wholesale. Despite the economic crisis in Lebanon, these businesses maintained a better salary scale for their employees. However, many business owners in Karantina did not adjust the salaries of their employees in response to the significant devaluation of the Lebanese Pound in relation to the value of the dollar.

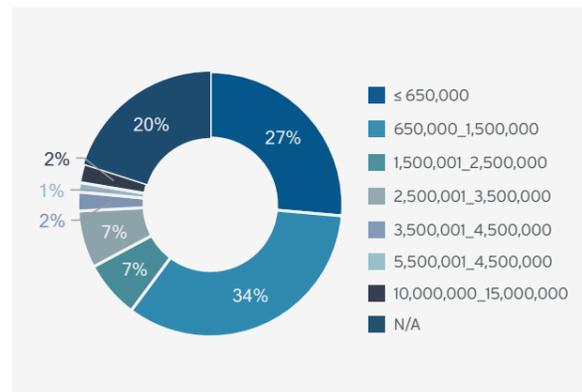


Figure 52: Salary ranges in LBP in Karantina. Source: The Beirut Urban Lab, 2021.

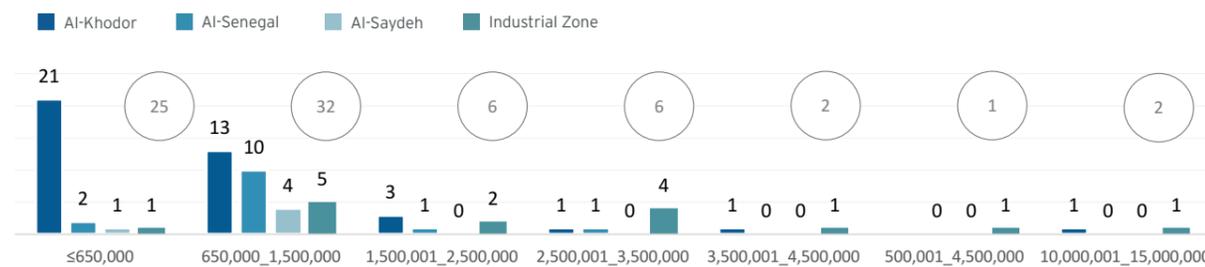


Figure 53: The distribution of salary scales across the three sub-neighborhoods and the Industrial Zone. Source: The Beirut Urban Lab, 2021.

The data from the answers to the questionnaire showed that 32% of the business owners pay salaries to their employees every month, and 29% pay weekly salaries. The 29% are mainly in Al-Khodor - around 22 businesses out of a total of 30 in Al-Khodor - and include owners of butchery shops, minimarkets, bakeries, coffee shops, and mechanics or steelmaking workshops (Figure 54). As a result, many of the employees were likely to look for work opportunities outside of Karantina, or look for local alternatives.

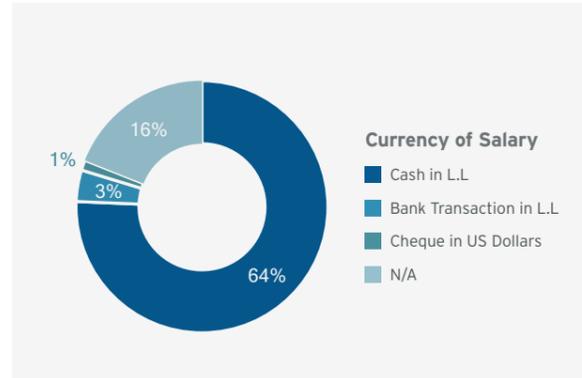
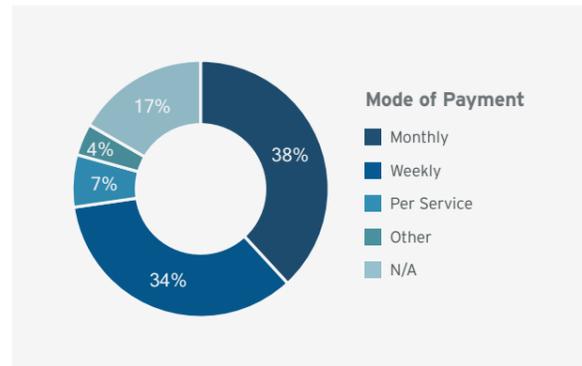


Figure 54: The frequency of payments of salaries in Karantina. Source: The Beirut Urban Lab, 2021.

The answers to the questionnaire also showed that half of the business owners employ the residents of Karantina, equivalent to a total of 42 businesses (Figure 55). They are mostly micro businesses such as retail shops, mini markets, butchery shops, bakeries, and micro-scale mechanics shops. However, the owners of medium and chain businesses live mostly outside of Karantina; they tend to employ skilled people who live across Greater Beirut. As a result, medium and chain businesses in Karantina do not contribute to reducing the local unemployment rate.

It is also important to note that the answers to the questionnaire showed that many of the micro businesses are owned by families in Karantina and do not require a large number of employees.

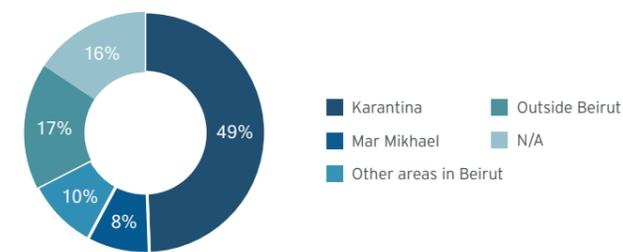


Figure 55: Breakdown of the main areas where the employees in Karantina live. Source: The Beirut Urban Lab, 2021.

### EMPLOYMENT TRENDS IN KARANTINA

The employment trends in Karantina are described as follows:

1. A significant loss in employment opportunities due to the ongoing threat of businesses closing after the port blast.

People who currently live and work in Karantina are at risk of losing their jobs or sustaining major cuts in their salaries. 21 businesses in Karantina are partially operating and 19 closed after the port blast. 2 of these businesses are planning to relocate while the rest prefer to remain in Karantina. Additionally, most of the employees work without formal contracts and, as a result, are vulnerable to losing their jobs considering the ongoing economic crisis in Lebanon. Only 7 businesses offer their employees formal contracts; most of these businesses are larger micro, small, and medium/chain companies in the Industrial Zone and mainly provide logistics and shipping services (Figure 56).

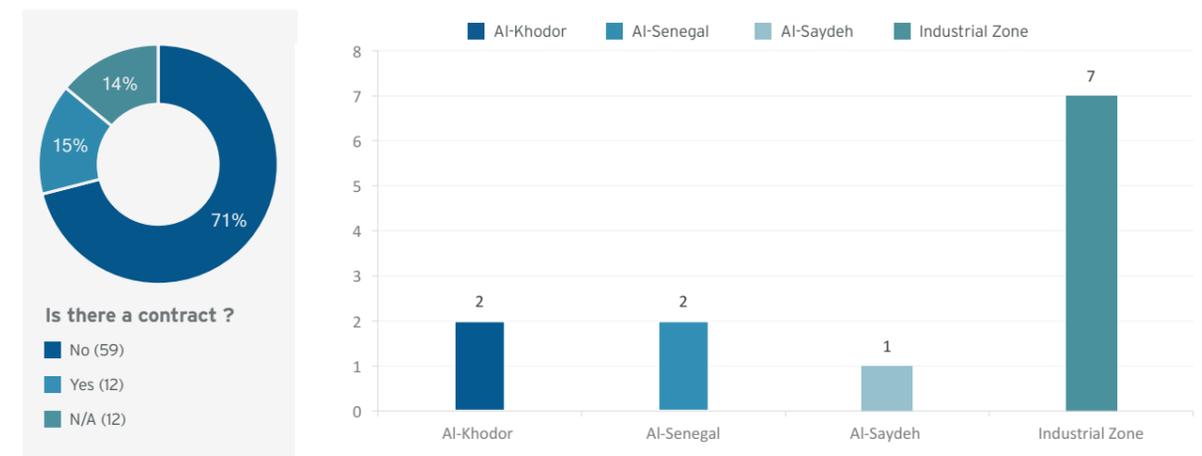


Figure 56: The numbers of businesses in Karantina that employ people on formal contracts. Source: The Beirut Urban Lab, 2021.

In addition to the ongoing closure of businesses, the salary cuts reduced the purchasing power of the employees and business owners who live and work in the different sub-neighborhoods in Karantina, and this negatively affected the local economy<sup>22</sup>. The economic crisis in Lebanon also threatened the activities of many of the smaller micro businesses in Karantina. It is important to note that 63% of the business owners pay their employees in cash in Lebanese pounds, 3% through bank transfers in Lebanese Pounds, and only 1% through check transfers in dollars that can only be retrieved in LBP at a conversion rate fixed by the bank "lollar" (Figure 54).

<sup>22</sup> 30 business owners work and live within the different sub-neighborhoods; 23 businesses are in Al-Khodor sub-neighborhood.

2. Unequal access to job opportunities:

Micro businesses rely on manual labor workers who live mainly in Karantina while many medium and chain businesses in the Industrial Zone employ general office and management workers who live outside of Karantina. During the town hall meetings and the thematic focus group discussions, many of the Karantina residents pointed out the importance of increasing local job opportunities and the shortcomings of temporary aid and family support. It was clear from the discussions and the data from the questionnaire that community groups in Karantina are marginalized and unable to access equal employment opportunities. Additionally, some of the previous employees of the slaughterhouse resorted to temporary jobs such as taxi driving, and some of them remain unemployed.

B. Business Diversity and Intensity

B.1 Diversity and Intensity of Businesses by Type, Size, Location, and Date of Establishment

“ We don't have a pharmacy in the area and this is primary<sup>23</sup>  
 ما في عنا صيدلية بالمنطقة وهل الشي من الأساسيات

This section of the report explores the level of diversity and intensity of business activities in Karantina in terms of two factors. The first factor is the level of diversity of businesses by type, size, age, and location in the three sub-neighborhoods or the Industrial Zone. The second factor is the level of diversity and inclusion of business owners in terms of class, religion, gender, and nationality.

Business Type and Location

Four main characteristics distinguish the types of businesses in Karantina:

- 01 Firstly, businesses are spatially arranged into clusters. Local micro businesses such as bakeries and grocery shops are clustered in the residential sub-neighborhoods. These businesses serve the daily needs of the residents. However, most of the small, medium, and chain businesses and industries such as logistics, car showrooms, and transit services are in the Industrial Zone. Micro-scale industries such as mechanics shops and garages are in the residential sub-neighborhoods along key streets or are clustered in the inner areas of the Industrial Zone.
- 02 Secondly, there is an absence of businesses that can meet the essential daily needs of the residents, including gas stations, bookstores, banks, and doctor clinics. The absence of these types of businesses reflects the level of marginalization of people in Karantina and the lack of adequate investments. For example, one of the Syrian residents said "I live in this area too. I propose that a health center 'mostawsaf' be created, and which takes symbolic fees, as the hospitals are very expensive."<sup>24</sup>
- 03 Thirdly, the three sub-neighborhoods are mixed-use and most of the residential buildings have commercial activities on the ground level (Figure 57). Accordingly, the facades of buildings on the ground level are active in Al-Senegal, Al-Khodor, and partially active in Al-Saydeh (Figure 58). However, the facades of buildings in the Industrial Zone are completely inactive due to the morphology of the large lots and the detached building types that are single use (Figure 59).

<sup>23</sup> First Town Hall meeting, Karantina (2022-April-11).  
<sup>24</sup> First Town Hall meeting, Karantina (2022-April-11).

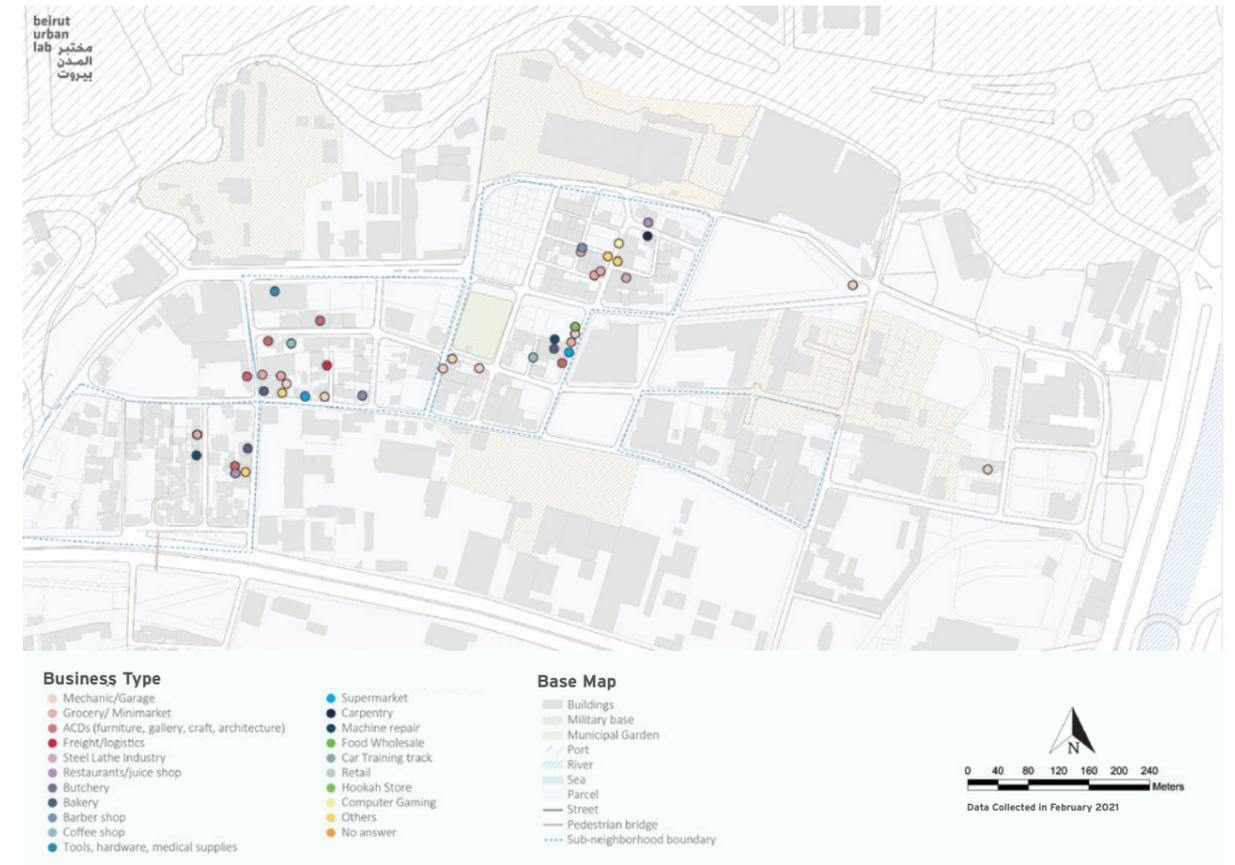


Figure 57: Building use at the ground level. Source: The Beirut Urban Lab, 2021.



Figure 58. Active shop fronts in the residential clusters. Source: Ali Ghaddar, 2021.

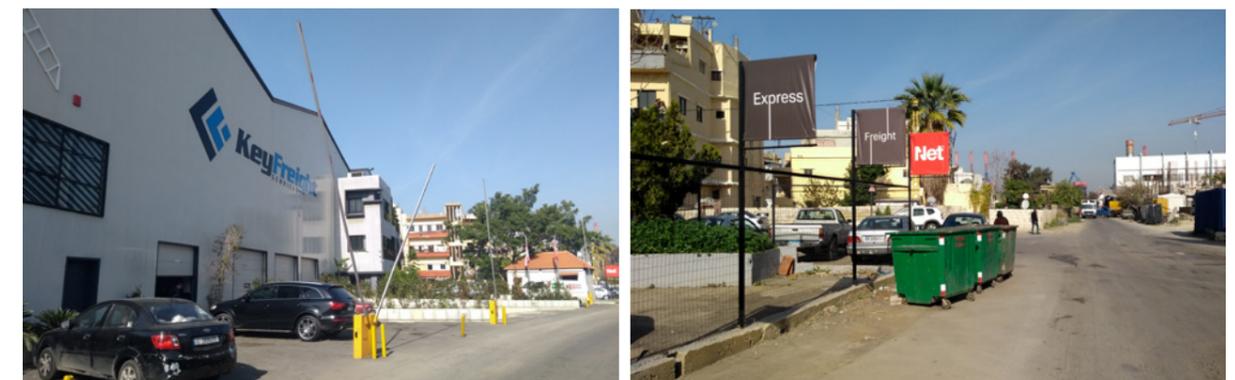


Figure 59. Absence of active shop fronts in the Industrial Zone. Source: Ali Ghaddar, 2021.

As a result, there are three main issues that characterize the distribution of businesses by type and location in a neighborhood:

- 01** The land uses in the sub-neighborhoods and the Industrial Zone are relatively limited and not diverse. Most of the businesses are not continuous on the ground level and are spatially fragmented.
- 02** The Industrial Zone does not have shops or active frontages and does not include mixed-use and apartment buildings. Most of the buildings are large, detached, and are mostly used for storage and small to medium industries.
- 03** The military bases surround the inner-neighborhood residential clusters and create a spatial segregation from the Industrial Zone. They are located along the periphery of Karantina close to the Charles Helou Highway and the port (Figure 60).



Figure 60: Military base in the municipal lot along Al-Rehban Street. Source: Ali Ghaddar, 2021.

Additionally, the inner-neighborhood residential clusters are slowly transforming into commercial uses (Figure 61). The infiltration of new business activities, such as logistics and shipping services, into Al-Saydeh sub-neighborhood is transforming the socio-spatial composition of the area. Apartment buildings are replaced by new businesses and residual open spaces are used by the employees to park their cars. These changes started in 2010 and increased in 2015.

Many business owners in Mar Mikhael moved their businesses to Al-Saydeh due to the affordable rents and the proximity to the port and the Charles Helou Highway. Some of the business owners rented apartments while others purchased multi-story apartment buildings and turned them into offices (Figures 62 and 63). Most of the activities of these businesses are related to the port and include shipping and logistics services.

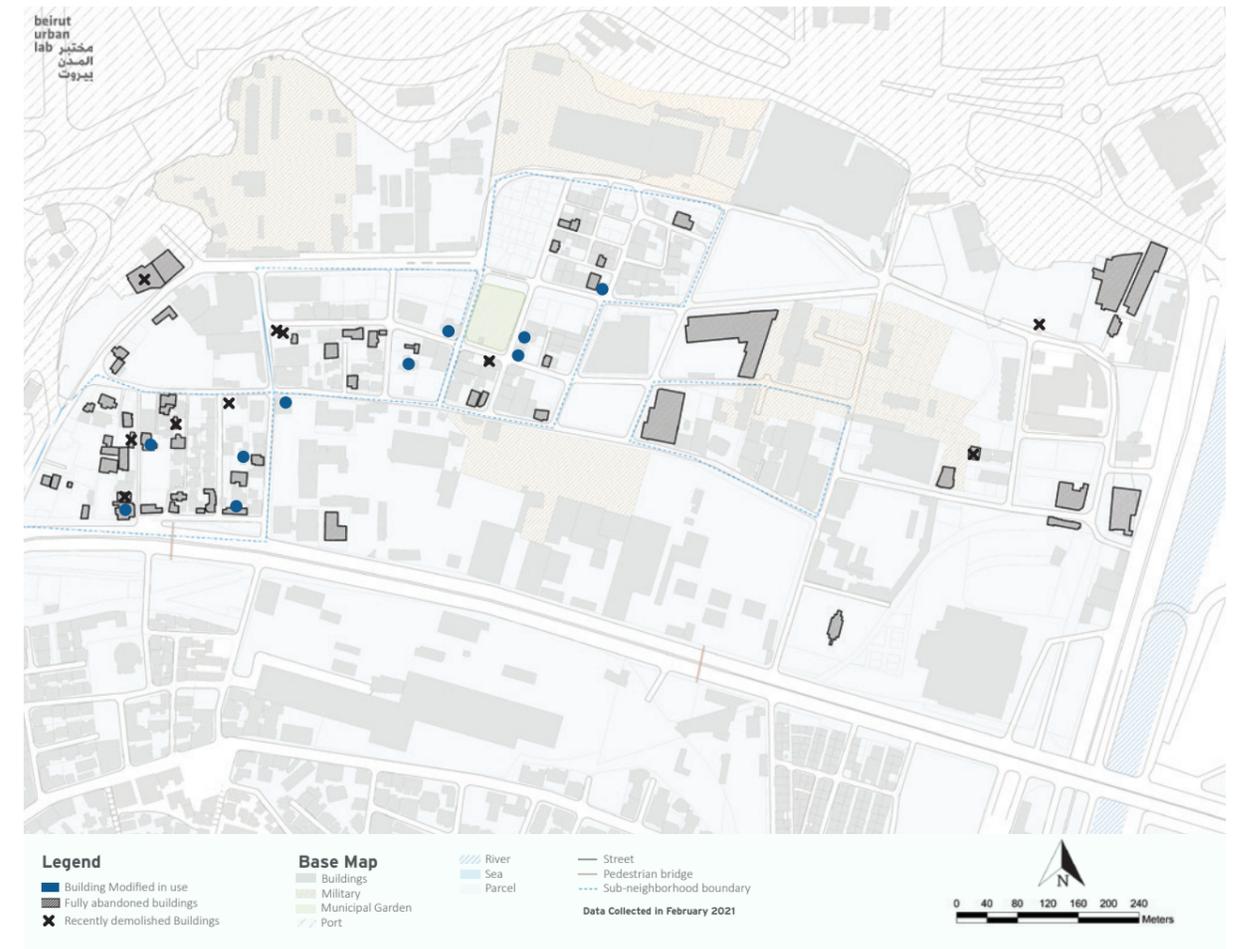


Figure 61: Changes in land-use from residential to business use. Source: The Beirut Urban Lab, 2021.

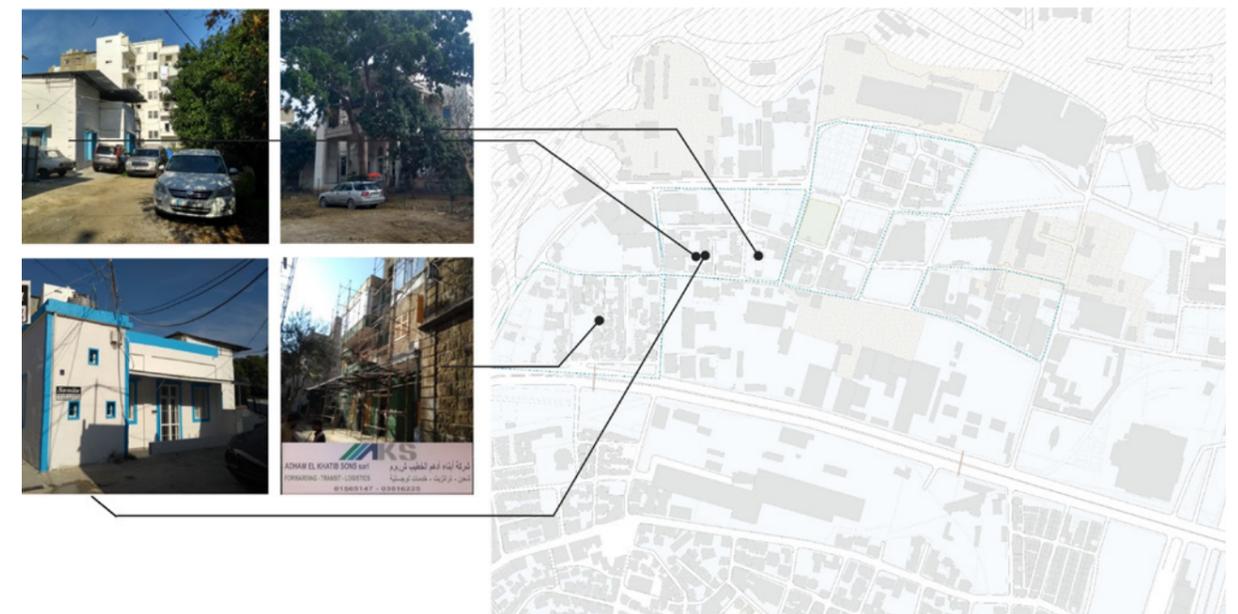


Figure 62: New shipping service companies in the inner residential clusters. Source: Ali Ghaddar, 2021.

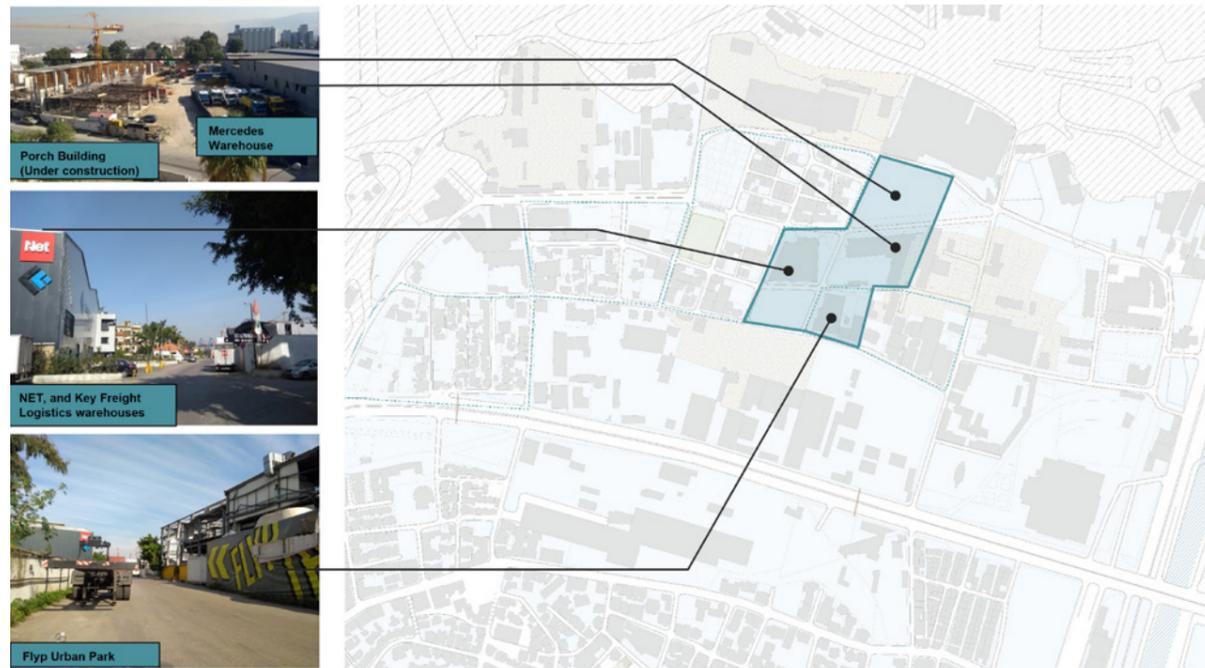


Figure 63: The new types of small to medium businesses along Iben Sarjoun Street. Source: Ali Ghaddar, 2021.

### Sizes of Lots and Businesses

Karantina has a variety of lot sizes compared to other areas in Beirut outside of the Beirut Central District. This variety of lot sizes is a key to creating and maintaining a diversity of businesses in Karantina in terms of sizes and uses. For instance, some of the large lots are used for public amenities, for example, for the waste management facility. Besides, large lots in Karantina attracted functions that are related to the port and medium/chain businesses such as logistics, showrooms, and recreational activities. These businesses are mushrooming along Iben Sarjoun Street and transforming the area into a high-end commercial zone (Figure 63). The new medium and chain businesses do not attract visitors and clients to Karantina.

Some of the businesses include storage warehouses with managerial offices such as The Net and Key Freight that offer logistic services. Other businesses, such as Mercedes-Benz (T. Gargour and Fills) provide repairs and store Mercedes cars before they are distributed to the Lebanese market from the port. As such, the size of a business is tied to the lot size in Karantina; large lots attract substantial business investments that require large built structures and flexible spaces (Figure 63). The process of transforming Iben Sarjoun Street from an industrial to a commercial strip by the Waqf mediator is addressed in the fourth transversal issue report on Inclusive and Sustainable Development in Karantina<sup>25</sup>.

Figure 64 shows the distribution of lots by size in Karantina. Small lots (between 0-50 and 51-100 square meters) are mostly located in the three sub-neighborhoods where large pieces of land were subdivided in the 1900s and 1940s to accommodate apartment buildings. However, large lots (between 501 and 5000 square meters) are in the Industrial Zone and accommodate individual and single-use buildings. Most of these large lots are owned by the Municipality of Beirut or the Waqf.

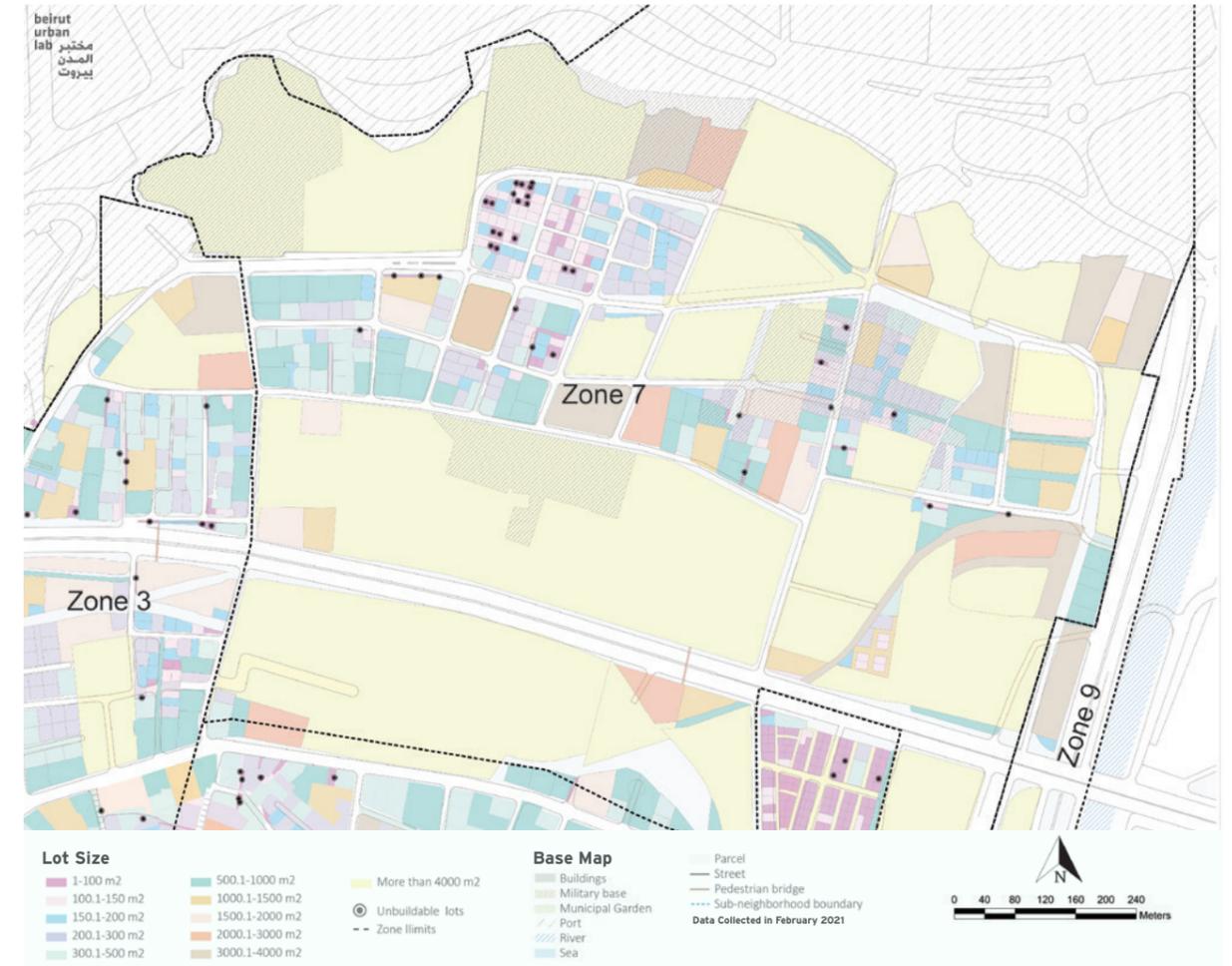


Figure 64: The sizes of lot and unbuildable lots in Zone 7. Source: Ali Ghaddar, 2021.

Additionally, the Municipality of Beirut leased part of its lots at the periphery of Karantina along the Charles Helou Highway to a private company that constructed multiple warehouses. The company provides storage agreements, not lease contracts, to business owners (Figure 65). The port blast destroyed most of these warehouses that belonged to small and medium businesses and were not repaired in 2020 and 2021.

There are 5 main office buildings in Karantina (Figure 66). One of these office buildings is located along the Charles Helou Highway near the municipal lot and attracts clients from all over Lebanon. The office building has active storefronts, with mechanics shops and garages, and accommodates larger micro businesses like architecture offices. It has few vacant offices compared to the new office buildings that were constructed in 2018 and 2019 before the port blast. After the port blast, and because of the halt on new rental agreements and contracts, approximately 90% of the offices in these buildings became vacant.

Other older office buildings are now partly occupied according to the new "For Rent" signs on the building facades<sup>26</sup>. They mainly include larger micro, small, and medium businesses such as jewelry stores, law firms, and logistics and shipping services.

<sup>25</sup> Refer to report 4 "Sustainable and Inclusive Development"

<sup>26</sup> It was evident from the field work observations that many stores were destroyed and left vacant because of the port blast.

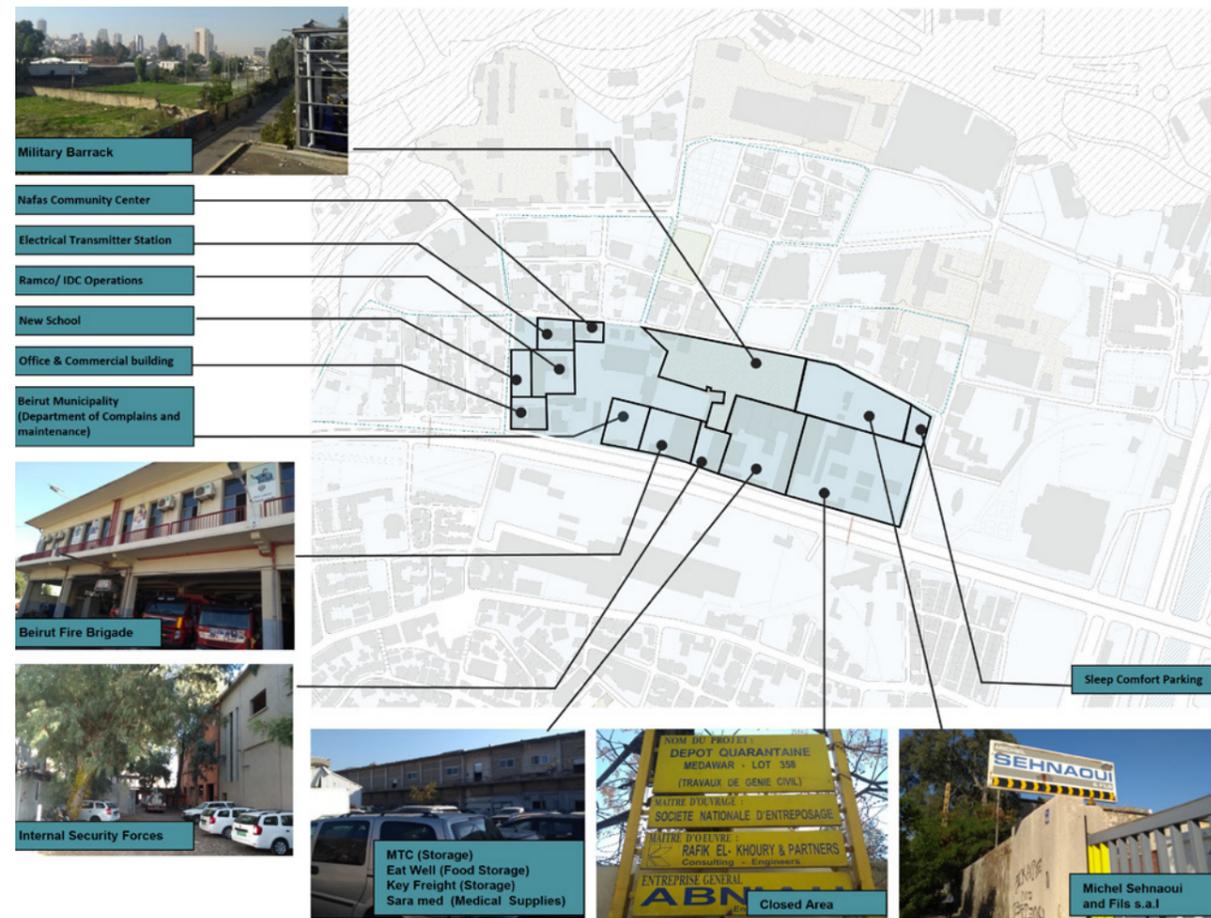


Figure 65: The distribution of different functions on the municipal lot. Source: Ali Ghaddar, 2021.



Figure 66: The distribution of the key office buildings in Karantina. Source: Ali Ghaddar, 2021.

### Business Age

New businesses opened in Karantina mainly during three periods that corresponded to major events in Lebanon. The first period was a few years after the civil war between 1998 and 2001 when the displaced residents returned to Karantina. The second period was before the beginning of the Syrian refugee crisis between 2009 and 2011. The third period was before the port blast between 2018 and 2020 (Figures 67 and 68). At the time, most of the new businesses were concentrated in the Industrial Zone and Al-Senegal sub-neighborhood. They replaced old businesses and some of the traditional crafts. Thus, Karantina became a destination for business owners who were looking for affordable rent in a low-density area that is close to the city center and the port.

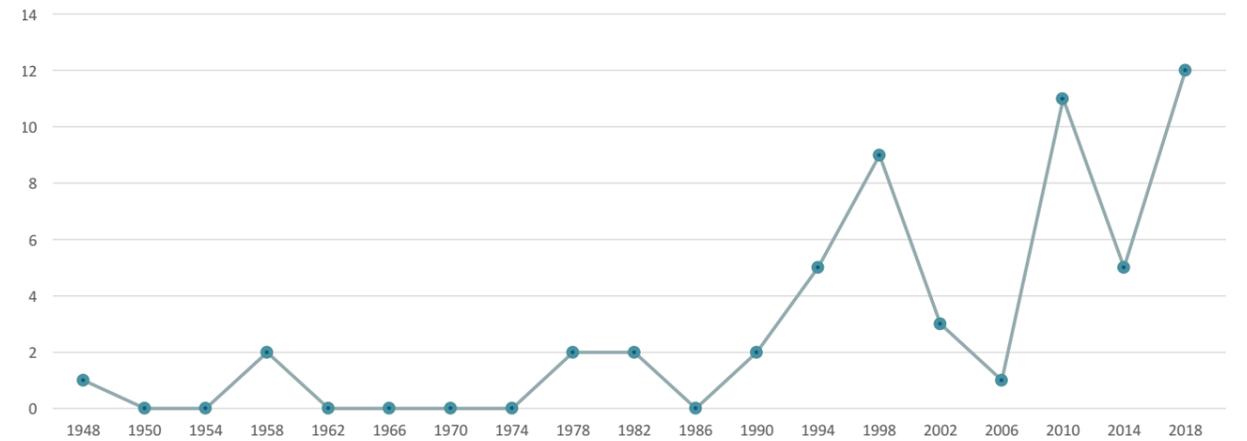


Figure 67: Businesses that opened in Karantina from 1958 to 2020. Source: The Beirut Urban Lab, 2021.

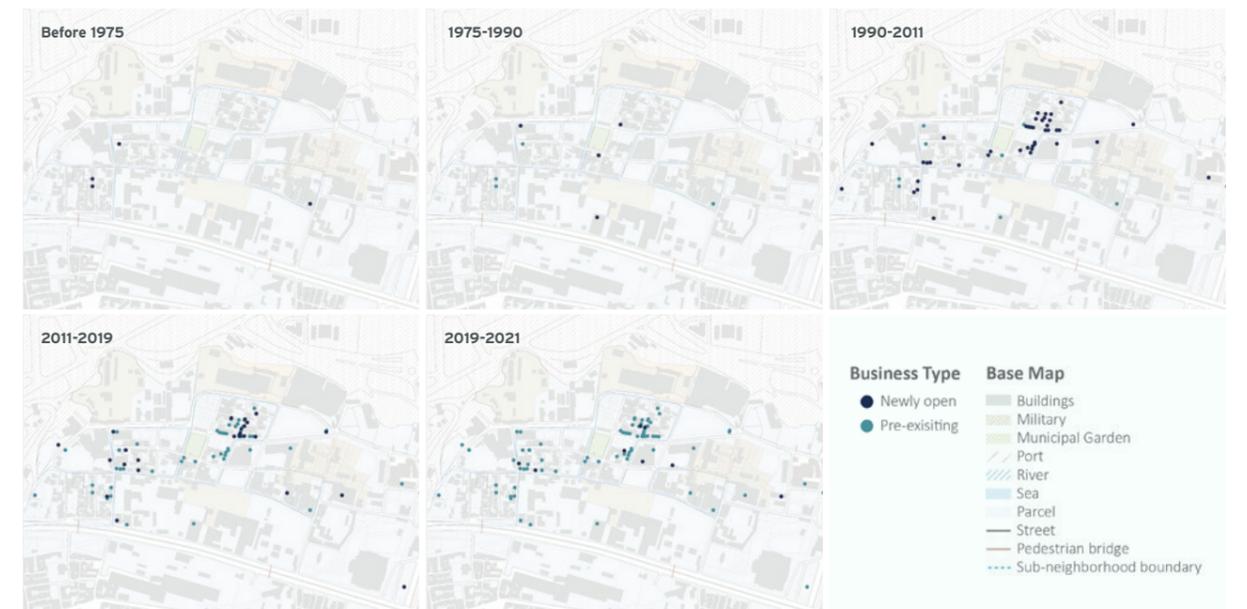


Figure 68: Businesses that opened in Karantina from 1958 to 2020. Source: The Beirut Urban Lab, 2021.

However, most of the businesses that were established before the civil war either had to move to other locations or closed. Data shows that a few businesses survived the civil war (1975-1990) (Figure 69), two of which are in Al-Khodor (Sleep comfort and a grocery shop) and the others are in Al-Senegal. It is important to note that few of these businesses were able to expand their activities beyond Lebanon after the civil war, including Sleep Comfort and Bakalian Flour Mills. Additionally, most of the businesses that opened in the sub-neighborhoods after the war are neighborhood scale and enough to meet the daily needs of the residents; they include butcheries, grocery shops, bakeries, barbershops, and minimarkets.

Here, most of the new businesses in Al-Khodor introduced new types of activities to the sub-neighborhood. Many micro-scale industries such as mechanics shops and steel lathe workshops opened before 2000. However, most of the businesses that opened after 2000 were of the smaller micro businesses category and owned by families that live and work in Karantina. These businesses include grocery stores, butcheries, retail stores, and online gaming workshops.

AL- KHODOR SUB-NEIGHBORHOOD	Specify the type of your business	What was the previous use of this space	Year
		Juice Shop	Formerly Vacant
	Coffee Shop	Formerly Vacant	2015
	Phone Shop	Formerly Vacant	2009
	Retail	Formerly Vacant	2019
	Steel Lathe Industry	Formerly Vacant	2013
	Furniture	Formerly Vacant	1948
	Mechanic / Garage	Formerly Vacant	1995
	Mechanic / Garage	Formerly Vacant	1993
	Pesticide Spraying	Formerly Vacant	1995
	Carpentry	Formerly Vacant	1982
	Butchery	Formerly Vacant	2000
	Butchery	Formerly Vacant	2000
	Barber Shop	Formerly Vacant	2018
	Grocery	Formerly Vacant	2000
	Steel Lathe Industry	Formerly Vacant	1994
	Butchery	Formerly Vacant	2020
	Coffee Shop	Formerly Vacant	2005
	Crafts	Grocery	2000
	Supermarket	Formerly Vacant	1994
	Minimarket	Fridge and washing machine repair shop	2010
	Mechanic / Garage	Formerly Vacant	1928
	Furniture	Art Gallery	2017

AL- SAYDEH SUB-NEIGHBORHOOD	Specify the type of your business	What was the previous use of this space	Year
		Grocery	Formerly Vacant
	Architectural Office	Shipping Company	2017
	Furniture	Minimarket	2012
	Money Transfer	Restaurant	1990
	Restaurant	I was the first to open here	2010
	Bakery	Grocery	2001

AL- SENEGAL SUB-NEIGHBORHOOD	Specify the type of your business	What was the previous use of this space	Year
		Mechanic / Garage	Formerly Vacant
	Minimarket	Mechanic / Garage	2019
	Minimarket	Formerly Vacant	2013
	Lottery Shop	Formerly Vacant	1999
	Supermarket	Bakery	2019
	Freight and Logistics	Freights and Logistics	2011
	Tools and Hardware	Formerly Vacant	1978
	Freight and Logistics	Apartment	2018
	Barber Shop	Formerly Vacant	1999
	Crafts	Food Snack	2010
	Coffee Shop	Formerly Vacant	2017
	Wax Factory	Formerly Vacant	1958

INDUSTRIAL ZONE SUB-NEIGHBORHOOD	Specify the type of your business	What was the previous use of this space	Year
		Freight and Logistics	Shipping
	Freight and Logistics	Freight and Logistics	2002
	Freight and Logistics	House	1999
	Mechanic / Garage	Formerly Vacant	2017
	Mechanic / Garage	Tannous Steel	2010
	Mechanic / Garage	Tannous Steel (Storage)	2018
	Food Wholesale	Formerly Vacant (Junkyard)	2012
	Car Training and Track	Parking	2018
	Mechanic / Garage	Mechanic / Garage	1998
	Gallery	A Storage for Metal and iron rods	2005
	Medical and Lab Supplies	Storage	1980
	Freight and Logistics	Tannous Steel	2019
	Freight and Logistics	Tannous Steel	2019
	Freight and Logistics	Tannous Steel	2019
	Mechanic / Garage	Formerly Vacant	2019

Figure 69: Changes in land-uses and types of businesses in the three sub-neighborhoods and the Industrial Zone from 1958 to 2020, highlighted in gray, the businesses that opened before and during the civil war. Source: The Beirut Urban Lab, 2021.

However, more businesses are opening in the Industrial Zone at a rapid pace especially after the relocation of Tannous Steel along Iben Sarjoun Street to Zgharta. The relocation of Tannous Steel changed the dominant land-use from industrial to commercial and recreational activities. This change is guided by a mediator from the Waqf who planned to upscale the status of the Industrial Zone by attracting high-end commercial businesses. The number of new businesses reached its peak in 2020 before the port blast especially with the opening of the Porch branch (Figure 70). Thus, Karantina is becoming more attractive to businesses from the adjacent neighborhoods and investors looking for affordable rents and property prices close to the port, the Charles Helou Highway, and the Beirut City Center.



Figure 70. A building with a porch that is under construction in the Industrial Zone. Source: Ali Ghaddar, 2021.

Additionally, due to the proximity of Al-Saydeh sub-neighborhood to Mar Mikhael, new nightlife and leisure businesses opened especially along the Charles Helou Highway after 2011; examples of these businesses include the Harbor 201 club (Figure 71&72). The club owners refurbished an old Lebanese building into a restaurant. However, nightlife businesses are still limited to a few, and most of these businesses are located near or along the Charles Helou Highway. The nightlife did not infiltrate into the sub-neighborhoods but was limited to the periphery due to the presence of the military bases and residential clusters.



Figure 71 and 72. Harbor 201 after the port blast. Source: Ali Ghaddar, 2021.

## B.2 Business Inclusion by Class, Religion, Gender, and Nationality

### Nationality, Class, and Religion

Most of the business owners are Lebanese and a few of them are Syrian (Figure 4). Syrian refugees either rely on money from social networks or families outside of Lebanon. They also often have to borrow money from their neighbors or rely on temporary support from NGOs, INGOs, and the United Nations High Commissioner for Refugees. Recently, Syrian refugees are suffering from the economic crisis in Lebanon and many of them are unable to provide the basic needs for their children such as food and medicine.

The social characteristics of the business owners in the residential clusters are not diverse; each sub-neighborhood has its own social characteristics that reflect the socio-spatial distribution of the local community groups before the civil war (1975-1990) (Figure 73). Most of the business owners in Al-Khodor are Sunnis and belong to the lower to middle income households, while the majority of business owners in Al-Saydeh are Christians and also belong to lower to middle income households. However, the new businesses that are infiltrating the residential clusters in Al-Saydeh and Al-Senegal belong to different religious and social groups.

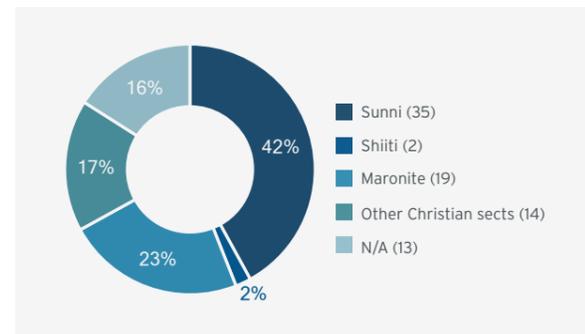


Figure 73: Breakdown of the religious affiliations of business owners in Karantina. Source: The Beirut Urban Lab, 2021.

However, the Industrial Zone is diverse in terms of nationality, religion, and levels of income in comparison to the three sub-neighborhoods. The new businesses are owned by Lebanese owners who reside outside Karantina and belong to different religious sects; whereas, the majority of the business owners are Christian. This diversity reflects the socio-economic dynamics in the Industrial Zone that attracts companies and business owners from across regions in Lebanon regardless of their religion. Furthermore, some of the older businesses in the Industrial Zone belong to Armenians who established their businesses before the civil war (1975-1990); an example of these businesses is Bakalian Flour Mills. It is worth noting that most of the new small and medium businesses are high-end in comparison to the mechanics shops and garages.

## Gender

The in-depth profile of Karantina showed that most of the business owners are men - 69 business owners from the total 82 - while the rest are women (Figure 12). The level of participation of women in economic activities in Karantina is the same as the rest of Beirut. Women work, access job opportunities, and contribute to the local economy; nevertheless, their number is limited to a few. However, the port blast affected businesses owned by women of Karantina- 7 women lost their businesses due to the port blast and the activities of the remaining businesses that are owned by women is threatened by the ongoing economic crisis in Lebanon. Additionally, Syrian women are not able to access job opportunities or contribute to the everyday economy. This includes Syrian refugee women who are often not able to work due to restrictions from their family members, the lack of resources and employment opportunities, or because they do not have a college degree. Accordingly, both Lebanese women and Syrian refugee women need support and assistance in sustaining their businesses or accessing job opportunities.

## C. Connectivity and Serviceability of Businesses and their Relation to the Surrounding Neighborhoods

This section of the report analyzes the spatial connectivity between the businesses and their customers at different spatial levels: the sub-neighborhoods, Beirut, Greater Beirut, Lebanon, and beyond. It assesses the activities of customers and merchants who operate in Karantina in relation to the locations, intensity (size), and diversity. This section of the report also analyzes the level of serviceability of the businesses in Karantina and their ability to expand and accommodate new demands without having to compromise on important factors like time, money, consumer satisfaction, and efficiency.

### C.1 Connections to Customers at Different Spatial Scales

Businesses in Karantina are connected to customers at different spatial levels. Figure 74 shows the locations of customers in relation to the types of businesses in Karantina. The following spatial scales present the levels of diversity and intensity of visitors, customers, and merchants in Karantina.

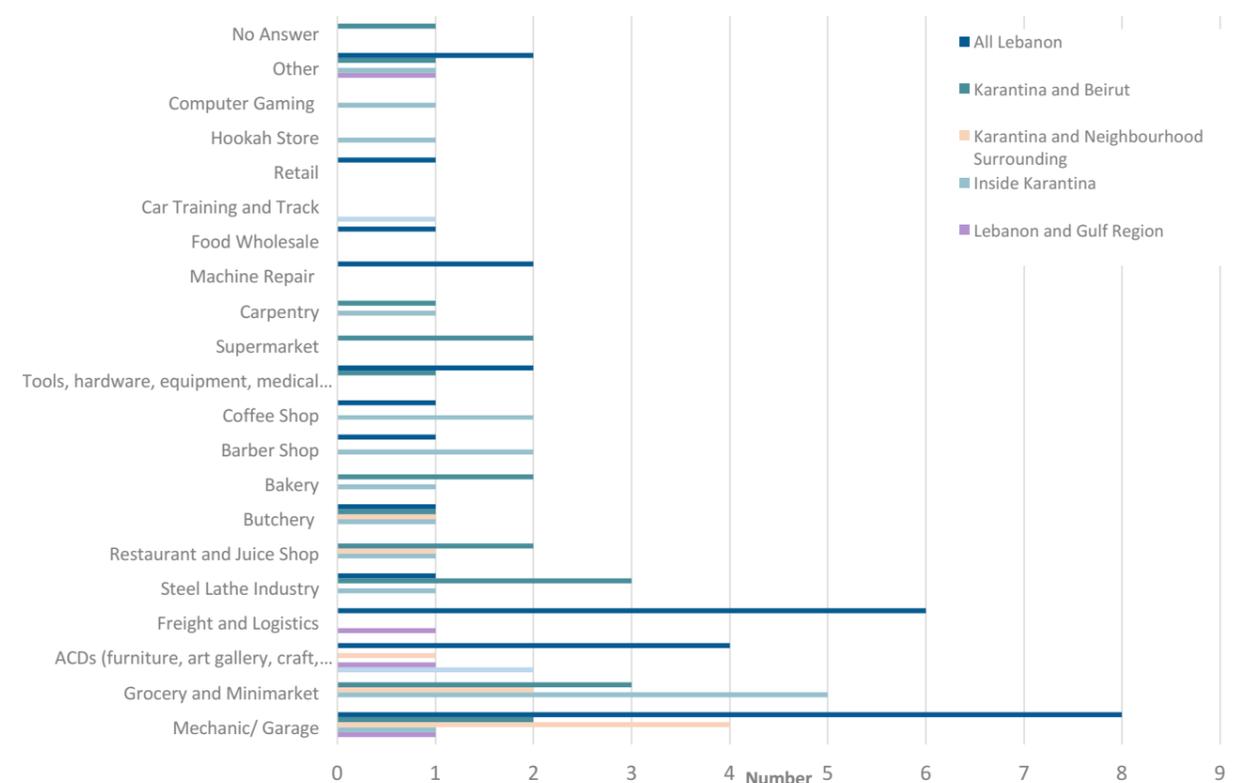
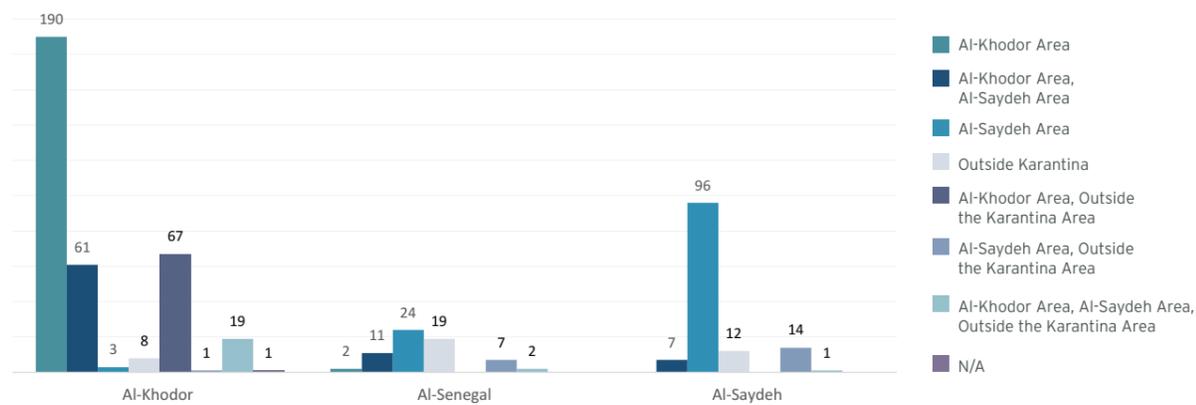


Figure 74. The locations of clients and customers in relation to the types of businesses in Karantina. Source: The Beirut Urban Lab, 2021.

**INSIDE KARANTINA**

Many businesses in the sub-neighborhoods, especially in Al-Khodor, serve their own residents. 15 out of 18 shops in Al-Khodor are frequently visited by a customers from the same sub-neighborhood. These shops are of the smaller micro businesses (0-2 employees) that are family-owned and rely on the residents of Karantina to purchase their goods. They include butcheries, mini markets, grocery stores, barbershops, computer gaming workshops, and hookah stores. Additionally, most of the families in Al-Khodor and Al-Saydeh buy their daily and essential needs from shops in their sub-neighborhood. The shops provide the residents with their daily needs including vegetables, bread, and dairy products.

Despite the proximity between the three sub-neighborhoods, the residents of Al-Khodor do not often buy products from the shops in Al-Saydeh; equally, the residents of Al-Senegal and Al-Saydeh do not frequently buy products from shops in Al-Khodor. As such, each sub-neighborhood is economically detached from its surroundings (Figure 75).



**Figure 75.** Graphs showing the shopping destinations for the residents of the three sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

**FROM KARANTINA, BEIRUT, AND GREATER BEIRUT**

Micro businesses in the sub-neighborhoods attract clients from different locations and backgrounds in Beirut and beyond. For example, a small bakery in Al-Senegal attracts customers not only from Karantina but also from Greater Beirut due to the quality of the service (Figure 76). One of its customers said that he usually comes to Karantina because of the quality of food that the bakery offers. Moreover, micro mechanics shops attract customers from across Greater Beirut. For example, one of the mechanics shops in Al-Saydeh offers mechanical repairs for luxury cars that are owned by customers from outside Karantina (Figure 77). The garage repairs cars and offers high quality services that require high-end technologies and technical skills.



**Figure 76.** Bakery in Al-Senegal sub-neighborhood. Source: Ali Ghaddar, 2021.



**Figure 77.** Mechanics shop in Al-Senegal sub-neighborhood. Source: Ali Ghaddar, 2021.

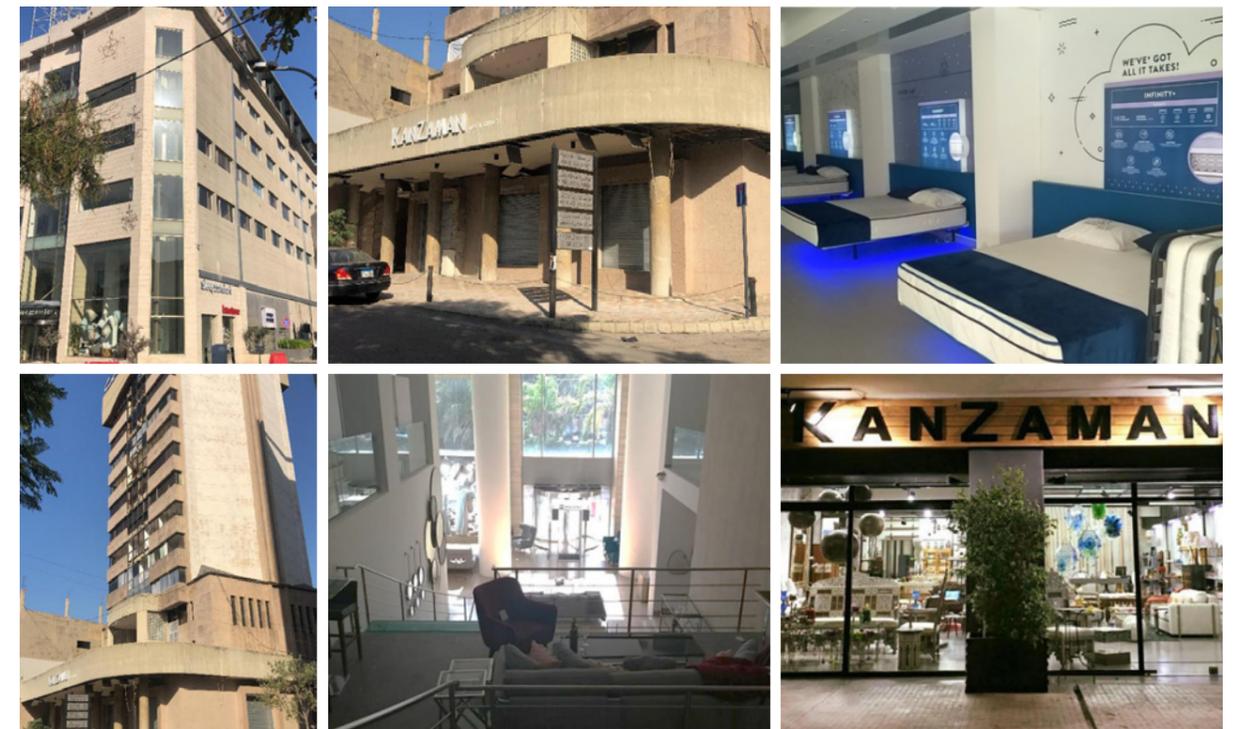
Other businesses such as carpentry and steel lathe shops are located on the periphery of Karantina and attract clients from across Greater Beirut, given that Beirut does not have a designated Industrial Zone by the zoning law. Such micro-scale industries require a special permit from the Municipality of Beirut to operate within or close to residential neighborhoods and should meet special requirements for safety and environmental standards. Currently, these businesses are deteriorating due to the loss of customers and the inability of business owners to compete with larger companies. Moreover, many businesses that are related to the port, especially mechanics shops and transportation services, are losing their clients because of the partial closure of the port. Many of these businesses lost their vehicles in the explosion and are hardly partially operating. They were not compensated by the Lebanese government or from insurance companies.

**ACROSS LEBANON**

Additionally, some of arts, crafts, and creative industries in Karantina, like Gallery Kan Zaman attract clients from across different areas in Lebanon (Figure 78). During the lockdown period of the Covid-19 pandemic in 2020-2021, the gallery diversified its operations and relied on virtual platforms such as Facebook and Instagram to attract new customers and serve its clients. After the port blast, the owner repaired the destroyed gallery at her own expense. Moreover, the activities of the gallery declined because of the pandemic and the economic crisis in Lebanon that was exacerbated by the port blast. During one of the focus group discussions, the owner mentioned that the port blast impacted the activity of the gallery intensively. However, she prefers to stay in Karantina because of its strategic location and the solid customer-base that she secured and are now familiar with the location.

As such, the number of arts and drafts and creative industries in Karantina are limited, losing their customers, and threatened with closure. Most of these industries are in the Industrial Zone and Al-Khodor sub-neighborhood that is adjacent to the Charles Helou Highway.

In addition to these industries, the closure of the slaughterhouse and the public markets affected the number of visitors, merchants, and customers who come to Karantina. It caused people to lose many job opportunities and reduced the daily commercial activities that link Karantina to Lebanon.



**Figure 78.** Arts and crafts and creative industries at Sleep Comfort and Kanzaman Gallery across the Rehban Street. Source: Ali Ghaddar, 2021 and KanZaman Facebook page.

Additionally, some of the businesses on the periphery of Karantina, along the Beirut River and the Emile Lahoud Highway, are spatially fragmented. However, they attract customers from multiple areas across Lebanon; examples include the hookah store and KED (Figure 79). KED serves as a center for art galleries, art performances, and music venues in Beirut. It attracts visitors and artists from across Lebanon. It is important to note that periphery edge of Karantina along the Charles Helou Highway is fragmented and not accessible due to the fenced municipal lots and land-uses that do not attract customers to Karantina; these land-uses include storage warehouses and military bases.



Figure 79. KED building from the outside and inside. Source: desktop.beiruting.com and www.beirutdesignweek.org/.

### ACROSS LEBANON, THE GULF REGION, AND EUROPE

Other industries serve clients outside of Lebanon. For example, the Bakalian Flour Mills, a family-owned enterprise, extends its services to the MENA region by offering a variety of products (Figure 80). It is a private company that employs more than 40 employees from different backgrounds, professions, and locations in Lebanon. Other companies such as Key Freight, The NET Logistics, and Mercedes-Benz Garage are associated with the activities of the port (Figures 81 and 82). They provide high-quality services that rely on skilled and professional employees. However, they barely attract clients and visitors to Karantina. They rely on online communication and dedicate their Karantina branch to store products for customers from the port or to redistribute them to their sub-branches. Mercedes-Benz Garage, in specific, provides both mechanical repairs for Benz automobiles in Lebanon and stores their imported cars.



Figure 80. Bakalian Flour Mills. Source: Ali Ghaddar, 2021.



Figure 81. Key NET and Freight Logistics. Source: Ali Ghaddar, 2021.



Figure 82. Mercedes-Benz Garage. Source: Ali Ghaddar, 2021.

### LEBANON AND WORLDWIDE

Moreover, many leisure activities, such as the BO18 nightclub, and Forum de Beirut attract visitors from Lebanon and all over the world. BO18 is a nightlife destination for international artists that attracts younger generations from higher-income families from Lebanon and abroad (Figure 83). They rarely attract people from Karantina. Moreover, prestigious galleries, such as Sfeir Gallery, attracts international artists, exhibitors, and visitors from Lebanon and abroad. The number of new arts and crafts and creative industries increased in Karantina, especially after the renowned Lebanese architect Bernard Khoury opened his office in the Industrial Zone (Figure 84).



Figure 83. BO18 night club. Source: Ali Ghaddar, 2021.



Figure 84. The office of the renowned Lebanese architect Bernard Khoury in the Industrial Zone. Source: Ali Ghaddar, 2021.

As such, Karantina is threatened by the closure of businesses and the loss in the number of clients. Some of these businesses are gated, exclusionary by type (single use) or class (dedicated to high-income households) or accommodate land-uses such as warehouses that do not attract people to Karantina. Additionally, many of the businesses, especially the ones in the inner neighborhoods, are spatially fragmented and economically detached from each other.

## 5.2 CULTURAL VITALITY IN KARANTINA

### A. Cultural Practices in Karantina

Cultural practices are communal practices that unfold in the religious, economic, social, and artistic activities. These practices bring groups of people together to become part of their collective identity.

Accordingly, the term 'culture' is defined in this report as the communal practice of activities that unfold spatially; it is characterized by, and linked to, the scale of the groups of people who are involved in these activities. In this section, there are four main categories of cultural practices in Karantina:

- (1) religious practices;
- (2) socio-economic practices;
- (3) socio-spatial practices; and
- (4) artistic practices.

This section of the report presents these categorizes, analyzes them in relation to the term vitality, and demonstrates how they unfold spatially.

### A.1 Religious Practices

Religious practices include Friday gatherings at the neighborhood mosque for prayer or Sunday prayers at Al-Saydeh Church. They are particularly relevant during the holiday seasons. For example, during the Christmas holiday, the Christian community in Al-Saydeh and Al-Senegal organizes recitals, food gatherings, and prayers in the church (Figures 85 and 86). During Al-Adha holiday, the Muslim community in Al-Khodor celebrates Eid by visiting family members and organizing lunch gatherings. During special occasions - for example, while mourning the death of a family member - people in Karantina, especially the Arab Tribes, gather outdoors. They set up tents with plastic seats in the streets for the gatherings. This practice is part of the collective traditions of the Arab Tribes who tend to support each other through difficult situations.



Figure 85. Christmas tree in an open space in Al-Saydeh. Source: Ali Ghaddar, 2012.



Figure 86. Al-Saydeh Church in Al-Senegal (right) and Khalid Ibn Al Walid Mosque in the Industrial Zone (left). Source: Ali Ghaddar, 2021.



### A.2 Socio-economic Practices

The residents of Karantina often produce their own household food 'mouneh'. A few families in Al-Khodor and Al-Saydeh produce and sell healthy, homemade food from their kitchens. Other families turned some of the residual open spaces or their backyards into urban farms where they grow vegetables and herbs. For example, a woman in Al-Khodor uses her kitchen to prepare homemade food and sells it to NGOs for their local events. She also displays organic foods in small glass bowls in her home to visitors and neighbors (Figure 87). Additionally, there is a growing potential in Al-Saydeh to produce handmade foods, especially after the port blast; some of the residents of Al-Saydeh are planning to open small restaurants for homemade food in their backyards and open spaces in front of their houses.

The activities around the port are determined by the socio-spatial practices of the truck drivers in Karantina, the majority of whom are Syrians. The proximity of Karantina to the port and the limited number of parking spaces inside the port is causing frequent truck traffic congestion inside Karantina. The truck drivers gather in Karantina almost every day during their breaks to have some food and smoke the hookah (Figure 88). They take their breaks mostly on the vacant lots, the sidewalks, and the streets at the peripheries of Karantina.

Daily shopping is a main element of the street activities in front of shops and bakeries. The answers to the business questionnaire showed that most of the residents of Karantina buy their daily products locally. Only 7.7% of the household buy their daily products from outside of Karantina (Figure 74). However, daily shopping is fragmented and bounded in terms of space. The residents of each sub-neighborhood prefer to shop from nearby streets. For example, 75% of Al-Saydeh's households buy their daily needs from nearby shops in Al-Saydeh since it is more convenient; they also mentioned that some products like alcoholic drinks are not available in shops in Al-Khodor (Figure 89).



Figure 87. Homemade food (mouneh) by a resident in Al-Khodor sub-neighborhood. Source: Ali Ghaddar, 2021.



Figure 88. Truck drivers spending their breaks in an open space near the port. Source: Ali Ghaddar, 2021.



Figure 89. Stores along the main streets in Al-Senegal sub-neighborhood (right) and in Al-Khodor sub-neighborhood (left). Source: Ali Ghaddar, 2021.

Leisurely and recreational activities in Karantina are often communal and occur continuously over an extended period. These activities, as mentioned earlier, are limited to small gatherings on streets, sidewalks, and in front of coffee shops (Figure 90). The answers to the business questionnaire showed that around 72% of the households do not use public spaces and most of the residents prefer to stay in Karantina for leisurely activities. A few households go to nearby areas such as Bourj Hammoud and Mar Mikhael for leisurely activities while others prefer to go to Rawsheh and the seaside (Figure 91).

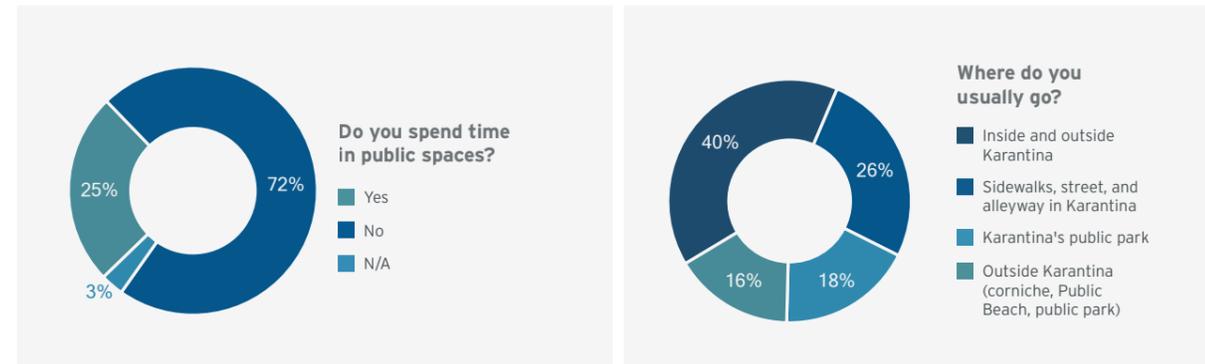


Figure 90: The locations of public spaces where households mostly spend their time. Source: The Beirut Urban Lab, 2021.

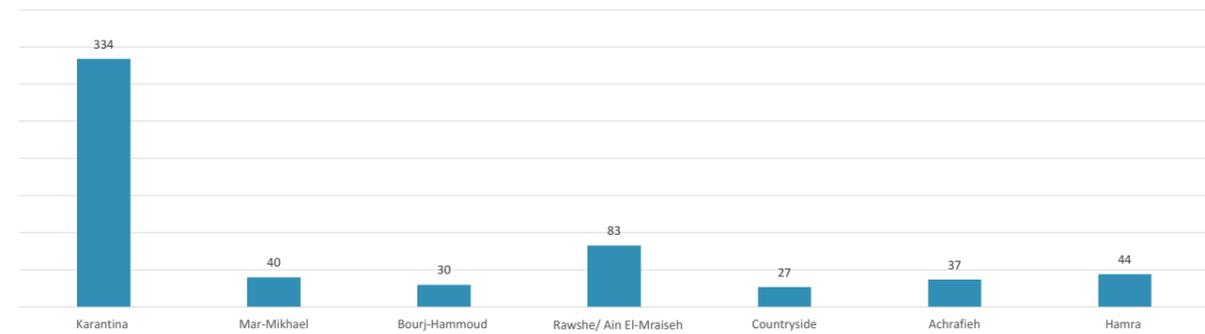


Figure 91: The main locations of leisure activities. Source: The Beirut Urban Lab, 2021.

Figure 92 analyses the density of leisure activities in Al-Khodor. Most of the households in Al-Khodor (Syrians and Lebanese) spend a considerable amount of time outdoors on the streets, sidewalks, and in public spaces. Families, including children and younger people, often buy snacks, food, and juice packs from the nearby grocery stores while using these public spaces.

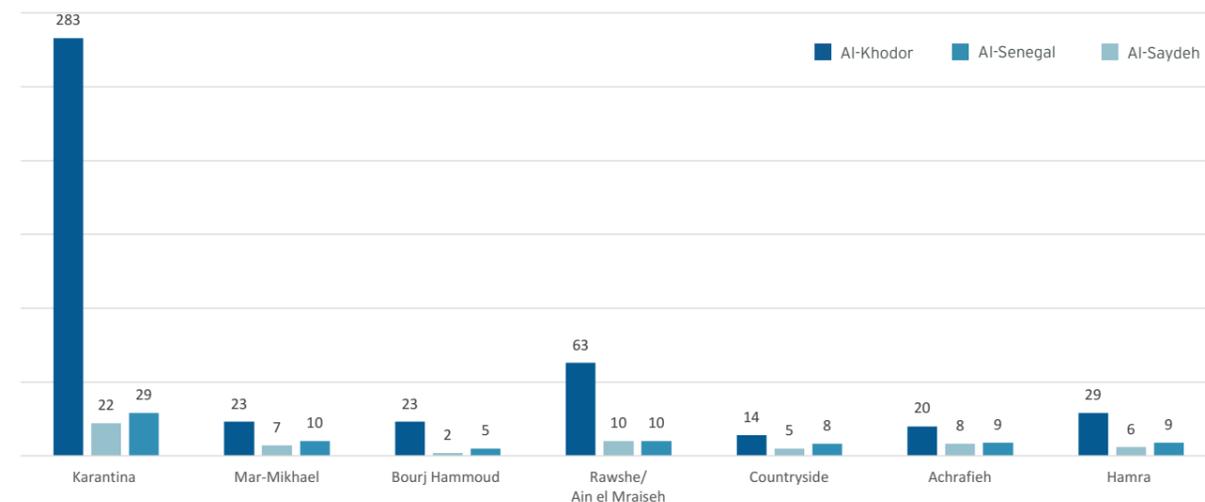


Figure 92: The main locations of leisure activities in relation to the places where people live. Source: The Beirut Urban Lab, 2021.

Additionally, children more frequently ride bikes in the streets in Karantina due to the growing numbers of shops that sell, rent, and repair bikes in Al-Khodor. Most of the children in Karantina play outdoors (Figure 93). 93% of the children play on the streets and sidewalks, on vacant lots, in the public park, and in the areas around the church and the mosque. They bike, play soccer, and engage in various outdoor games. 58% of the elderly people use public spaces and 42% prefer staying at home (Figure 94).



Figure 93. Children playing in alleyways, vacant lots, and streets. Source: Ali Ghaddar, 2021.

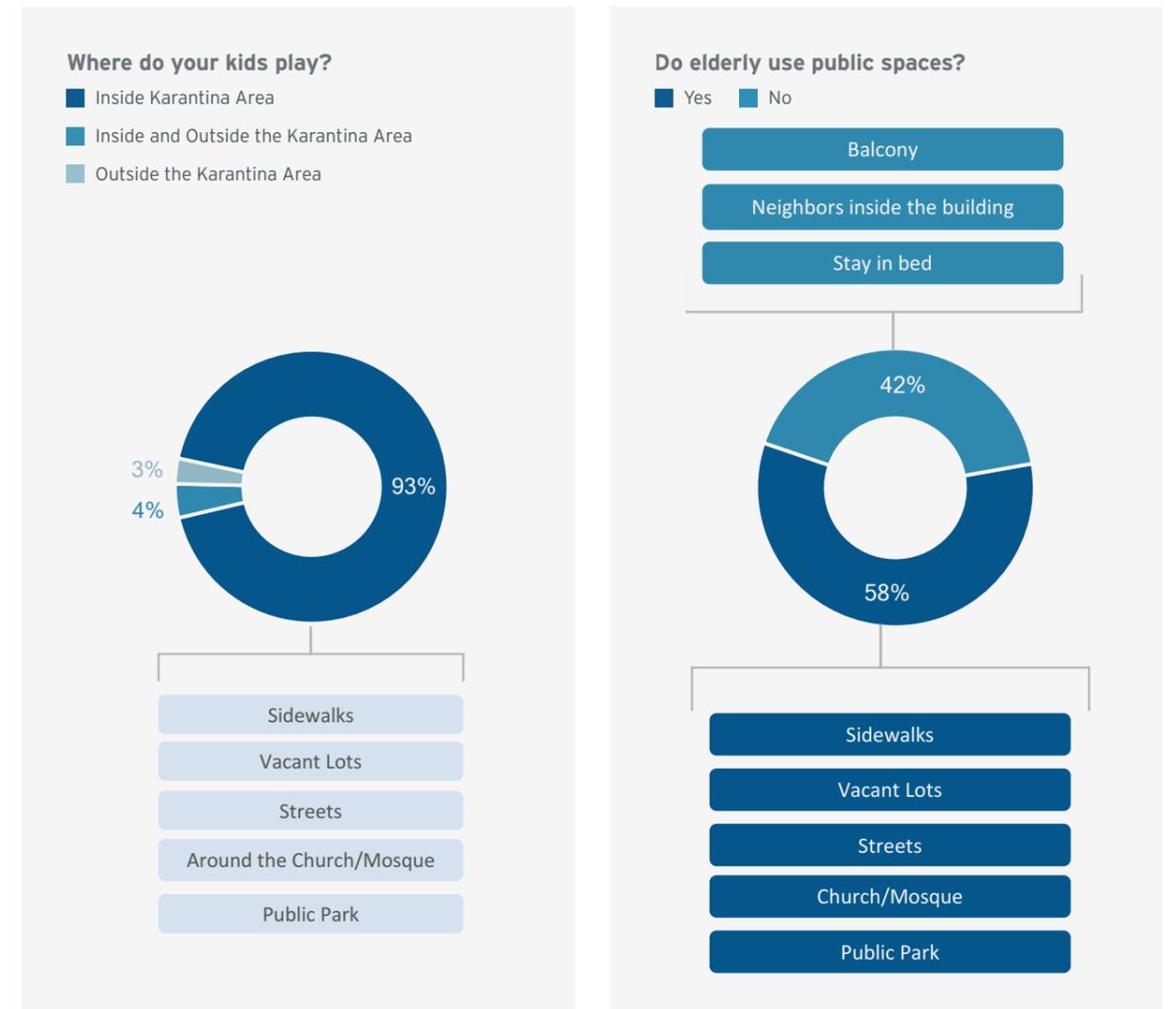


Figure 93. The main locations where children play, and elderly people spend their time. Source: The Beirut Urban Lab, 2021.

Nevertheless, Karantina has its own leisure hubs and recreational centers in the Industrial Zone and along the Charles Helou Highway near the Beirut riverside. BO18 is a well-known nightclub that opened in 1994 after the civil war (1975-1990) and closed in 2020 after the port blast. The owners of BO18 decided to relocate to Dubai. Forum du Beirut is another leisure and recreational center in front of BO18. It is a large and multi-purpose hall area that people from across Lebanon used for political, entertainment, and artistic events. It was affected by the port blast and is now under renovation. Both BO18 and Forum du Beirut were built on lots where massacres took place during the civil war. Additionally, one of the nightclubs that opened on the rooftop of a food wholesale building closed after the port blast due to the complete destruction of the interior space and furniture (Figure 95). FLYP Urban Park is a sports center that opened in 2018 and was also destroyed and closed after the port blast (Figure 96).



Figure 95. The destroyed roof of the Food Wholesale building. Source: Ali Ghaddar, 2021.

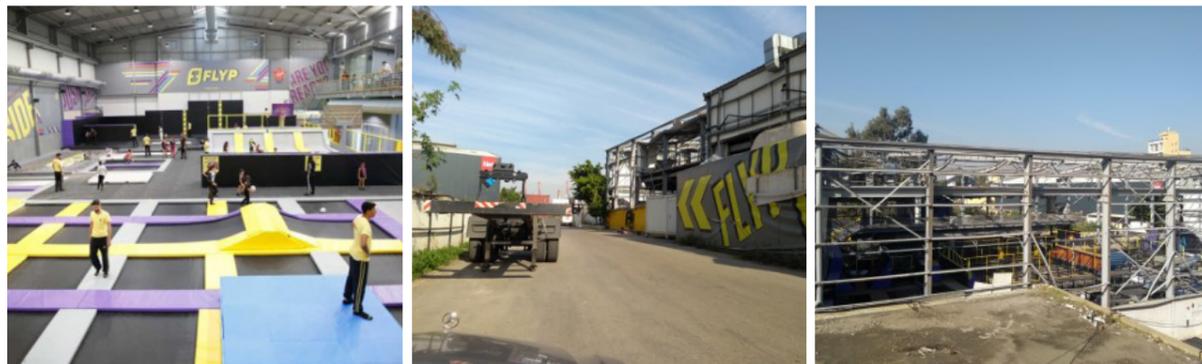


Figure 96. The FLYP Urban Park from the inside before the port blast (right) and from the outside after the port blast (left). Source: Ali Ghaddar, 2021 and the Facebook page of the FLYP Urban Park.

These leisure hubs and recreational centers target specific high-end users who reside mainly outside Karantina. They are partially isolated from the sub-neighborhoods socially and spatially. Most of the residents of Karantina do not go to these places despite their proximity to the Industrial Zone since they are expensive. The residents of Al-Khodor also prefer not to go to these places for religious reasons. As such, the nightlife activities, including the local pubs, are not connected to the lifestyles of the residents who do not work there.

## The Slaughterhouse

“ Maslakh Beirut- Beirut Slaughterhouse was a source of employment for 250 Lebanese and 100 Syrian people. It has been closed for political and sectarian reasons<sup>27</sup>  
 كان مسلخ بيروت مصدر للعمل لـ 250 لبناني و 100 سوري تسكيرو لأسباب سياسية و طائفية

Some cultural practices are embedded within, or associated with, the economic activities in Karantina. The slaughtering of animals for food is a good example of an activity that brings the collective practices of the residents of Al-Khodor with an economic establishment. The link is manifested in a web of professional relations that were fostered over years and allowed people to acquire informal titles to frame their roles. Mr. Fakir al-din Shihadeh<sup>28</sup> pointed out in an interview that slaughtering animals for food is a common activity among the Arab Tribes in Karantina, also known as Arab Al Maslakh from previous generations. Their relationship, as described by Shihadeh, is manifested in the following network: (Figure 97):

- 01 The dominant cattle traders who belong to wealthy families such as Mikdash and Zahran. They import livestock cattle through the port and sell them to private farms outside of Beirut that distribute them to local traders. In the process, they monopolized the wholesale market.
- 02 The local traders, al toujar (التجار) are the business owners who buy the cattle from the farms of the monopolists (Al Mouhtakeron) and send them to the slaughterhouse for distribution. The traders are mainly from Al-Khodor and are known as Abnaa Al Karantina
- 03 Al Mouaayeshon (المعيشون) are the sub-traders who provide special orders to their own networks of clients. They work in the slaughterhouse and have strong ties with the traders.
- 04 The anchored businesses that include dying industries are related to food. The food industries utilize the leftover parts of the slaughtered cows, for example, bones, bowels, and intestines.
- 05 Suppliers are micro-scale butcheries. Some of the butcheries are in Karantina and others are spread out across Greater Beirut.
- 06 Municipal employees are the ones who administer and oversee the everyday operation of the slaughterhouse and the trading process. They include managers, guards, cleaners, technicians, some of whom live in Al-Saydeh, and veterinary doctors.

<sup>27</sup> First Town Hall meeting, Karantina (2022-April-11).

<sup>28</sup> Interview with Fakir al-din Shihadeh was conducted by BUL researcher (2021-May-27) who used to work in the old slaughterhouse.

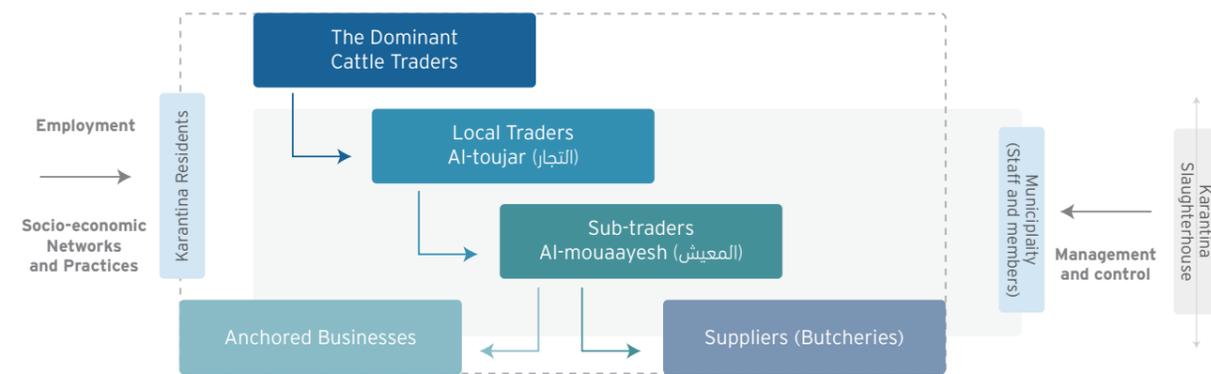


Figure 97. The network of actors who were involved in the operation of the slaughterhouse. Source: Ali Ghaddar, 2021.

Accordingly, the slaughterhouse was a key economic driver in Karantina and Beirut in general. It provided employment opportunities to many lower and middle income families in Karantina, especially families in Al-Khodor who inherited the profession. The closure of the slaughterhouse weakened the cultural and economic practices in Karantina and decreased the number of incoming merchants and clients. Hence, it reduced both levels of cultural and economic vitality in Karantina.

### A.3 Socio-spatial Practices

“ The neighborhood is socialization between people, love of neighbors, and convivial relations between family and people<sup>29</sup>  
 الحي هو اجتماعيات بين الناس محبة  
 الجيران عشرة طويلة بين الامل والناس

Daily gathering is a street practice that is visible in the three sub-neighborhoods especially mornings (Sobheye, صباحية) and evenings (Asrouniyeh, عصرية). They are mostly visible along the main streets in Al-Khodor and Al-Senegal specifically in front of the residential apartments at the ground level, or on the inner alleys (Figure 98). The daily gatherings reflect the strong social ties between the residents, especially the Arab Tribes, and the village like social networks. In Karantina, men mostly gather to smoke the hookah on Mashgarah Street while women prefer the inner alleyways. These gatherings do not extend to the Industrial Zone which is typically empty at night. They are spatially fragmented, restricted to the residents of each sub-neighborhood, and do not occur with the same intensity throughout the day and night.

At night, the closing hours of many businesses such as bakeries, mechanics shops, and key services impact the intensity and activity of people gathering in the streets. The daily outdoor gatherings reflect the village like character of social environment in Karantina, especially in the sub-neighborhoods. Karantina is, however, threatened by changes in its economic sector and the operation of local businesses, for example, the closing of the slaughterhouse and the emergence of new business ventures, the displacement of younger generations of people, and new real estate construction that is altering the socio-spatial and socio-economic practices.

29 Z.H., (2020-December -24), (Mohamad Amshah Tatarian, Interviewer).



Figure 98. The residents of Al-Khodor sub-neighborhood gathering in the streets in front of their apartments and shops. Source: Ali Ghaddar, 2021.

### A.4 Art Practices

Karantina has three main furniture and home décor galleries that are known across Lebanon (Kan Zaman, Sleep Comfort, and Boutique Du Monde). However, artistic practices in Karantina are mostly commercial and limited to private homemade crafts; they are not a collective shared practice that brings people together through communal gatherings and exhibitions. Karantina had only two active art galleries in 2021 (Sfeir Gallery and KED) (Figure 99). Thus, art as a communal cultural practice is almost absent in Karantina and is not tied directly to the residents of Karantina.



Figure 99. The interior spaces of the Sfeir Gallery. Source: Ali Ghaddar, 2021 and www.sfeir-semier.com.



## 6. SYNTHESIS AND RECOMMENDATIONS

### SYNTHESIS ECONOMIC VITALITY

The economic sector in Karantina is currently facing the following challenges:

- 01 The rate of unemployment is high in Karantina. Currently, 70% of the population is unemployed<sup>30</sup>.
- 02 The old industries in Karantina are frequently replaced with small and medium-sized commercial businesses, and this increased the economic activities in the Industrial Zone. New companies that arrived to Karantina after 2018, such as logistics, car showrooms, and recreational centers, replaced the old steel industry on the periphery of Al-Khodor sub-neighborhood. These new companies are changing the economic status of the Industrial Zone into a high-end commercial zone. Companies that opened across Iben Sarjoun Street are altering the economic character of Karantina and bringing in a new type of clients. As a result, the need for skilled labor in Karantina and its surrounding areas is decreasing in favor of outside skilled workers.
- 03 The closure of traditional businesses, including the slaughterhouse and the public market, raised the unemployment rate in Karantina. Many people lost their jobs at the slaughterhouse. Some of these people moved to unskilled jobs such as taxi driving and the rest remained unemployed. The closure of the slaughterhouse, which was the main economic driver in Karantina, curtailed the economic activity at the local and regional levels. Before its closure, it attracted micro-scale suppliers, traders, and customers from outside of Karantina, Beirut, and the rest of Lebanon.
- 04 The increased closure of micro businesses. Butchery shops, grocery shops, and garages for mechanics are frequently closing due to complete destruction from port blast and the ongoing economic crisis in Lebanon. This is mostly evident in the inner residential clusters. The closures slowed down the economic activities in Karantina and left many households without a steady income.
- 05 The delay in the reconstruction of the port is threatening the operation of various businesses that are related to the port, especially in the Industrial Zone. Many of the larger micro businesses lost some of their customers and are partially closed. They attribute the loss of customers to the partial closure of the port after the blast.
- 06 The increase threats of eviction and hikes in rent prices are exacerbating the vulnerability of many businesses in Karantina. This is especially problematic since 80% of the business owners are tenants.
- 07 The delay in economic reforms at the national level in Lebanon and the absence of any municipal intervention in regulating and supporting the economy in Karantina is threatening the sustainability of larger micro, small, and medium businesses, especially the new businesses and the port related activities. As a result, many business owners were not able to pay their taxes to the Ministry of Finance or their loans to commercial banks on time. Some of the business owners also laid off their employees or decreased their salaries. Many of these businesses are in the Industrial Zone.

- 08 The purchasing power of consumers has significantly declined as a result of the economy's constant deterioration. The decreasing number of clients from various parts of Beirut and throughout Lebanon is one way in which reality has been reflected.
- 09 Many business owners are not able to sustain and maintain their business activities due to the uncertain economic and political conditions in Lebanon, as well as the negative impact of the pandemic. This uncertainty may lead to a long-term closure. For example, creative industries and micro businesses that work in areas that are connected to the port - such as transportation services and mechanics - were still closed in 2022 after this study was conducted. Many of the businesses lost their cars, equipment, and offices and do not have the financial capacities to get back on track. As a result, some of the businesses are planning a permanent closure.
- 10 The decline of old crafts in Karantina - for example, in manufacturing office and school furniture - threatens the diversity of businesses in terms of size and type. Many of these businesses are entrepreneurial and led by personal initiatives.
- 11 The infiltration of larger micro businesses such as logistics and shipping services to Karantina is transforming the inner blocks from residential to business clusters. 10 residential buildings in the sub-neighborhoods were either fully or partially transformed to businesses. This transformation is leading to the loss of rooted and aging communities and can potentially lead to gentrification.
- 12 The Lebanese Army and insurance companies were delayed in paying compensations to businesses after the port blast. This increased the risk of vulnerable businesses closing, especially the micro-scale mechanics and grocery shops. More than 84% of the surveyed businesses did not receive their compensations. Additionally, most of the NGOs that supported households through short-term aid did not equally support the economic sector. Most of the businesses did not receive assistance or support from NGOs and INGOs.
- 13 There is a lack of important economic activities in certain areas of Karantina. Many micro businesses are absent in Karantina; these businesses include pharmacies, libraries, gas stations, nurseries, and doctor clinics. Additionally, there is complete absence of opportunities for new startups that rely on smart and green technologies.
- 14 Vulnerable groups are no longer active in the economy of Karantina. Most of the Syrian refugees in the sub-neighborhoods are not employed and cannot establish their own businesses due to financial and legal restrictions in Lebanon. Accordingly, only 8% of the surveyed businesses are owned by Syrians who came to Lebanon before 2011. Additionally, a few women who established their own smaller micro businesses are not able to sustain their activities in the long term; some of these women lost their equipment and furniture from the port blast and others lack the needed funds.

The economic sector in Karantina is considered vital in relation to other areas in Beirut. It hosts a wide range of businesses that cater to multiple users and locations across Lebanon. However, Karantina is currently threatened by the ongoing political and economic crises in Lebanon.

The port blast caused further damage to many of the deteriorating micro businesses, especially the businesses that are connected to the port. Additionally, the closure of many of the local traditional businesses weakened the socio-economic practices in Karantina and left many of the residents unemployed.

<sup>30</sup> This percentage does not account for child labor.

## CULTURAL VITALITY

Cultural practices in Karantina are mostly linked to economic activities and are often reduced to everyday socio-spatial practices. However, there are a few artistic and religious practices that are kept private.

- 01** The type and intensity of socio-spatial and socio-economic practices in the residential clusters in Karantina mimic the ones that are found in villages, including organizing daily gatherings, shopping for groceries, and growing their own vegetables and fruits. Even the socio-economic practices that are related to the port are mostly limited to truck drivers and the users of the port who mostly live and work outside of Karantina.
- 02** Most of the current socio-spatial practices are limited to a few users and are not directly tied to the identity of the residents. These practices are also spatially fragmented in each sub-neighborhood. Many of the activities in the sub-neighborhoods do not extend to the Industrial Zone that accommodates heavy and single use businesses.
- 03** The closure of the slaughterhouse negatively impacted the economic and cultural vitality in Karantina, especially for the residents from the Arab Tribes. The local practice of slaughtering animals, in specific, used to contribute to the socio-spatial and economic activity. There was a strong connection between the slaughterhouse and the daily practices of the residents of Al-Khodor sub-neighborhood. The slaughterhouse used to also contribute positive gains to the economy of Beirut.
- 04** Finally, the presence of the military base where the slaughterhouse was located - particularly around the sub-neighborhoods and their residential clusters - isolated social practices from the Industrial Zone.

In Karantina, cultural practices are limited and reduced to daily socio-spatial practices:

- 1.** The religious practices are rare and limited to a few residents in Karantina.
- 2.** The artistic practices are almost non-existent and often limited in scope.
- 3.** The socio-economic practices are relatively more vital but are threatened with the increased closure of traditional businesses.

Therefore, cultural vitality is limited by space and type, and it is not sustainable or vibrant.

## RECOMMENDATIONS

### THE ECONOMIC SECTOR

#### 1. AT THE NATIONAL LEVEL:

- a.** The Lebanese government, through the Council of Ministers, should move forward with economic reforms, control the devaluation of the Lebanese pound, and promote political and economic stability.
- b.** The Ministry of Finance should provide local businesses with financial support through low-interest loans and tax exemptions.
- c.** Insurance companies and public agencies should provide direct compensation to businesses that were affected by the port blast.
- d.** Commercial banks should support local businesses to access their savings, facilitate financial transactions, and provide long-term subsidized loans.
- e.** There is also a need to rehabilitate the port in the near future.

#### 2. AT THE LOCAL LEVEL:

##### Strengthen and revive local traditional businesses.

- a.** There is a need to reactivate and rehabilitate the key economic drivers and clusters in Karantina. This includes the commercial cluster at the periphery of Karantina that includes the slaughterhouse, the fish market, and the public market.

##### Introduce new business and employment opportunities.

- a.** Establish a digital platform that announces vacancies and work opportunities at local companies in the Industrial Zone to professionals of unemployed people in Karantina. At the same time, establish cooperatives as economic alternatives to encourage the production of hand crafts, and homemade food initiatives to provide affordable products in Karantina.
- b.** Representatives of the Waqf can cooperate with potential local investors to introduce new micro businesses that are not available in Karantina; these can include multi-use and temporary structures for gas stations, stationary shops, coffee shops on some of the large lots that the Waqf owns.
- c.** Conduct campaigns that support the circular economy in Karantina.
- d.** Involve different stakeholders from the academic sector, incubator centers, and accelerator parks such as the Beirut Digital District" and the Talal and Madiha Zein AUB-Innovation Park to support young people from Karantina who are interested in startups. This can be done through setting up small working spaces or organizing workshops in and outside Karantina.

##### Provide aid, support, and capacity building.

- a.** The Municipality of Beirut should support local businesses that were affected by the port blast by providing tax exemptions or subsidies.
- b.** Establish a local business committee such as the Karantina Traders Association جمعية تجار الكرنطينا to bring the businesses together to discuss their needs and concerns, as well as coordinate future plans and seek funds and support.
- c.** Encourage NGOs and INGOs through the newly established Neighborhood Committee by the Beirut Urban Lab to support business initiatives with cash, tools, and training workshops. This is especially needed for vulnerable population groups such as Syrian refugees and women.
- d.** Include a representative from the Waqf in the neighborhood committee and engage the community groups in a series of workshops to envision the future use of the vacant lots that are owned by the Waqf.

##### Introduce a soft mobility strategy and public transportation.

- a.** Provide a soft mobility plan and public transportation that can link Karantina to the rest of Beirut.
- b.** Organize and manage the circulation of truck drivers in Karantina. This includes designating off-street parking spaces for the trucks inside the port and creating leisure activities for the drivers.

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# Inclusive and Sustainable Development in Karantina

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# 1. INTRODUCTION

This report presents the strategic diagnosis of inclusive and sustainable development in Karantina, one of the five transversal issues that were identified in the descriptive memory report. The descriptive memory report provided an account of the current land-uses and key factors that restrict development in certain lots; the restrictions include the requirements of the current urban regulations and enclosed military areas. This report provides a more focused understanding of the key issues that impact the potential inclusive and sustainable development in Karantina before and after the port blast.

## Position

Scott Campbell urged urban planners to reconcile three conflicting goals for development: the growth of the economy, the distribution of growth in an equitable manner, and the protection of the ecosystem. Sustainable Development is, thus, a framework that combines environmental resource, property, and development management towards a shared goal (Campbell, 1996). Inclusive development aims to include marginalized and diverse groups of people<sup>1</sup> in social, political, and economic processes that improve human wellbeing and social and environmental sustainability (Gupta, Pouw, and Ros-Tonenb, 2015). Accordingly, it “hinges on the inclusion of excluded people and the utilization of their capabilities” (Johnson and Anderson, 2012). Although both concepts of sustainability and inclusion have been addressed by multiple scholars from different approaches, the main objective of inclusive and sustainable development is to provide a good quality of life for all people, produce spaces that serve them and protect the shared commons, and maintain collective and effective participation in decision-making processes.

It is worth noting that inclusive and sustainable development in the context of urban recovery is not yet explored in research studies. In this study, The Beirut Urban Lab (BUL) tackles inclusive and sustainable development within the framework of urban recovery. It is examined through three main axes: (1) access to development opportunities (identifying the key issues that restrict land development) (2) the diversity and activity of actors that are involved in development or re-development; (3) the quality of infrastructure projects and urban planning tools in Karantina (through assessing some of the key infrastructure and public utility projects and the post-blast masterplans and regulations) and (4) community participation in the development decision-making process.

The aim of this report is to present the main problems that inhibit sustainable and inclusive development and, accordingly, pinpoint opportunities for development or re-development in Karantina to guide the proposed strategic framework for urban recovery.

## Hypothesis

Local landlords, residents, and the Municipality of Beirut have limited opportunities for development in Karantina due to the militarization of space, the current urban planning regulations, and transport and planned yet suspended infrastructural project. These limitations protected Karantina from predatory development but also prevented many of the property owners from returning to the area or developing their lots since the civil war. Additionally, the port blast and the ongoing economic crisis in Lebanon since 2019 exacerbated the socio-spatial and economic deterioration of the environment in Karantina, hindering the potential for urban recovery in the long term. Thus, providing an inclusive and sustainable development strategy, rather than a top-down approach to post-port blast reconstruction is fundamental.

<sup>1</sup> Marginalization is experienced on many levels according to economic class, gender, sex, age, race, ethnicity, and political affiliation.

# 2. METHODOLOGY AND DATA COLLECTION

The diagnosis of inclusive and sustainable development in Karantina is based on the analysis of primary data from questionnaires, interviews, thematic focus group discussions, town hall meetings, and spatial mapping between January and June 2021. The primary data was also compared to existing information on topics that are pertinent to Karantina such as, the local security measures and the militarization of space, and were validated by questionnaires, focus group discussions, and one-to-one interviews.

## SOURCES OF DATA COLLECTION PRIMARY DATA

### 1. Semi-Structured Questionnaires

The citizen scientists administered the questionnaires in person to 545 households from a total of 579 in Karantina. Accordingly, the participation rate was at 94%. 83 interviews out of 140 were also conducted with local businesses.

In this report, the research team extracted different data sets from the responses to the questionnaires, for example, data on lot ownership, vacancy levels and the respondents' future vision for Karantina. The data was geographically referenced on digital maps to generate statistical charts and graphs for comparative analysis between the different sub-neighborhoods.

### 2. Thematic Focus Group Discussions

One of the thematic sessions focused the discussion on inclusive and sustainable development. It was held in May 2021. The discussion revolved around urban trends and phenomena that emerged during the preliminary analysis of the questionnaires, such as the militarization of space due to the civil war and restrictions on land development due to current urban planning regulations and multi-shareholder ownership.

The session hosted business owners, landlords, residents, and a representative of the Al-Khodor Development Association<sup>2</sup> which works on strategies for the removal of military stations in Karantina. The attendees were from different socio-economic backgrounds and localities in Karantina. The session was an opportunity for the attendees to share their experiences in a group setting, inform the research team about their plans for vacant lots, and discuss some of their pressing needs for development and re-development.

### 3. One-to-one Interviews

The aim of the interviews was to understand how trends in lot development and re-development and space militarization in Karantina drive socio-economic, socio-spatial, and cultural transformation. As such, the research team conducted one-to-one interviews with two people who had important roles in changing the land-use patterns in Karantina. The first interviewee was the owner of Dallal Steel<sup>3</sup> who bought several vacant lots in the sub-neighborhood of Al-Khodor before the blast for future development. The second interviewee was the Waqf mediator<sup>4</sup>. He had a major role in transforming the Industrial Zone by attracting investment of small and medium companies - including logistic companies, car showrooms, and recreational center.

<sup>2</sup> “جمعية منطقة الخضرة الامانية” is a local community association that focuses on the holistic development of Al-Khodor sub-neighborhood in Medawar.

<sup>3</sup> Interview with Tawfic Dallal on 26 May 2021

<sup>4</sup> Interview with Naji Obeid in 2021

#### 4. Field Mapping and Field Observations

Site visits, field observations, walk-through assessments, and informal conversations were also part of data collection. The research team discussed and validated the findings from the collected data. They mapped the physical conditions in Karantina - including buildings, four military bases, open spaces, and green spaces - and the military security measures.

#### SECONDARY DATA

The analysis of the data also relied on secondary sources such as: (1) historical maps that show the stages of development of lots in Karantina, (2) articles and documents about the presence of military bases, and (3) the descriptive memory analysis of Karantina that The Beirut Urban Lab conducted after the port blast. The descriptive memory report included a general profile of Karantina that guided the preliminary findings of the research. The report located the impact of the port blast within the larger urban trends that influenced the nature and development of Karantina over the past three decades.

#### METHODS OF ANALYSIS

The methods of analysis that were used in this section of the report included spatial analysis, comparative analysis, and statistical analysis. A comparative analysis was conducted to explore ownership patterns across the three sub-neighborhoods and their potential to facilitate or impede development in Karantina. Spatial analysis was important to assess the different elements of the urban fabric and map the geographical distribution of the vacant, militarized, and unbuildable lots according to the current and proposed urban planning regulations. The research further mapped and analyzed the security mechanisms and their impact on restricting future development. The statistical analysis of findings from the questionnaires was used to explore the potential opportunities for development in Karantina by assessing the willingness of the residents to remain in the area and develop their lots. Statistical analysis was also used to study a number of approved construction permits in Karantina and Beirut over the years. The collected data was located and spatialized using the mapping software ArcGIS.



## 3. PRELIMINARY FINDINGS FROM THE DESCRIPTIVE MEMORY REPORT

This section of the report presents the preliminary findings from the descriptive memory report. The findings showed that the constraints to the development or re-development of lots in Karantina and the spatial characteristics and urban trends negatively impact the built and socio-economic environments. They resulted in development or re-development projects that were not inclusive or sustainable. However, through private initiatives, a few projects before and after the port blast focused on public spaces or adopted a long-term approach to urban recovery. The key findings are detailed below.

#### Restrictions on Development

The descriptive memory report showed that development or re-development is not possible in some of the vacant lots and buildings in Karantina because of the presence of military bases, the regulations in the zoning plan for Beirut, and the suspended public expropriation of private property.

#### Militarization

Karantina is heavily impacted by the presence of four military bases that restrict accessibility to sidewalks and streets. The military bases also prevented property owners either from returning to their buildings or developing their lots since the civil war ended.

#### Dilapidated Urban Environment

Karantina is characterized by a dilapidated urban environment including most buildings. Open spaces - including sidewalks and streets - are either deteriorated or inaccessible because of the current urban planning regulations and the military encroachment on space. Additionally, Karantina lacks key services such as transport and infrastructural networks and facilities like schools that are necessary for a better quality of life of people.

#### High Levels of Pollution

High levels of pollution and congestion rendered Karantina an unhealthy place to live. This is due to the presence of a solid waste management plant and a landfill that collected the debris of destroyed buildings after the port blast, as well as truck traffic. The landfill in Bourj Hammoud and the integrated wastewater management systems also negatively affect the odor and quality of air in Karantina. Polluted water also spills into the Beirut River that borders Karantina to the east.



# 5. DIAGNOSIS TRACKS

Inclusive and sustainable development in Karantina were diagnosed in terms of three key dimensions: (1) access to development opportunities, (2) the the quality of infrastructural, urban planning projects, post-blast masterplans, and urban planning regulations, and (3) community participation in the decision-making on development projects.

## 5.1 ACCESS TO DEVELOPMENT OPPORTUNITIES

This section of the report identifies and assesses the key issues that restrict access to land and development opportunities. It also assesses the diversity and activity of the actors that are involved in development or re-development projects.

### A. Restrictions on Land Development

The results of the questionnaires showed that there is a high concentration of undeveloped and vacant lots in the subneighborhood of Al-Khodor where many old buildings were destroyed during the civil war (Figure 2).

Al-Khodor	Al-Senegal	Al-Saydeh	Industrial Zone
22	0	1	0

Figure 2: Distribution of vacant lots that are owned by the residents across the different sub-neighborhoods. Source: The Beirut Urban Lab, 2021.

Figure 3 explains the different reasons that limit the reconstruction, development, and sale of these lots. Most of the lots are occupied by the Lebanese army<sup>7</sup>, while the rest are either restricted by the requirements of the zoning plan for Beirut, owned by multiple shareholders, or suspended for use due to incomplete expropriation by the state. The key factors that restrict development are discussed in the following pages:

#### Key factors that restrict development in Karantina

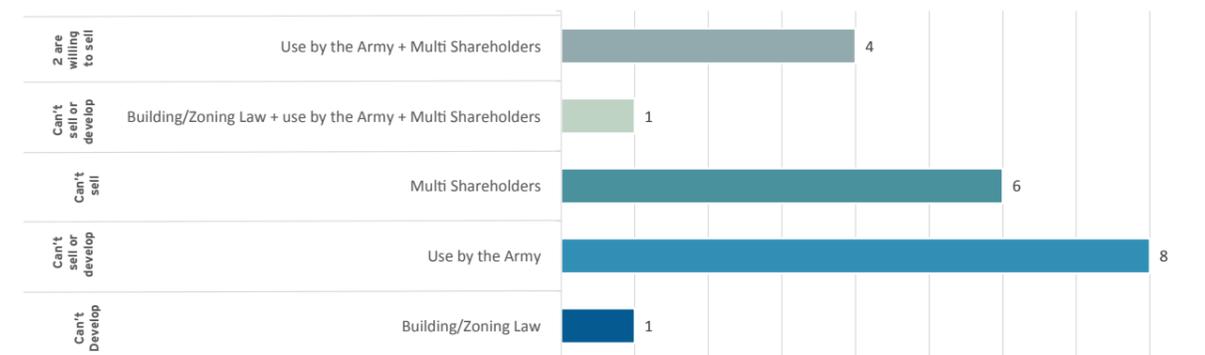


Figure 3: Key factors that restrict development in Karantina. Source: The Beirut Urban Lab, 2021.

<sup>7</sup> Some military bases contain vacant lots and buildings that are occupied by the army. Hence, people are not allowed to develop their lots and access or reuse their buildings.

### A.1 The Zoning Plan for Beirut

The regulations in the zoning plan for Beirut<sup>8</sup> are prescriptive with predefined norms and standards and do not address performative issues such as environmental quality in the evaluation of new buildings during the permit application process. Consequently, building permit applications need to comply with the requirements of the zoning plan and the construction law despite their impact on the social, economic, and environmental fabrics of the city. Karantina is in zones 3, 7, and 9 (Figure 4 and 5). Zone 7 extends to Mar Mikhael and allows for a 70% footprint and a total exploitation ratio of 3, and is mostly threatened by the LINORD project. Zone 3 also extends to Mar Mikhael and allows for a 60% footprint and total exploitation of 4 while any type of construction in zone 9 is prohibited. Zone 9 includes lots that are near the Port of Beirut and the Beirut River.



Figure 4a: Distribution of zones in Karantina, and an overlay of LINORD project (highlighted in gray). Source: The Municipality of Beirut, modified by The Beirut Urban Lab, 2020.

ZONING OF BEIRUT CITY												
ZONES	LOT PARCEL AFTER DIVISION			CONSTRUCTIBLE PARCEL			MINIMUM RECESS OF FAÇADE FROM:		PERCENTAGE OF CONSTRUCTION	COEFFICIENT OF EXPLOITATION	MAX.HEIGHT OF BUILDING	
	min. surface	min. facade	min. depth	min. surface	min. facade	min. depth	Road	Site limit back/side				
1	250 m <sup>2</sup>	10m	10m	100 m <sup>2</sup>	9m	7m	4.5m		100%	6		
2	250 m <sup>2</sup>	10m	10m	100 m <sup>2</sup>	9m	7m	4.5m		70%	5		
3	300 m <sup>2</sup>	12m	12m	120 m <sup>2</sup>	10m	8m	4.5m 6m (4.5<L<9)		60%	4		
4	300 m <sup>2</sup>	15m	15m	150 m <sup>2</sup>	10m	8m	4.5m 6m (4.5<L<10) 2m from edge L>10)		50%	3.5		
5	500 m <sup>2</sup>	17m	17m	250 m <sup>2</sup>	12m	14m	Cornice 4m other roads 3m	2.5m	40%	2.5		
6	400 m <sup>2</sup>	15m	15m	200 m <sup>2</sup>	12m	8m	4.5m 6m (4.5<L<10) 2m from edge L>10)		50%	2.5		
7	250 m <sup>2</sup>	12m	12m	100 m <sup>2</sup>	9m	7m	4.5m 6m (4.5<L<2 (10m from edge L>10)		70%	3		
8	AI	1200 m <sup>2</sup>	30m	35m	800 m <sup>2</sup>	25m	25m	depends on map with min. recess of 3m	6m	30%	0.9	17m
	AI4-	900 m <sup>2</sup>	25m	30m	750 m <sup>2</sup>	20m	20m		4.5m lat 6m back	40%	1.4	17m
	Spec.	1200 m <sup>2</sup>	30m	35m	1200 m <sup>2</sup>	30m	35m	depends on map with min. recess of 4m	5m lat 8m back	30%	2	
	II a	1200 m <sup>2</sup>	30m	40m	1200 m <sup>2</sup>	30m	40m		5m lat 8m back	20%	1.25	0.1- ground, 1.00 floor, 0.15 roof
	II b	1200 m <sup>2</sup>	30m	40m	1200 m <sup>2</sup>	30m	40m		5m lat 8m back	25%	1.5	0.1- ground, 1.25 floor, 0.15 roof
II c	1200 m <sup>2</sup>	30m	40m	1200 m <sup>2</sup>	30m	40m	5m lat 8m back	25%	1.75	0.1- ground, 1.25 floor, 0.15 roof		
9											CONSTRUCTION IS FORBIDDEN	

Figure 4b: Regulations for the different zones in Beirut. Source: The Municipality of Beirut, 2021.

<sup>8</sup> Except for the Beirut Central District, a zoning plan at the city level guides urban development in the neighborhoods of Beirut

### Unbuildable Lots



Figure 5a: Lot size and Unbuildable lots in Karantina. Source: The Beirut Urban Lab, 2020.

### Number of Unbuildable lots per sub-neighborhood

Al-Saydeh	Al-Senegal	Al-Khodor	Industrial Area
10	4	23	6

Figure 5b: The number of unbuildable lots by law per sub-neighborhood, Source: The Beirut Urban Lab, 2021.

The zoning plan for Beirut specifies minimum dimensions and surface area for buildable lots. In Karantina, there are 42 lots that are classified as unbuildable since they do not meet the minimum required dimensions. For instance, in zone 3, the minimum length of the length of the façade of a buildable lot should be 10 meters and the minimum depth should be 8 meters, while in zone 7 the minimum façade should be 9 meters and the minimum depth should be 7 meters. Accordingly, lots that can be developed should have a minimum surface of 120 meter-squares in zone 3 and 100 meter-squares in zone 7. Figure 5 shows the highest concentration of vacant and unbuildable lots is in Al-Khodor sub-neighborhood, mostly built then destroyed during the civil war (Figures 6 and 7).

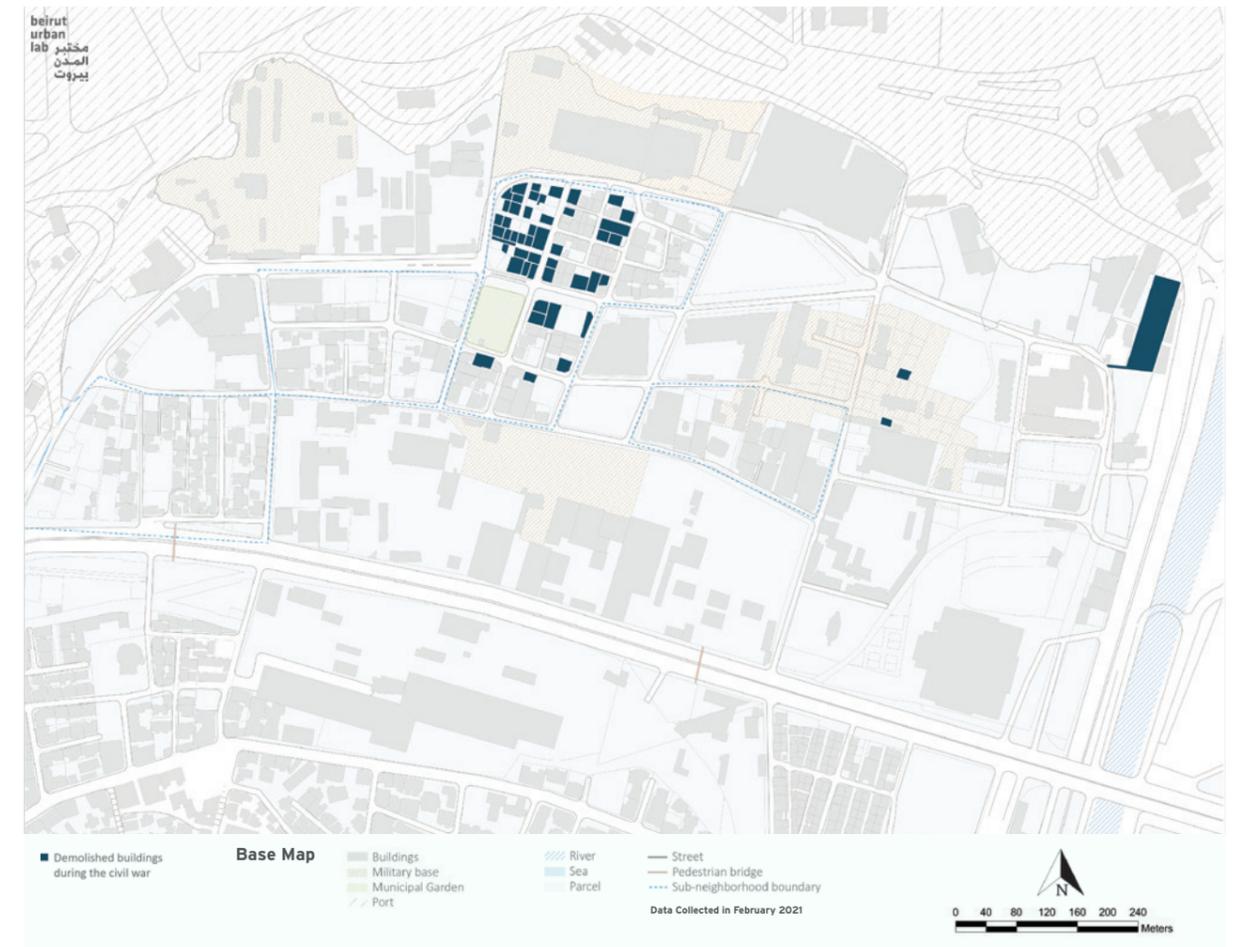


Figure 6: Lots with buildings demolished during the civil war "based on data from the Lebanese Army". This map excludes the demolished buildings from some of the lots occupied by the Army. Source: The Beirut Urban Lab, 2021.



Figure 7. Vacant lots that is located in front of the Karantina Public Park. Source: Ali Ghaddar, 2021.

The landowners of the unbuildable lots who attended the focus group discussions and the first community meeting mentioned that they prefer to amend the regulations of the zoning plan or sell their lots to a developer who can afford the administrative costs of land pooling. Currently, many of the vacant lots operate as public spaces for the residents of Karantina (Figure 8).



Figure 8. Some of the residents of Karantina spending their time in the vacant lots in Al-Khodor. Source: Ali Ghaddar, 2021.

### Lot Typology: Diversity of Lots by Size, Shape, and Ownership

The typology of lots in Karantina varies by size, shape, and ownership. Some lots in the residential clusters are small and are owned by residents or the Waqf. They accommodate residential buildings or are vacant. Other lots in the Industrial Zone are large and have multiple owners from outside Karantina - including the Waqf and the Municipality of Beirut - and include industrial uses or military bases (Figure 9). The size of lots varies from 30 to over 700 square-meters. For instance, the size of the municipal lot that is adjacent to the highway is around 597 square-meters, while the size of the majority of small lots in Al-Khodor does not exceed 100 or 150 square-meters (Figure 5).

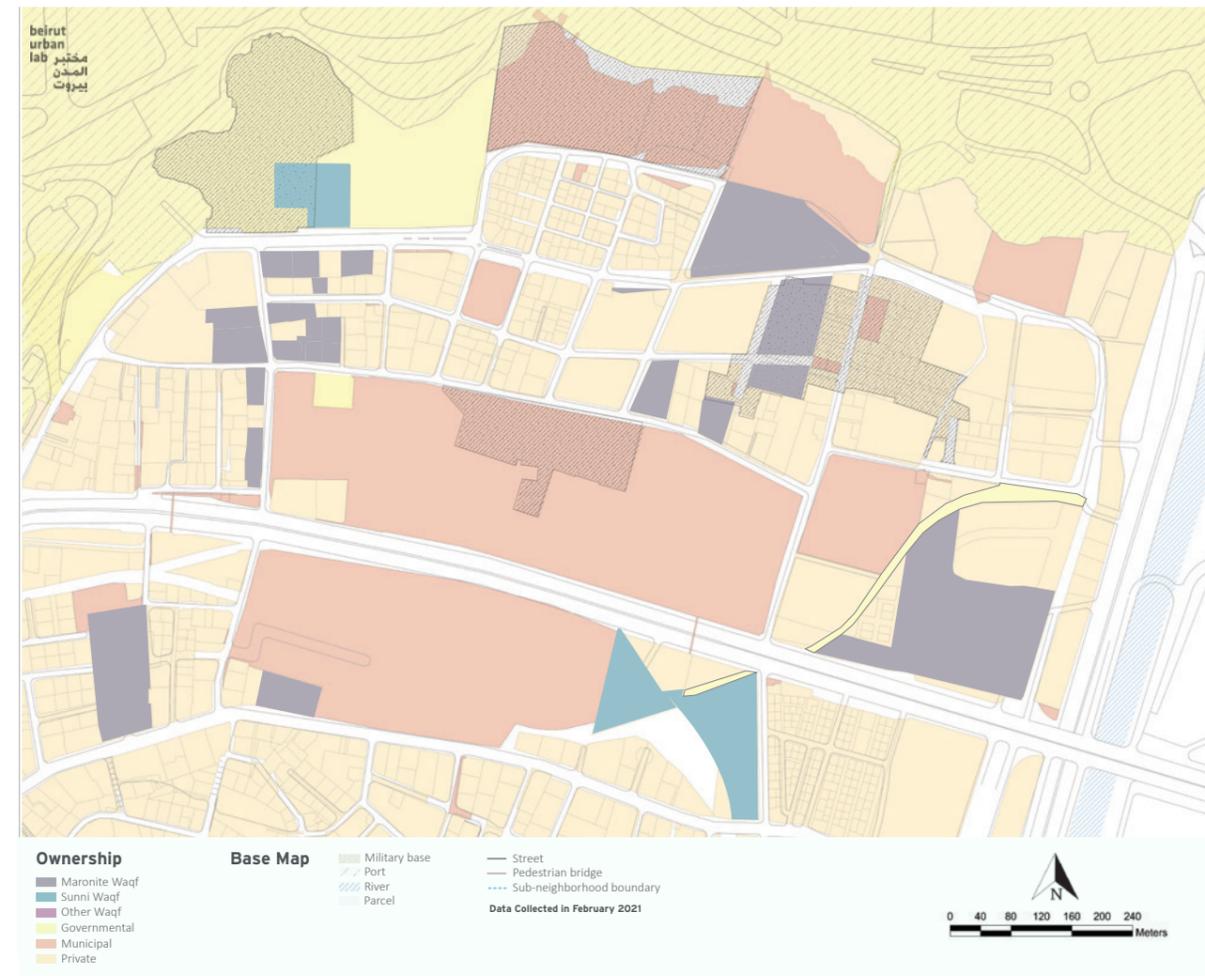


Figure 9: Lot ownership in Karantina. Source: The Beirut Urban Lab, 2021.

Various factors played a role in shaping the sizes of lots in Karantina. The first factor is ownership (Figure 9). For example, the Municipality of Beirut and the Waqf safeguarded their lots from development or subdivision. In addition, despite the implementation of the Charles Helou Highway which divided the large municipal lot of the train station in two, the section of the lot within the boundaries of Karantina maintained its form.

The second factor is the slow pace of developers pooling small lots in Karantina in comparison to other areas in Beirut. This is due to the lengthy and costly administrative process for land pooling and the complexity of obtaining the consent of multiple shareholders. As such, developers have not been active in acquiring vacant, small, or unbuildable lots in Karantina. However, in this study, the diversity of vacant lots according to size, shape, density, ownership is an opportunity to develop a strategic neighborhood plan that is inclusive and sustainable.

### A.2 Law No. 322/1994

The law in Lebanon and the Taif Agreement in 1989 stipulated the right of displaced people to return to Lebanon after the civil war. Law No. 322 was issued in 1994 to exempt the displaced people from paying taxes and fees for rebuilding their demolished houses. However, the law applied to the restoration of villages and towns and not to Beirut (2015, جمعية منطقتي الخضر الانتمائية). Official documents for the ownership of 183 lots mention that the total area amounted to 157,265 square-meters. However, reconstruction did not happen and many of the residents who left Karantina did not develop their lots since the civil war (جمعية منطقتي الخضر الانتمائية, 2015).

### A.3 Multiple Shareholders Lots

Different lots and buildings have multiple owners. For instance, one lot may be owned by various shareholders from the same family (Figure 10) and across generations. Its redevelopment requires the approval and compensation of all the owners. Additionally, the second and third generations of shareholders prefer to move out of Karantina and rent their properties to incoming Syrian refugee families instead of resolving property right disputes that require time and complex negotiations<sup>9</sup>.



Figure 10. Property owned by multi shareholders across generation groups in the same family. Source: Ali Ghaddar, 2021.

<sup>9</sup> One of the community members during the focus group discussion on "Affordable and Inclusive Housing in Karantina" mentioned that they prefer to relocate and secure loans from the Public Housing Corporation instead of solving property issues.

### A.4 Un-expropriated Lots

Some of the streets in Karantina are partially public due to the incomplete expropriation of lots for suspended infrastructural projects. This is one reason behind the absence of sidewalks and urban furniture, especially in Al-Khodor sub-neighborhood. For instance, many sections of the lots to the left of Al-Mashgara Street are not expropriated (highlighted in Green in Figure 11) (Figure 12). However, the eastern extension of the street is the property of the owners of the adjacent lots (highlighted in Blue in Figure 13) (Figure 14). A private alleyway formed after subdividing the initial lot into smaller ones for development and provides car and pedestrian access to the residents.

While The Beirut Urban Lab was applying to a permit to implement the public space intervention<sup>10</sup>, the Municipality of Beirut did not approve any intervention on the western side of Al-Mashgara Street and on the private alleyway. It is worth noting that both street and alleyway are used for vehicular activity, pedestrian flow, and social gatherings. Additionally, in Lebanon, public ownership is a requirement for obtaining a permit from the municipality to upgrade streets and alleyways. This requirement restricts plans to upgrade a dilapidated street if it is not publicly owned despite its current function as a public space.



Figure 11. The final design approved by the community. Source: The Beirut Urban Lab, 2021.

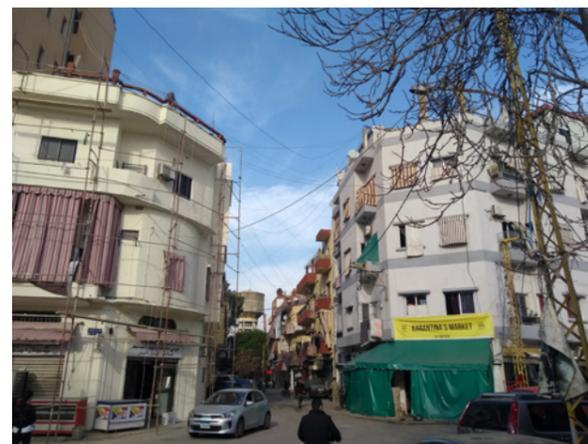


Figure 12. Mashghara Street also known as Al-Khodor Street. Source: Ali Ghaddar, 2021.



Figure 13. The final design that the Municipality of Beirut approved for implementation. Source: The Beirut Urban Lab, 2021.



Figure 14. The private but shared alleyway. Source: Ali Ghaddar, 2021.

### A.5 Militarized Lots

“Return the lands to their displaced owners<sup>11</sup>  
يرجعوا الأراضي لأصحابها المهجرين



Karantina currently hosts four military bases (Figure 15). Official documents from the mukhtar revealed that 71 private lots are used by the army (Figures 16 and 17). However, the field work and mapping showed that the boundaries of the military bases extend beyond these lots (Figure 15). The residents and landlords who left Karantina during the civil war or immigrated cannot access their buildings or redevelop their vacant lots. Hence, the militarization of space prevented the previous residents to return to Karantina and delayed recovery since the civil war.

<sup>10</sup> The Beirut Urban Lab research team and District D engaged community members in co-designing the streetscape through multiple workshops. The team's approach was participatory and aimed at understanding the dominant uses, challenges, and needs of the community, but most importantly, the significance of this space which was described by the residents as "الربعة" or affinity in English.

<sup>11</sup> A.H.W. (21-12-2020), (Yiyah Shihadeh, Interviewer).

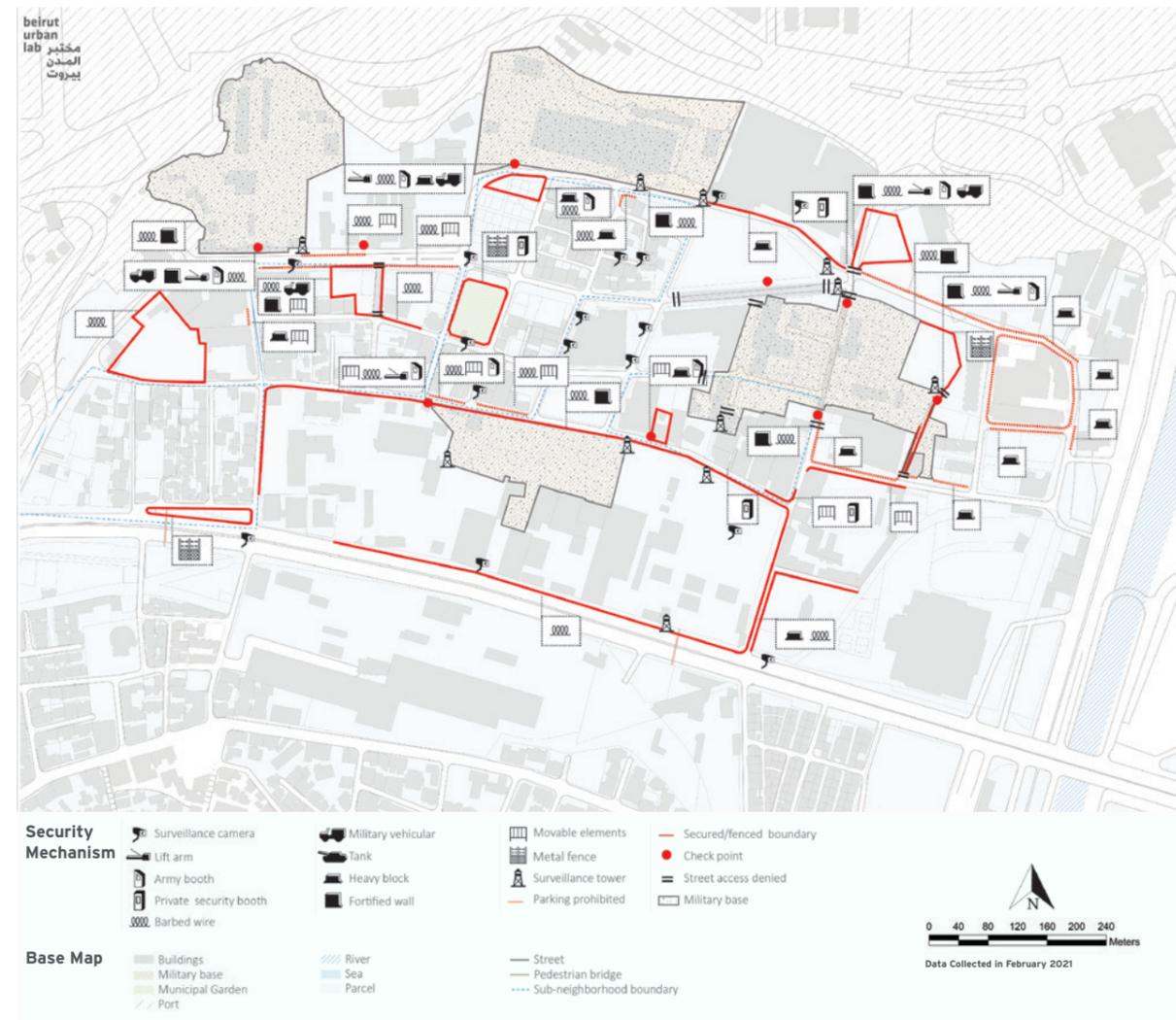


Figure 15: Security map of Karantina. Source: The Beirut Urban Lab, 2021.

It is worth mentioning that after the civil war, a neighborhood committee was formed to negotiate the withdrawal of the army from the military bases in Karantina, which are still occupied until today. The Karantina Displaced Committee<sup>12</sup> sent different memos to the army after 1990 and received the following initial response in 2009: “The Army Command has taken the necessary measures to start constructing a new barrack for the benefit of the property owners whose lots are currently used by the military, and it will be vacated as soon as this barrack is completed” (2015, جمعية منطقة الخضرا الانمائية). However, the army later argued that for security reasons and the need to protect the eastern entrance to Beirut prevent them from evacuating. As a result, the displaced residents were not able to return to Karantina.

12 The committee is headed by the lawyer Hassan Matar.

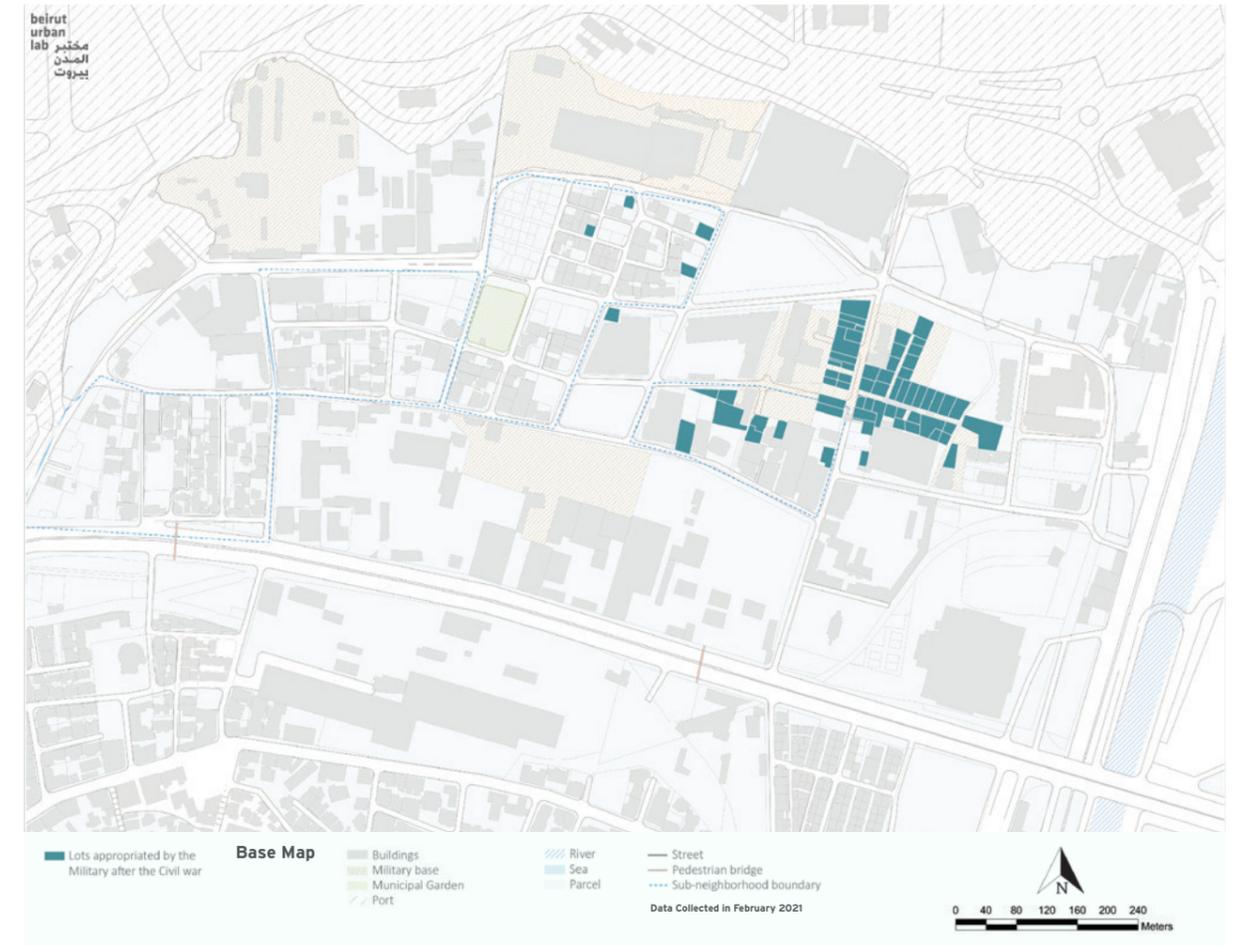


Figure 16: Private lots used by the army, based on data from the Lebanese Army. Source: The Beirut Urban Lab, 2021.



Figure 17. A view of the lots and buildings that are occupied by the army from; photos taken from the roof of the Sleep Comfort building. Source: Ali Ghaddar, 2021.

However, Hassan Matar, the lawyer who led the committee, mentioned the following: “Does Beirut’s security depend solely on the Karantina area? This is not true, it is forbidden for the people of the area to return to it” (2015, جمعية منطقة الخضرا الانمائية). The Lebanese Ministry of the Displaced was not effective in resolving the problem that they attributed to the political and security conditions in the country and their staff members mentioned that their term in office will end before the problem is resolved.

During the thematic group discussion on transversal issue IV on Inclusive and Sustainable Development in Karantina, the lawyer Fouad Matar<sup>13</sup> mentioned that “We as a committee met with several political leaders and official figures and they all are aware of our case and legal rights”. The lawyer also mentioned that “the residents want their lands back, but they do not want to press legal charges on the military, and if no legal actions are taken, the situation is not going to change”. Additionally, the residents prefer not to clash with the army and would rather resolve matters peacefully. Conversations with residents during the focus group discussion revealed that they feel a sense of guilt if any confrontations happened. One resident said “We want the army to move without problems”<sup>14</sup>.

Accordingly, on the one hand, any urban planning project or intervention at a neighborhood scale will face challenges due to the heavy presence of the military and the partial return of the residents after the civil war. On the other hand, the presence of the military protected many lots from development and can be considered as an opportunity for property owners to implement inclusive and sustainable projects in the future.

Moreover, during a one-to-one interview, Naji Obeid<sup>15</sup>, the mediator of the Maronite Waqf, pointed out that after the civil war a decree was issued to put Karantina under study due to the presence of military bases. As a result, all new building permits needed the approval of the Directorate General of Urban Planning. It is worth noting that one of the citizen scientists pointed out that there are ownership disputes over the lots with the Waqf.

## B. Actors Involved in Development or Re-development

### B.1 Real Estate Developers and Private Investors

The marginalization of Karantina from the rest of Beirut, the presence of unbuildable lots, and the lots occupation by the army contributed to safeguarding the area from real estate developers and increases in rent prices. As a result, real estate development in Karantina is limited in comparison to other areas in Beirut. The descriptive memory report mapped the construction of a limited number of buildings since 1998, including: new office buildings, commercial and trade warehouses, furnished apartments, sports center, and galleries (Figure 18).



Figure 18. Graph of building permits in Karantina and Beirut based on data from the Municipality of Beirut. Source: The Beirut Urban Lab, 2021.

Figure 19 shows that building permits and property speculation is limited and below the average in the rest of Municipal Beirut. As a result, Karantina remains a low-income area where refugees have a relatively secure access to housing units.

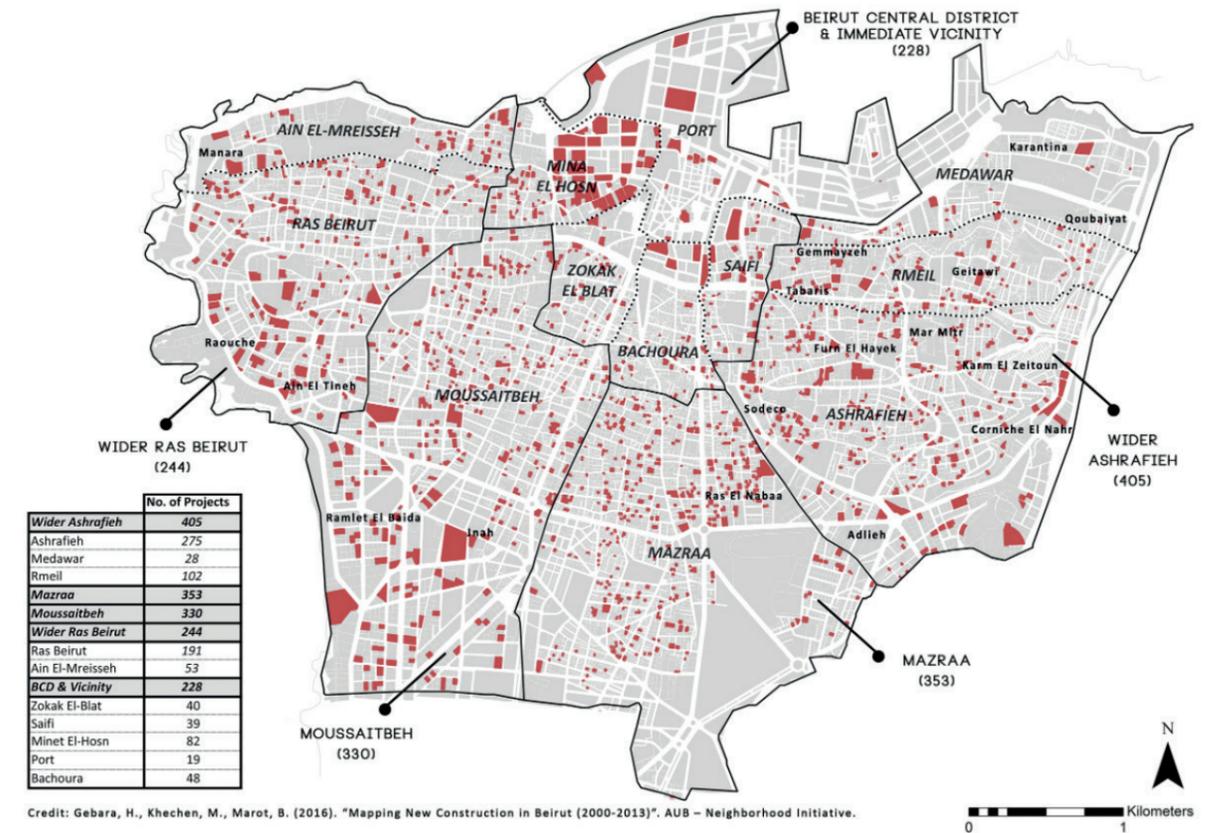


Figure 19. Location of new constructions in municipal Beirut (2000-2013). Source: Gebara, Khechen, and Marot, <https://www.jadaliyya.com/Details/33751>, 2016.

## Profile of Real Estate Developers

There is a limited number of real estate developers that are active in Karantina, including Nassouh Jaber and Jihad Al-Arab, who aim to invest money in lot development. Nassouh Jaber is the real estate developer of a lot in the Industrial Zone that he turned into furnished apartments. Jihad Al-Arab is a contractor who acquired lots in the Industrial Zone, a typical activity for developers who regards lots as safety deposit boxes for future development (Figure 20).

Additionally, the actor who is contributing the most to the development of Karantina is the mediator of the Waqf. His profile and approach to development are discussed in the next section of this report. The profiles of these developers reflect the types of developments that are exclusive and target high-income people that, if not controlled, can lead to gentrification or rapid real estate development in Karantina. As such, the following section of the report presents a narrative of a private investor who aims to develop vacant lots in Al-Khodor sub-neighborhood for future business opportunities.

13 Member in “جمعية منطقة الخضرة اللبنانية”

14 A resident from Al-Khodor sub-neighborhood during the thematic group discussion on Inclusive and Sustainable Development.

15 Interview with Naji Obeid in 2021.

### Narrative of a Private Investor

Six years ago, Mr. Tawfik Dallal started investing part of his savings in lots in Al-Khodor sub-neighborhood for future business opportunities after his retirement. In 2016, he bought 12 lots in Al-Khodor sub-neighborhood next to the park and the public hospital. Some of these lots were previously built before they were demolished during the civil war. The lots are mostly small in area. 10 out of the 12 lots are located within the area of the LINORD project, of which 5 lots are directly impacted by the proposed highway. The highway imposes a 25% deduction in the area of impacted lots. To avoid the 25% loss from the total area of the 10 lots if pooled, he refrained from pooling for the time being. Furthermore, he hired a lawyer to facilitate the purchasing and registration processes which extended over 5 years. The lawyer managed the negotiations with the shareholders and was able to complete the registration process before the port blast.

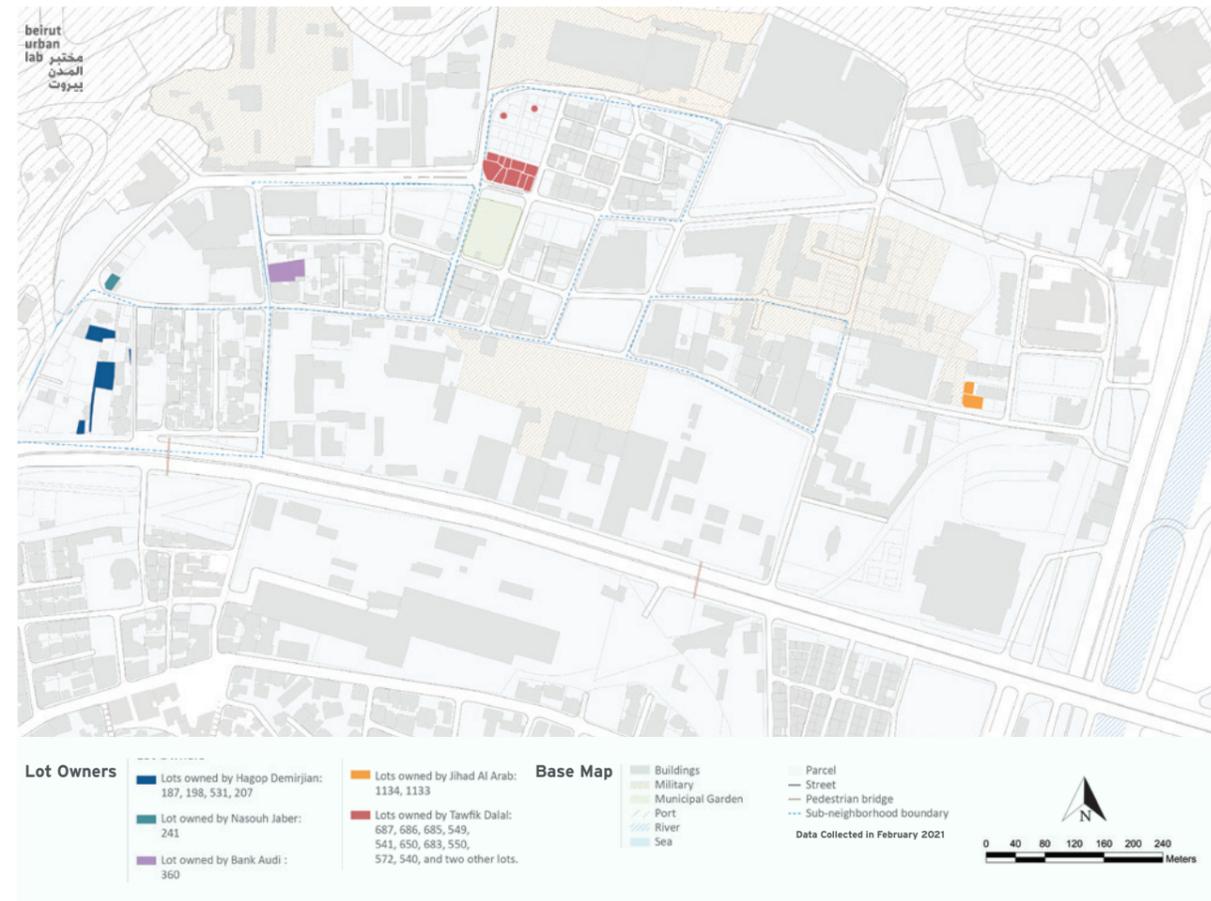


Figure 20: Lots owned by high-profile developers. Source: The Beirut Urban Lab, 2021.

According to Mr. Dallal, the low price of the lot in comparison to other areas in Beirut is the key factor that attracted him to invest in Karantina. It is worth noting that an investor fenced the lot before the blast and transformed it into a parking space. He signed a contract with Dallal for three years with a minimal profit. After the three years, the contract between Mr. Dallal and the investor was not renewed, and the lot was used as a temporary work space with tents for the NGOs. The lot is currently vacant and appropriated by children.

In addition to the 10 lots, the remaining 2 lots in the same block are small and serve as space for future expansion (Figure 20). Development is not possible in the adjacent lots unless they are pooled with the 2 lots that Mr. Dallal owns. Mr. Dallal also plans to attract car brands to Karantina, building on the trend of new business ventures in automobile showrooms in Karantina since 2018. It is important to note here that findings from the questionnaires and community meeting discussions showed that these new businesses are exclusive and do not hire employees from Karantina<sup>16</sup>.

<sup>16</sup> Responses to the questionnaires showed that 70% of the residents are unemployed. This does not take into account child labor.

### B.2 Waqf

As mentioned in the report on transversal issue II on Cultural and Economic Vitality in Karantina, the Maronite monasteries' endowment (Waqf) is a major landowner (Figure 9). Lots that are owned by the Waqf are managed by a mediator who is upscaling the area along Iben Sarjoun Street (Figure 21). This can contribute to the future socio-economic transformation in Karantina. Vacant lots and buildings that are owned by the Waqf are opportunities for strategic intervention that can host urgently-needed projects such as schools and affordable housing units.

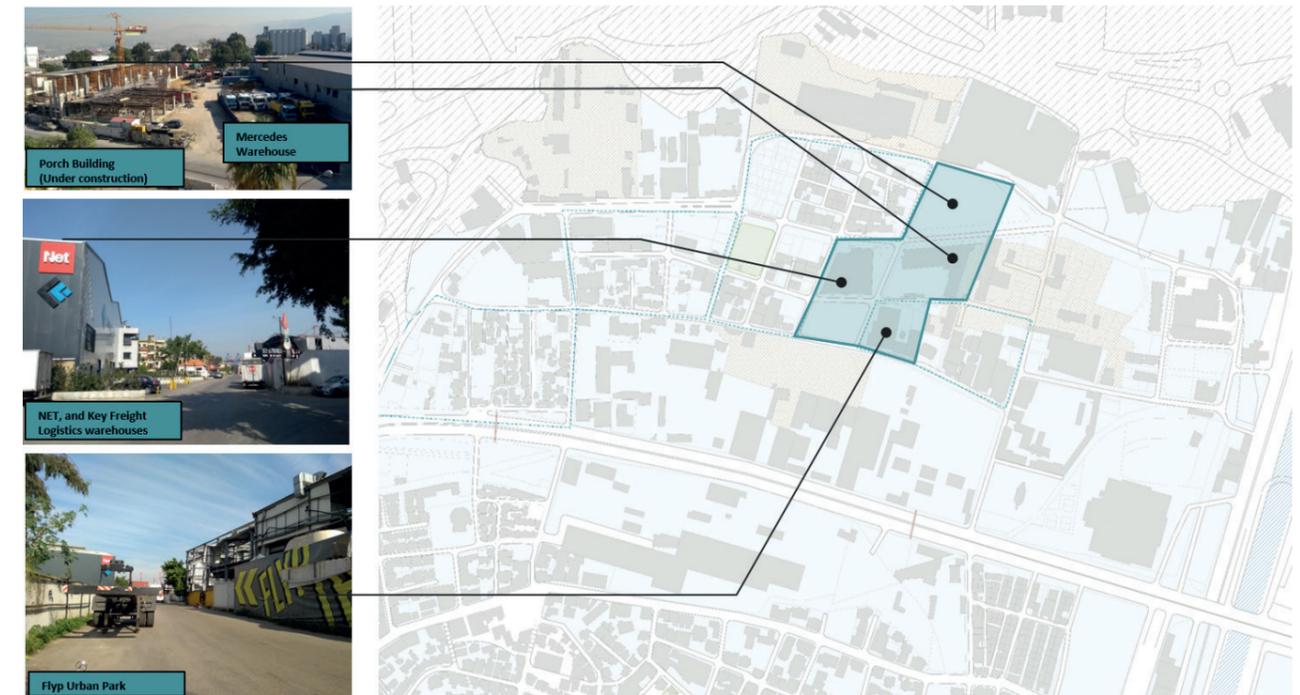


Figure 21: Types of new businesses along the Iben Sarjoun Street. Source: Ali Ghaddar, 2021.

### A Brief Snapshot of the Profile of the Mediator

The relationship between the mediator and the Waqf dates to 1990 when members of the monastery approached him to resolve various property issues in appraisal and selling agreements. Later on, the Maronite monasteries appointed Naji Obeid to manage their Waqf land and properties in 1995. During the one-to-one interview, he explained that his interest in Karantina dates to the early 1990s, saying: "With the beginning of the relationship with the monasteries, I felt the importance of this area in the future." As such, he implemented several development projects in the lots owned by the Waqf. In the 1990s, he planned to build a motel on the lot where the building owned by Electricity of Lebanon (EDL) is located (west Karantina). The agreement with the EDL was followed by a long-term tenure contract with Tanous Steel that constructed warehouses on lots along Iben Sarjoun Street. The warehouses transformed the stretch of the street into a hub for high industrial activities that attracted blue-collar workers. In 2014, the families that own the warehouses decided to relocate to Zgharta in the north of Lebanon. Accordingly, the mediator decided to redevelop the lots into high-end commercial activities that can attract logistic and car companies.

During the interview, he envisioned Karantina as an exclusively Industrial Zone due to the presence of industrial services and facilities and its proximity to the port. It would be dedicated to automobile showrooms, storage warehouses for the imported cars from the port, and logistic companies. He plans to

attract more car companies to Karantina, such as Nissan, Peugeot, Citroen, Renault, and BMW. Regarding the transactions, the mediator pointed out that he gets a commission on the number of transactions between the endowment and the second party as follows:

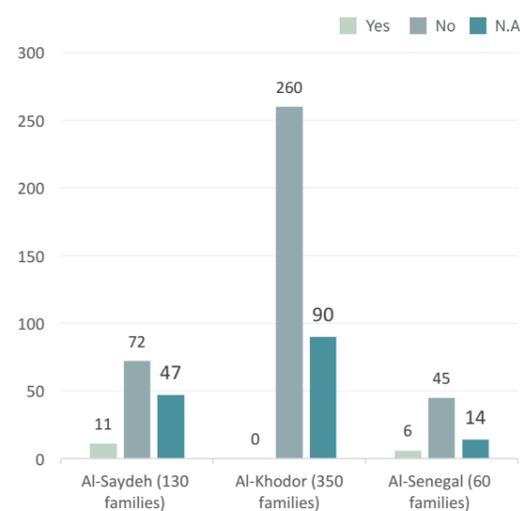
1. He takes 10% of the contract value if the lease contract is between the Waqf and a private investor.
2. He pays rent to the Waqf and then sublets the land to investors for higher price.

It is important to note that his interest in real estate is broad enough to include private lots owned by various Beiruti families in Karantina. He manages agreements in lease contracts to invest in lots for a period of time before they are released to new businesses or companies.

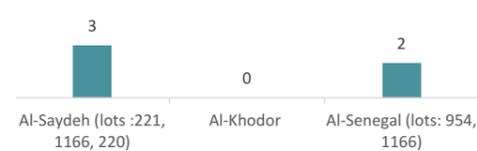
### Land and Properties that are Owned by the Waqf

A study conducted at the Lebanese University in 2013 showed that the Maronite Waqf owns 20 lots in Karantina mostly located in Al-Saydeh and Al-Senegal sub-neighborhoods (Figure 9). However, the answers to the questionnaires showed that the Waqf owns large lots in the Industrial Zone with a few buildings in the predominantly Christian sub-neighborhoods (Figures 22 and 23). These buildings are mainly used as residential units for low to middle-income residents.

Does the apartment belong to "Waqf" ?



Lots owned by the "Waqf"



Figures 22 and 23: Waqf property distribution among the different sub-neighborhoods by apartment (left) and lots (right), according to the answers of the questionnaires.. Source: The Beirut Urban Lab, 2021.

### B.3 Non-governmental Organizations (NGOs) and International Non-governmental Organizations (INGOs)

The role of NGOs and INGOs in the development of Karantina became more prevalent and intense after the port blast. The descriptive memory report showed three key socio-spatial modes of intervention that were adopted in the areas that were impacted by the blast including Karantina:



#### Immediate and short-term building repairs

This type of intervention targeted households and included the following types of work: cladding and paint, repair of walls and openings, plumbing, and waterproofing among others. The aim was to fix the damaged parts of buildings so people can return as soon as possible. However, the absence of common criteria for repairs and coordination between the different NGOs and INGOs during the planning and implementation process resulted in an unequal distribution of efforts. Although some efforts were promising and effective, especially by the organizations that adopted a zone recovery intervention, however, the results of the questionnaires, one-on-one interviews, and observations in Al-Khodor sub-neighborhood show that residents were not satisfied with the quality of work. The unequal distribution of repair efforts, aid, and compensations resulted in tension among the residents.



#### Zone Recovery Intervention

Some of the NGOs and INGOs preferred to upgrade a specific zone or cluster of buildings rather than implement punctual or short-term interventions. For example, Offre Joie worked on the repair and reconstruction of buildings in Zone 8 in Al-Saydeh sub-neighborhood. The centrality of actors in the repair and construction process was time effective but the type and quality of work was guided by minimum common standards. NGOs and INGOs were able to build trust with the local communities and attracted funds for renovating or constructing old buildings that were depilated before the blast. Some discrepancies can be observed in the quality of the work especially in old heritage buildings. Offre Joie's interventions were also limited to Al-Saydeh sub-neighborhood which are predominantly Christian and did not extend to other sub-neighborhoods which residents are predominantly Syrian refugees and residents from Arab tribes.



#### Long-term Recovery

Two levels of intervention characterize urban recovery in Karantina. The first level of intervention is holistic at a neighborhood scale and adopts a multidisciplinary approach in proposing a community-led and long-term urban recovery - one that is all-encompassing and focuses on the physical, social, political, legal, and economic aspects of a place.

The second level of intervention is punctual and aims to intervene in specific areas of public space that would plug into a wider open space network. It should be noted that there are no urban design guidelines for the various actors that are intervening in the public spaces in Karantina. This impacts the consistency of the design elements from one location to another. Both levels of intervention are strategic and viable since they promote and enhance inclusive and sustainable development. They aim to recover the shared spaces that bring people together and improve the quality of life. They focus on the community rather than the household scale and succeed in maintaining socio-spatial practices in Karantina and activating the degraded shared spaces in the sub-neighborhoods. Figure 24 depicts examples of community projects by Civil Society Organizations, Non-Governmental Organizations, and International Non-Governmental Organizations.

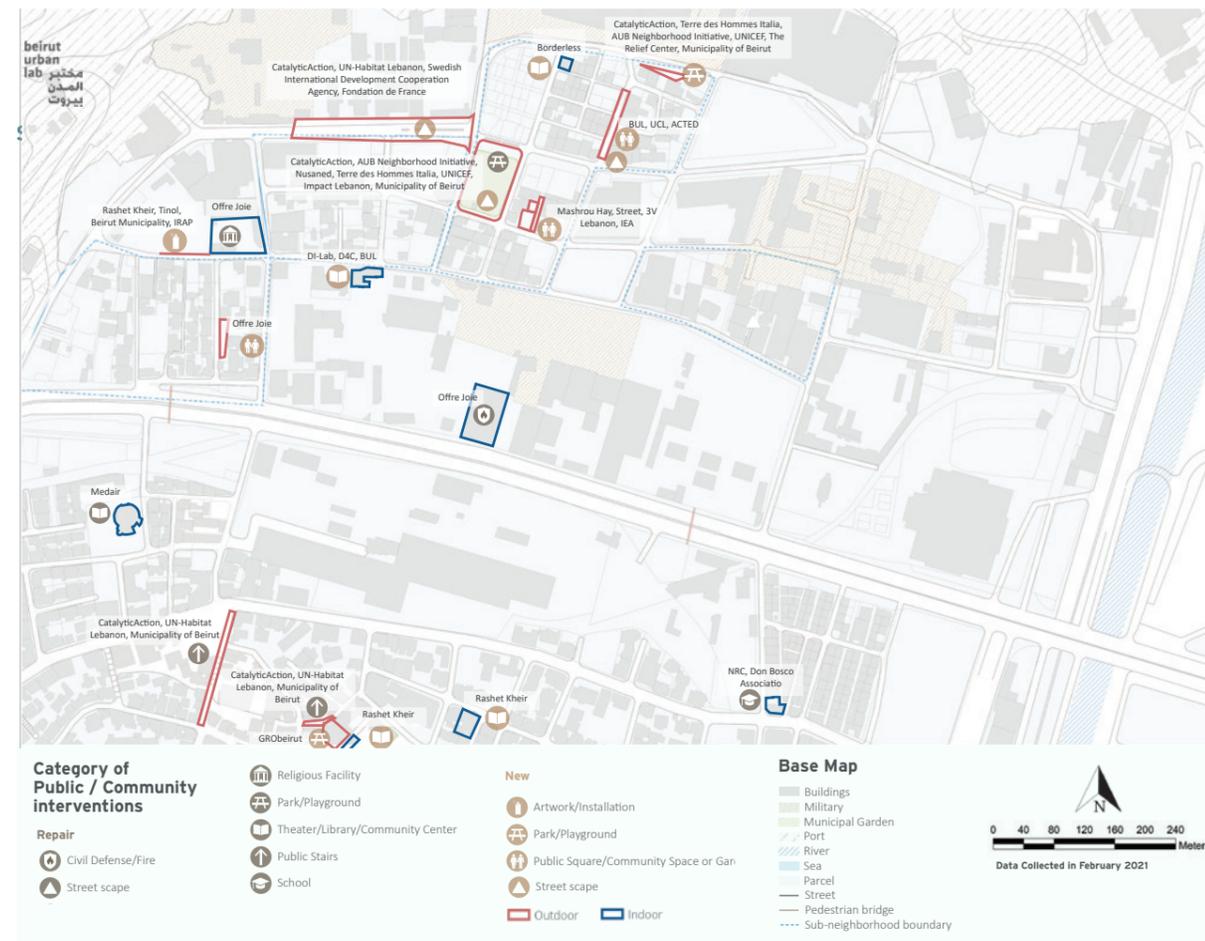


Figure 24: Key actors who intervened on the public spaces in Karantina after the port blast. Source: Beirut Urban Lab, 2021.

## 5.2 INFRASTRUCTURAL PROJECTS AND POST-BLAST MASTERPLANS AND REGULATIONS

This section of the report provides a description of the types of projects that guided urban development in Karantina. Most of these projects are either infrastructural developments or amenities that serve communities. The aim of these projects is to increase trade opportunities and market activity, connect northern Lebanon to Beirut, and provide land for public services. However, other important planning initiatives such as providing more green spaces, upgrading the public realm, protecting the built and non-built heritage, and providing public services such as schools and community centers were absent before the port blast. The following section of the report presents some of the projects in Karantina and their impact on the social, economic, and environmental aspects in Karantina.

### A. Infrastructural Projects

#### A.1 The Port of Beirut

Since the 19th century, the Port of Beirut contributed to the urbanization and development of Beirut into an economic and commercial city. To date, the port is considered as one of the most important economic hubs in the Mediterranean region since it provides strategic links between different markets and trade routes especially at the regional level. The proximity of Karantina to the port affected its spatial, economic, and social development. It attracted light and heavy industries, freight and logistics businesses, and contributed to the formation of early settlements. As such, there was a significant population growth in lower-income settlements that attracted employment and business opportunities.

Additionally, the increased economic activity expanded the port in several phases, increasing its area from 26,500 meters-squared to 1,200,000 meters-squared (Port de Beyrouth, 2018) (Figure 25).

Due to the expansion in 1956, the General Directorate of Urban Planning issued a decree to freeze development in Karantina which prohibited any new construction. It prevented landowners from constructing apartment buildings and developing Karantina with services that support the port. In 2006, development in Karantina was no longer frozen, and landowners were able to obtain new construction permits (Lebanese University, 2016). However, Karantina is still considered as dominated by industrial uses although it is not classified as industrial in the zoning plan for Beirut. This is due to the industrial activities that are related to the port, and the presence of small, medium, and chain businesses such as the Bakalian Flour Mill and Sleep Comfort that serve customers from different regions<sup>17</sup>.

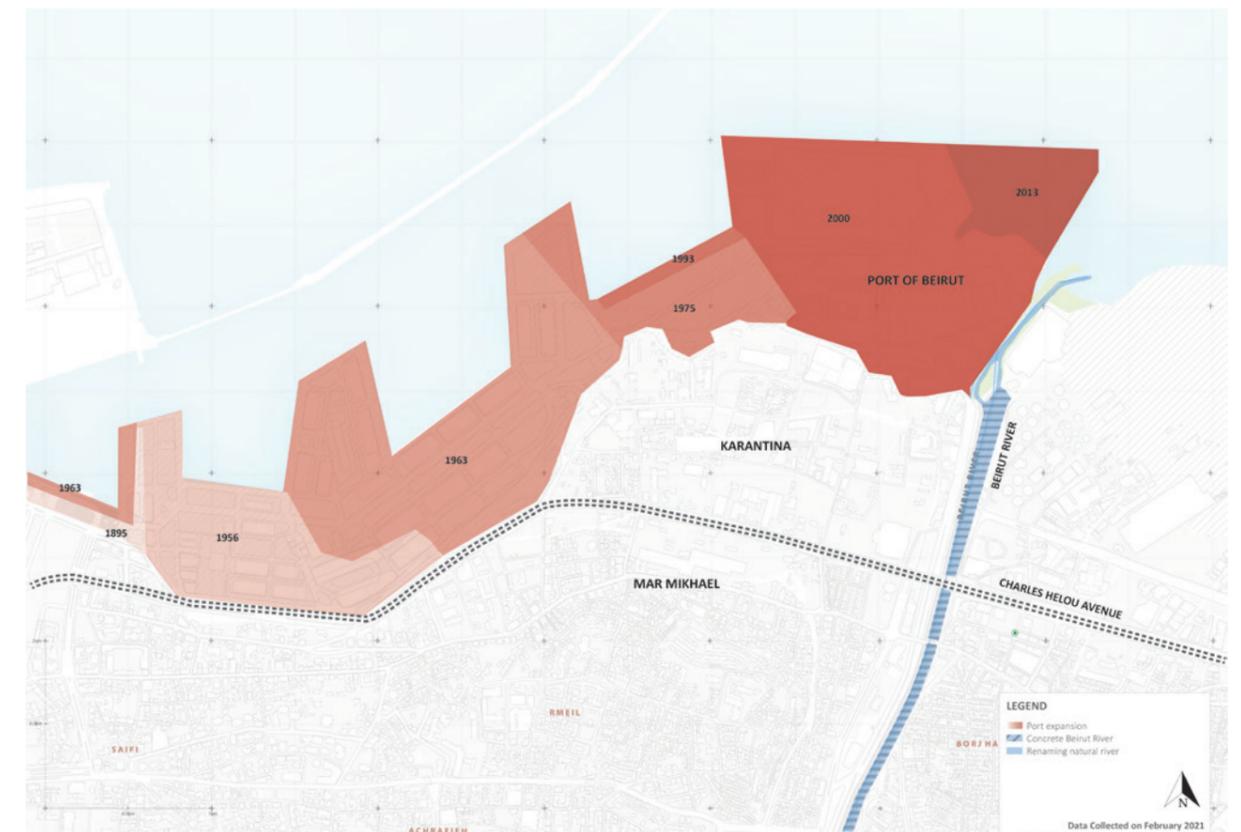


Figure 25: The expansion of the port over 40 years around Karantina. Source: The Beirut Urban Lab, 2021, based on diagrams from the port authority.

#### A.2 Street Network According to the Ecochard Plan

As was previously mentioned, the district of Medawar where Karantina is located is a destination for a variety of activities. In addition to the port gateway and the slaughterhouse, the railway station previously played a vital role in local socio-economic development.

The station shaped the spatial development of Medawar from 1895 till its closure after the end of civil war in 1990s (Figure 26). Historically, the Mar Mikhael Railway Station occupied around 1800 meter-squares, and served as a coastal railway, the port railway, and an inner city tramway.



Figure 26: Map from 1936 showing the urbanization of Medawar along the peripheries of the Mar Mikhael Railway Station. Source: Bureau Topographique des Troupes Francaises du Levant. Beirut. 1936. Collection Rice University: Levant Iconography.

<sup>17</sup> Refer to the third transversal issue on Cultural and Economic Vitality in Karantina for more details on the types and sizes of businesses in Karantina.

The opening of the railway station and the implementation of the Charles Helou Highway impacted the morphology of the lots and the spatial development of Medawar. Local neighborhoods grew around the station which enhanced development along key streets such as the Armenia Street in Mar Mikhael. However, in the 1960s, the implementation of the Charles Helou Highway had divided Medawar into two zones: Karantina to the north and Mar Mikhael to the south. As a result, the highway changed the spatial development of Medawar by isolating Karantina from its surrounding and the rest of Beirut (Figure 27). It contributed to its stigmatization as an industrial area that hosts undesirable activities such as the solid waste management facility and the slaughterhouse. During the thematic group discussions on several of the transversal issues, the residents insisted that they are marginalized and that Karantina lacks any form of equitable development.



Figure 27: Map from 1959 showing how the implementation of the Charles Helou highway divided Medawar. Source: Le Service Géographique (1959). Retrieved from [https://library.artstor.org/asset/SS7731849\\_7731849\\_12987666](https://library.artstor.org/asset/SS7731849_7731849_12987666)

### A.3 Suspended Transportation Projects LINORD Project

The Charles Helou Highway is the primary vehicular entrance to the Beirut Central District from the eastern side of Greater Beirut. It creates daily heavy traffic congestion points. To resolve this problem, the Lebanese Council for Development and Reconstruction proposed the LINORD project in the 2000s. The project proposed a network of highways that connect Beirut to Dbayeh and the north by cutting across Karantina. Figure 28 shows how the implementation of the LINORD project will subject Karantina to another process of socio-spatial and socio-economic fragmentation. The project proposes segmenting Karantina into three distinct spatial zones. The development of lots that intersect with the planned highway are also affected.

Transversal issue II revealed that the implementation of the Charles Helou Highway caused a deep fragmentation of Karantina with enduring consequences. Yet, the implementation of the LINORD project will cause a deeper fragmentation on the social, spatial, and economic fabrics of Karantina. It was designed around important pre-existing facilities and services such as the solid waste management facility, the Governmental Hospital, the new slaughterhouse, the Bakalian Flour Mills, the fish market, and the Port of Beirut. It is projected to cause socio-spatial division and isolation between Al-Khodor and Al-Saydeh sub-neighborhoods. Therefore, the LINORD project dismisses the presence of the residents and communities in Karantina and envisions the area as a transit juncture that can solve the congestion problem to the east of Beirut.



Figure 28: The LINORD project. Source: The Lebanese University, 2016.

### Transit Terminal for a Sea Bridge

Another transport project is the proposed national highway that links Tabarja with Jiyeh through Karantina. It is projected to turn Karantina into a daily transit node (Figure 29, 30 and 31). In 2016, the Ministry of Public Works and Transportation agreed to a proposed project that enlarges the highway of Jounieh from Naher Al-Kalb to Tabarja. The project proposed to add a lane on both sides of the highway to increase its capacity by 33% and reduce the high levels of daily congestion (Ajaka, 2016). Nevertheless, many people opposed the project since it does not solve the congestion problem but provided an opportunity for people to become more car dependent. Additionally, many property owners along the highway rejected the project since it required expropriation of many lots. Accordingly, the Design Engineering Partners proposed an alternative sea bridge that links Tabarja, near the Casino du Liban, with Beirut through Karantina. The sea bridge is 15.75 kilometers long, 20 meters wide, and 10 meters high (Ajaka, 2016). It was designed to accommodate 30,000 cars per hour; this means that it can accommodate in 5 hours half of the original number of cars commenting from Jounieh to Beirut.



Figure 29: Proposal for a sea bridge between Tabarja and Beirut. Source: [www.jassemajaka.com](http://www.jassemajaka.com).



Figure 30: The general layout of the bridge. Source: <https://blogbaladi.com/someone-wants-to-build-a-tabarja-jiyeh-sea-bridge/>

This transportation proposal will negatively affect the quality of life in Karantina especially with the absence of a comprehensive planning strategy. As stated in the fifth report, Karantina is already suffering from high levels of pollution. Residents are exposed to polluted air from the landfill, the Charles Helou Highway, and port. The passage of a large number of cars, as suggested in the plan, will further degrade the quality of the urban environment and negatively affect the health of the residents.



Figure 31: Three-dimensional illustration of the proposed highway bridge from the Harissa hill. Source: <https://blogbaladi.com/someone-wants-to-build-a-tabarja-jiyeh-sea-bridge/>

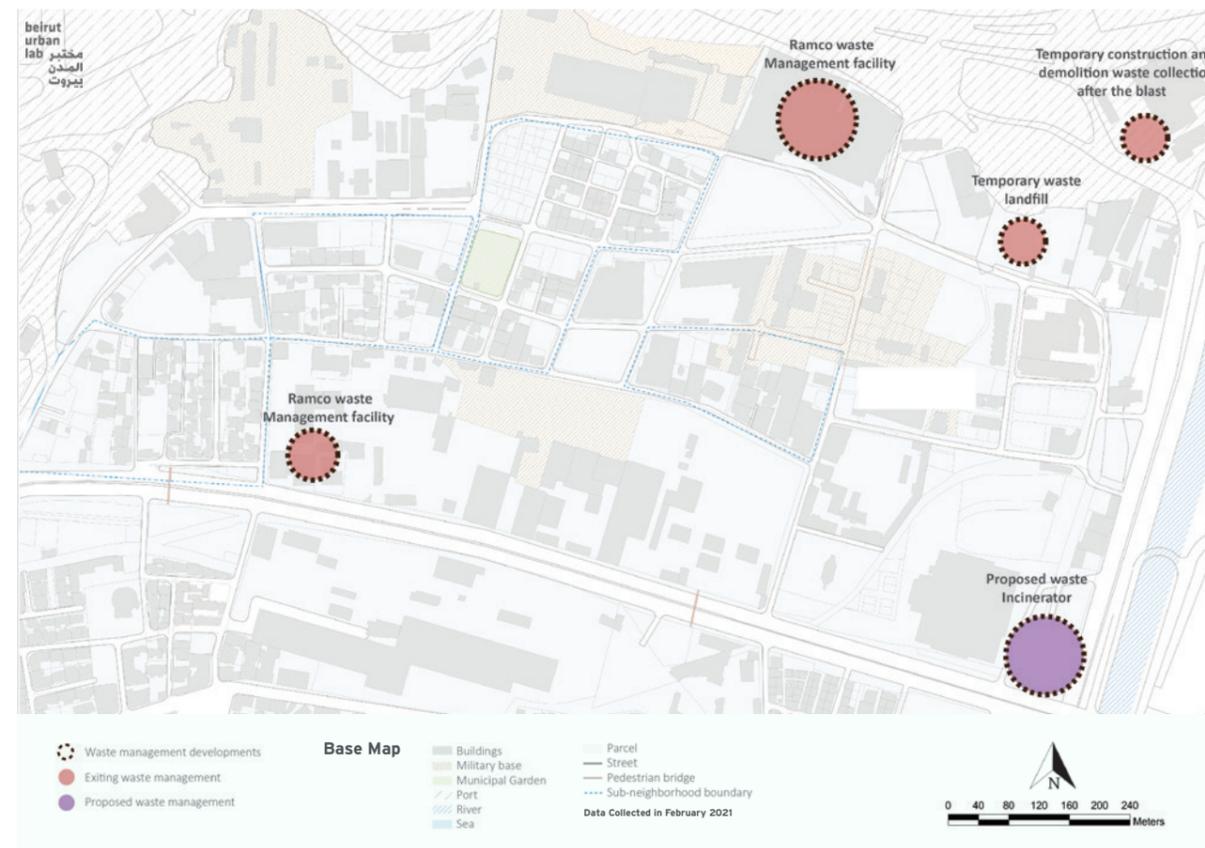
## B. Public Utility Projects

“ We want Karantina, an area where there is no SUKLEEN company, not even a landfill from which diseases and unpleasant odors spread<sup>18</sup>.  
 نريد الكرنطينا منطقة لا يتواجد فيها شركة السوكلين ولا حتى المكب التي يصدر منها الأمراض والروائح الكريهة



### B.1 Waste Incinerator (waste-to-energy plant)

Some of the major development projects in Karantina and its surroundings further deteriorate the urban environment by promoting public facilities that serve Beirut and beyond. As such, Karantina hosts two solid waste management facilities and a landfill, and is a site for a proposed incinerator. These types of development projects are negatively affecting the livelihoods of people in Karantina (Figure 32).



**Figure 32:** The distribution of waste management facilities in Karantina and the location of the proposed incinerator in red. Source: The Beirut Urban Lab, 2021.

In August 2017, the Beirut Municipal Council discussed the proposal of placing lot number 1382 - Medawar in Karantina - owned by the Lebanese government - at the disposal of the Municipality of Beirut to open a waste incinerator that can address the garbage crises of 2015 (Hamdan, 2017). The mayor of Beirut supported the project. However, the residents of Karantina voiced their concerns and pointed out that that site of the project has always been described as a “mazbaleh,<sup>19</sup> مزبلة” of Beirut. During the thematic group discussion on the Quality of the Urban Environment, the residents mentioned that Karantina unfortunately developed to serve as the backyard of Beirut. Figure 32 shows that many municipal or state-owned lots in Karantina are used for public utilities that serve Beirut and other municipalities such as the solid waste management facilities of Sukomi and JCC<sup>20</sup>(formerly known as SUKLEEN). Additionally, a designated landfill north of the Bakalian Flour Mills was established to accommodate the wastes after the blast. As such, these development projects are not sustainable and contribute to the deterioration of the urban environment and increase pollution levels.

The residents of Karantina were specifically concerned about airborne pollutants from the incinerator. Environmental experts explain that incinerators will not solve the waste problem in the absence of an integrated solid waste management strategy (Azzi, 2017). Incinerators pose serious environmental risks as they pollute the air, soil, and water quality through the released ash and smoke. As such, the proposed incinerator in Karantina will contribute to the deterioration of green spaces and reduce the quality of the environment. It will also lead to further displacement and socio-economic transformations in the livelihoods of people, especially that the area includes many public and private facilities such as flour mills, fish markets, and public hospitals. The former mukhtar, Jean Saliba, also indicated that the implementation of such development in the area will reduce land prices, “The price per square meter is expected to drop to more than \$3000, which is its current price, while in Saifi [Saifi district] the price per square meter is more than \$10,000” (Hamdan, 2017).

The proposal is currently on hold after some of the members in the municipal council, environmental experts and NGOs opposed the project, and activists have organized several anti-incineration protests<sup>21</sup> (Naharnet, 2019). According to the Environmental Justice Atlas (2019), it is not the first incinerator that was proposed in Karantina. In 1997, the government planned a similar incinerator that the residents rejected (Masri and Dwarkasing, 2019). Several activists pointed out that the Jihad Al-Arab company Al-Jihad for Commerce & Contracting (JCC) brought back the project and was among the pre-selected bidders (Masri and Dwarkasing, 2019). The CDR previously commissioned JCC to complete several public projects such as JCC solid waste management facility (formerly known as SUKLEEN) in Karantina, the Normandy landfill, the Amrousieh waste sorting plant, and the Coral composting facility in Burj Hammoud (Figures 33 and 34). All of these projects were publicly criticized for their mismanagement and corruption. For more information on the multiple sources that affect the health and wellbeing of residents, refer to Transversal Issue V on the Quality of the Urban Environment in Karantina.



**Figure 33.** The solid waste management facility JCC, previously known as SUKLEEN. Source: Ali Ghaddar, 2021.

<sup>18</sup> A.S.H. (29-12-2020), (Yihyah Saadeh, Interviewer)

<sup>19</sup> Mazbaleh comes from the Arabic term 'Zibalah' that people use to describe a location to dispose of waste.

<sup>20</sup> Al Jihad for Commerce & Contracting (J, refers to the contractor Jihad Al- Arab)

<sup>21</sup> <https://www.naharnet.com/stories/en/262239>



Figure 34. The panel at the entrance of the solid waste management facility mentions the collaboration with the LINORD Project. Source: Ali Ghaddar, 2021.

### C. Post-Port Blast Masterplans and Regulations

#### C.1 The Post-blast Port Masterplan: The German Proposal

During a conference in April 2021, a group of German private investors led by Hamburg Port Consulting and Colliers presented a multi-billion-dollar masterplan for reconstructing the port under the name of the St. Michel District. The project aims to rebuild the port of Beirut and surrounding neighborhoods (Figure 35). The proposed post-blast masterplan will redevelop more than 100 hectares (247 acres). It will shift the first three basins of the port to the east and rebuild the adjacent surrounding by creating new residential and commercial areas, a leisure center, a central park, and a city beach promenade with a new sandy beach (Figure 36) (Aljazeera, 2021 and Naharnet, 2021).



Figure 35. Proposed masterplan for the St. Michel District and the reconstruction of the areas that were affected by the blast. Source: www.ginosblog.com.

During the conference, the managing director of Colliers Germany Mr. Hermann Schnell stated that the main objective of the project is to provide affordable housing units for families, green space, and good infrastructure. However, Lars Greiner of Hamburg Port Consulting stated that the concept behind the proposed project is to “develop the port precinct of Beirut into a world class, state-of-the-art port” (Naharnet, 2021). It was also mentioned that the project will make 30 billion US dollars of indirect profits and create 50,000 permanent jobs over a period of 30 years.



Figure 36. The masterplan for the St. Michel District. Source: https://blogbaladi.com.

The funding of the project will be channeled through the formation of a project trust called the St. Michel Trust. The project suggests that the supervisory board of the St. Michel Trust will include members from the European Investment Bank and the International Monetary Fund with the support of the European Investment Bank (Figure 37).

#### OVERALL ORGANIZATION | CLEAR GOVERNANCE | TRANSPARENT FLOW OF MONEY

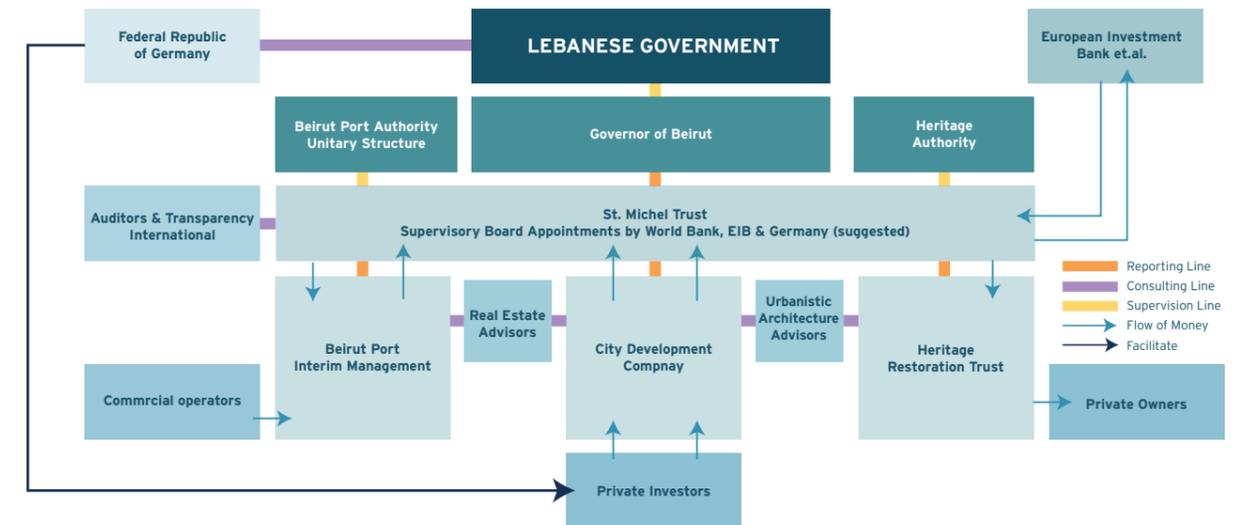


Figure 37. Proposed institutional setup. Source: https://ginosblog.com/port-of-beirut-plans-by-german-investors-renders-more-c2e6813339c5, re-visualized by The Beirut Urban Lab, 2021.

The proposed masterplan raised many concerns among the residents of Karantina. During the first community meeting on 11 August, a few days after the launch of the German project, many residents pointed out that the redevelopment plan for the area will negatively affect Karantina and threaten its residents with displacement. Additionally, one of the residents said: “This project is imposed on Lebanon and the port. It negatively affects the surrounding areas and neighborhoods that were damaged by the blast and it does not consider us in their vision”. While other residents found similarities between the proposal and the post-civil war masterplan for the Beirut Central District (BCD) by the Lebanese real estate company Solidere<sup>22</sup>. The masterplan for the BCD follows the institutional setup of urban renewal through a private real estate company. It attracted capital and empowered local and international elites while displacing many of the original residents of the BCD. It also compromised the historic quarters.

One of the residents who felt afraid from the project said:

“ We are afraid of the German Project in Karantina. People are happy with the idea that Germany wants to implement a project but fear that it may be a replica of the Solidere plan. Germany is not an NGO and can take over our small properties.

نحن خايفين من المشروع الألماني في الكرتينا. الناس مبسوطين بفكرة أنو ألمانيا بدها تنفذ مشروع بس خايفة أنه يكون نسخة طبق الأصل من سوليدير. ألمانيا ليست منظمة غير حكومية وممكن إنو تاخذ ممتلكاتنا الصغيرة.

<sup>22</sup> Solidere is a private real estate company that is in charge of the planning and redeveloping the Beirut Central District after the war. It was set up by former Prime Minister Rafik Hariri in the 1990s.

## C.2 Law 194/2020

The Lebanese parliament recently approved the new Law No. 194/2020, the only available law to regulate post-blast recovery (Fawaz et al., 2021). The law placed the areas that were impacted by the port blast under study (قيد الدراسة) which prevented property owners from demolishing or selling buildings. The law focuses on two things: it protects the affected neighborhoods and provides guidelines for reconstruction processes. Articles No. 3, No. 5, and No.6 in the law protect residents and the built fabric that was impacted by the blast. Article No. 3 prohibits transferring properties for two years and requires the Ministry of Culture to submit a restoration plan of buildings with heritage value (Fawaz et al., 2021). Article No. 5 extends rental contracts for one year, including the residents under verbal contracts. Article No. 6 exempts reconstruction fees and taxes on imported construction material.

**However, the law has the following limitations:**

- 01 The law empowered the owners who control the repair process at the expense of the tenants who were either under the threat of eviction or not having their houses repaired (Fawaz et al., 2021).
- 02 The law was not clear on the criteria for repairs, including the responsibilities, types, and mechanisms of the process. This was especially relevant to the selection process of rehabilitating heritage buildings.
- 03 The law did not specify alternative housing arrangements for people who lost their property or whose property became uninhabitable and they required temporary relocation.
- 04 The law did not address the need for heritage protection in the areas that were affected by the port blast, especially with the absence of a clear classification system for buildings that have heritage value and need to be preserved or renovated.



## 5.3 COMMUNITY PARTICIPATION IN PLANNING

The current planning tools lack a mechanism to involve people in decision-making on development matters; the focus of development is on profit-making through laissez-faire economic policies. As a result, the city is understood as a construction site for developers (Marot, 2018) rather a place for people to live and work.

The absence of a state-led approach to repair and recovery after the port blast increased the marginalization of people. People relied on the support of Non-governmental Organizations (NGOs) and International Non-governmental Organizations (INGOs) with limited resources. As a result, aid from NGOs and INGOs was unequally distributed among households and businesses in Karantina who, according to the one-to-one interviews, relied mostly on their social networks and savings for repairs.

Additionally, Law No. 194/2020 that addressed post-disaster conditions did not provide guidelines for a people-centered approach to urban recovery and was solely focused on the physical reconstruction of buildings that were damaged during the port blast. People were also not involved in the drafting of the law or consulted on the criteria for compensation (Public Works, 2021). Additionally, the assessment criteria for the distribution of the work of NGOs and INGOs across the sub-neighborhoods of Karantina were not communicated to the public.

As such, the work of some NGOs and INGOs that are affiliated with different political parties and religious groups resulted in uneven opportunities for the residents to access support to repair their houses. As a result, the residents with limited resources were locked in a cycle of development that reproduced power hierarchies and exacerbated existing vulnerabilities after the port blast. This is evident in some of the recent studies on Karantina (see Public Works Studio, 2021) that explored the role of religious organizations and their NGOs/INGOs in the distribution of aid. For example, the new Coordinating Committee for Survey of Damage, Relief and Compensation<sup>23</sup> did not include members who are residents of the impacted neighborhoods, including Karantina.

Figure 38 and 39 classify the urgent needs of the residents of Karantina. Most of the respondents to the questionnaires highlighted similar needs for health care facilities, employment opportunities, and housing units. Accordingly, the majority of the respondents highlighted the importance of maintaining neighborhood affordability and upgrading the infrastructural service. They also stressed the need for job opportunities over financial aid. One of the residents mentioned during an informal conversation: “We don’t need money, we have dignity, we are not beggars, we want jobs so we can recover”.



**Figures 38 and 39.** The primary needs of the surveyed households (left) and incentives to remain in Karantina (right). Source: The Beirut Urban Lab, 2021.

<sup>23</sup> A representative of the Ministry of Defense/Army Command. It includes a representative of the Ministry of the Interior (the Governor of Beirut and the Beirut Municipality), the Ministry of Public Works (the General Directorate of Urban Planning), the Ministry of Finance (the General Directorate of Real Estate Affairs), the Ministry of Culture, the Council for Development and Reconstruction, the Public Housing Corporation, the High Relief Commission, and a representative from the Order of Engineers and Architects in Beirut.

## 6. SYNTHESIS AND RECOMMENDATIONS

Karantina suffers from the lack of equitable and inclusive development opportunities and environmental protection. This negatively impacts the quality of life and increases the marginalization of people. Additionally, local landowners in Karantina suffer from restricted access to development opportunities due to the militarization of space, urban regulations, and suspended planned projects. This report concludes with the following findings:

- 01 Landowners in Karantina cannot develop their own lots due to legal and spatial considerations: the regulations of the zoning plan, the presence of multiple shareholders, the vision of the caretakers of the Waqf properties the suspension of infrastructural projects such as LINORD, and the army occupation of the old slaughterhouse and private lots.
- 02 There are large lots owned by the municipality which are unused and underserved. These lots have the potential for inclusive and sustainable developments which can serve residents of Karantina.
- 03 Law No. 322/1994 wasn't applied to Karantina, thus, preventing many residents from rebuilding their homes after the civil war. The law exempted displaced people from paying taxes and fees to restore buildings in villages and towns but not in Beirut. Accordingly, many residents never came back after the civil war.
- 04 Karantina as a site for polluting city services renders it undesirable for residential developments.
- 05 The Industrial Zone is under threat from real estate developers and mediators upscaling to high-end commercial zones, especially since 2018 in the lots that the Waqf owns.
- 06 Absence of participatory planning that ensures the engagement of the community in the decision making process (infrastructural projects, post-blast reconstruction projects)
- 07 The Directorate General of Urbanism placed Karantina "under study" after the port blast, temporarily freezing any demotion or development activities. Placing an area under study, however, does not result in a process of long-term urban recovery and increases the vulnerability of tenants for the benefit of land and building owners.
- 08 The outdated urban regulations, and the absence of an effective heritage preservation policy, led to the demolition of heritage buildings in Karantina.
- 09 Although real estate development in Karantina is slow compared to the rest of Beirut, it is changing the character of the place, especially within the residential clusters.

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# 1. INTRODUCTION

This report presents the strategic diagnosis of the quality of the urban environment in Karantina, one of the five transversal issues that were identified in the descriptive memory report. The descriptive memory report provided a general understanding of the key environmental problems in Karantina and their negative impacts. This report provides a more focused understanding of the quality of the urban environment by analyzing physical, social, and environmental practices and their impact on livability and sustainability in Karantina.

## Position

In the context of this report, urban infrastructure is studied in relation to attributes that can impact the well-being of Karantina and its users. These attributes include geographic location, the provision of services by local authorities, problems that are associated with poor governance, weak resource availability, loose development regulations, and a non-cohesive social structure. This includes principle elements, practices, and operational systems that form the built environment such as buildings and structural foundations for public services and public spaces such as streets, water, sewer, and waste systems, and electricity networks. This report diagnoses the status of infrastructural services not from a purely technical perspective; rather it attempts to situate infrastructure within the larger context of the urban environment. The aim is to emphasize the links between the provision of infrastructural services, the quality of the urban environment, and the capacity of community groups to cope with urban problems.

## Hypothesis

The interface of Karantina with the port, Beirut River, and the Charles Helou Highway is negatively affecting the quality of its urban environment. The presence of military bases, a municipal waste facility, a garbage landfill, unregulated industries, and underserved public and shared spaces stigmatized the perception of Karantina as an unwelcoming urban environment. As the result of the neglect and absence of municipal management for the area, the quality of the urban environment deteriorated after the blast. As a result, this can potentially have negative impacts on the health and well-being of residents and local users.



# 2. METHODOLOGY AND DATA COLLECTION

Urban environmental quality is a multidimensional and multi-disciplinary subject. The assessment of the quality of the urban environment requires considering a variety of components. Thus, the information presented in this report includes both objective and subjective measures and adopted a mix of qualitative and quantitative methods.

The methodology assessed three components of the urban environment: the outdoor environment, the indoor environment, and the experiences of the dwellers. The dwellers were considered as 'local experts' on Karantina and its conditions. This was emphasized by Bush et al. (2001) who stated that "experiences of environmental pollution (referring to air) can vary dramatically at local levels therefore it is particularly important to acknowledge and respond to local knowledge" (Bush et al., 2001).

Additionally, the methodology also followed Jan Gehl's 2013 guidelines for field observations to study public life and assess the relationship between the physical qualities of a public space and how people interact with it (e.g., how many, who, were, what, and how long).

## SOURCES OF DATA COLLECTION PRIMARY DATA

The analysis of the quality of the urban environment is based on the analysis of the primary data from the household questionnaires, the one-to-one interviews, the town hall meetings, the thematic group discussions, and mapping that was carried out between January and April 2021.

### 1. Thematic Focus Group Discussions:

The research team planned two town-hall meetings; the first meeting was on 11 April and the second was on 30 June. In addition, a thematic focus group discussion on the quality of the urban environment was held on 20 May 2021 (Figure 1). It discussed some of the critical issues that emerged from the descriptive memory report and questionnaires, such as the stigmatization of Karantina as a polluted area, the poor quality of the infrastructure, municipal services, business activities, and, as a result, the hazardous risks that the residents are exposed to daily.



Figure 1. Thematic group discussion on the quality of the urban environment on 20 May 2021. Source: Abir Cheaitli, 2021.

### 2. One-to-one interviews:

The interviews were held with an employee who previously worked in the old slaughterhouse. The aim was to understand and validate the various rumors surrounding this facility, its role in Karantina, and how it impacts the quality of the environment, social life, and the economy.

### 3. Questionnaires

The research was supported with data from the household and building questionnaires that the citizen scientists administered in Karantina. Many of the questions and answers were represented in graphs and charts to support the findings.

### 4. Field mapping and field observations:

The relevant data was collected through site visits, field observations, walk-through assessments, photographic analyses, and informal conversations. The collected data mainly included the condition of buildings, security elements, greenery, and urban furniture. Subsequently, the collected data was discussed with the research team members to further validate the findings.

## SECONDARY DATA

The sources included online databases and literature reviews of scholarly articles, dissertations, and books that used various methodologies to assess the quality of the urban environment, negative sustainable practices, private and public spaces, livability, and levels of social well-being.

## METHODS OF ANALYSIS

This section of the research relied on the statistical analysis of findings from the questionnaires to explore the quality of the urban environment and measure the level of people's satisfaction with municipal services and public spaces that are conducive to socio-spatial practices. Benchmarking the analysis to the pool of literature on the acceptable levels of pollutants and toxins and the recommended percentages of green and open spaces per capita was also useful for the analysis of the findings of this section.

Comparative analysis was also crucial to pinpointing the differences in access to public services and the concentration of socio-spatial practices across the three sub-neighborhoods. Additionally, content analysis was important in the research to understand the perception of the residents of public spaces, likes and dislikes about Karantina, and their feelings of safety and belonging to Karantina. The collected data were tabulated using Microsoft Excel and spatialized using the mapping software ArcGIS.

## 3. PRELIMINARY FINDINGS FROM THE DESCRIPTIVE MEMORY REPORT

The existing natural and infrastructural elements - for example, the Beirut River, the Charles Helou Highway, port - and the unregulated land-use activities and developments over the years have affected the physical infrastructure and environmental quality of Karantina, including noise, air, water, and soil.



### Multiple Regional And National Crises

The multiple regional and national crises around displacement and economic decline have intensified the level of informality in Karantina and compromised the quality of life due to the level of overcrowding per apartment. Overcrowding, in particular, led to poor indoor environmental quality.



### Deteriorating Spaces

Most of the vacant, residual, and leftover spaces are deteriorating and causing a decline in livability in Karantina.



### Development Challenges

Development challenges have led to the high level of abandonment and decay of buildings.



### Public Spaces

The status of the public spaces - including streets and sidewalks - is negatively affected by the port activities (truck transportation), militarization (encroachment on shared spaces), and neglect from the Municipality of Beirut.



### Outdated Infrastructure

The outdated infrastructure and poor municipal services like electricity, water, sewage, and waste management led to many environmental problems such as flooding during the winter season.



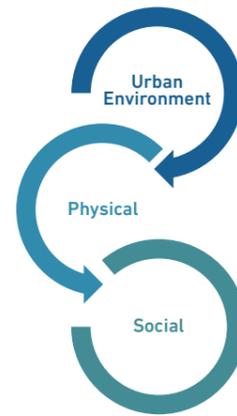
## 4. PROBLEM DEFINITION

The descriptive memory report revealed that the built environment in Karantina creates numerous challenges to the local communities.

The data gathered on the physical infrastructure (streets, buildings, empty lots, and landscape features), environmental factors (noise, odor, air, water, soil, and waste), and social practices and behaviors indicate that the urban environment in Karantina is polluted and degraded, as well as intimidating and unwelcoming to people. Therefore, this negatively affects the quality of life and comfort, collective, and individual well-being, as well as the landscape and ecology of Karantina.

Furthermore, the underserved, closure, and limited accessibility to public spaces have driven the community to gather on the streets, especially children in unsafe urban conditions. Nevertheless, these unregulated public spaces are considered an essential element for cultural heritage and values, where residents conceived these shared spaces as places to socialize and create a sense of belonging.

The physical, economic, and social aspects of the urban environment will be further discussed in the following section of the report. Each section of the analysis elaborates on how some urban patterns and trends affect aspects of the urban environment and the public. The report concludes with a set of proposed recommendations that will be further developed in the strategic framework step.



**Figure 2.** The report examined 3 overlapping trajectories: urban environment, physical, and social. Source: Abir Cheaitli, 2021.



## 5. DIAGNOSIS TRACKS

“ No one cares about the area, and it has suffered from great deprivation<sup>1</sup>  
 ما حدا بيتطلع بالمنطقة، عانت من حرمان كبير

In general, the built environment in cities provides a platform to strike the right balance between social, cultural, economic, and environmental components. The relations between these components have a direct impact on the sense of place, cultural heritage and values, and sustainable practices, hence, the quality of life of residents and users (Davos Declaration, 2018). In 2018, the European Ministers of Culture, along with other institutions and NGOs, highlighted in the Davos Declaration that “a high-quality built environment makes a crucial contribution to achieving a sustainable society, characterized by a high quality of life, cultural diversity, individual and collective well-being, social justice and cohesion, and economic efficiency” (Davos Declaration, 2018).

The following section of the report explores the quality of the urban environment in Karantina by examining the quality of the built fabric (building, public spaces, municipal infrastructure, and land-use activities), social practices (household arrangements and socio-cultural practices), and public health.

### 5.1 QUALITY OF THE BUILT FABRIC

#### A. Buildings

Historically, the area of Karantina witnessed several national crises that damaged its built fabric, specifically its buildings. Two of the major incidents include the 1976 massacre and the 2020 port blast, not to mention many years of deterioration due to government negligence.

During the Lebanese civil war, Karantina was an area that witnessed armed conflicts between local militias (Fregonese S., 2020). As a result, many buildings were abandoned, demolished, or highly damaged (Figure 3).



**Figure 3.** The physical condition of abandoned buildings, Karantina. Source: Abir Cheaitli, 2021.

Currently, the area has 364 buildings. The building questionnaire showed that out of 252 buildings that were assessed, only 22% are in good condition, 34% are in average condition, and 22 % are degraded (Figure 4). As for abandoned buildings, 78 buildings were found to be fully abandoned (Figure 5); the majority were vacated since the end of the civil war and after the port blast. Even though there was no data in this research to explain the relationship between abandoned buildings and the environmental problems in Karantina, previous studies showed that there are several environmental risks that are associated with vacant buildings and apartments, such as pollution, health problems, property value decline, waste of resources, crime, and vagrancy (Akindele, 2013).

<sup>1</sup> A.H.,(2020-December-12), (Yehya al Said- Interviewer)

Building maintenance and upkeep are crucial since they directly impact the building's quality and lifespan. If buildings are not routinely maintained, repaired, and improved, they may reveal concrete cracks, decaying roofing, or clogged sewer pipes. Eventually, this may cause early aging of buildings and structural deterioration, resulting in full or partial building failures.

In addition to the physical deterioration, poorly maintained and abandoned structures affect the indoor quality of buildings. Abandoned buildings trigger leaks from plumbing pipes, appliances, and any chemicals or lubricants stored on-site. As a result, this leads to moisture, mold growth, toxic fumes, and repulsive smells (Akindele, 2013, Duncan, 2013, & Environmental Protection Agency, 2020). Mold grows faster in warm and moist environments—including bathrooms, basements, under carpeting, inside walls, and HVAC ducts—and can easily spread throughout a commercial, retail, or residential structure (Duncan, 2013). In Karantina, signs of decay are visible in abandoned and inhabited buildings and apartments.

Photo surveys (Figure 6 and Figure 7) show that the interior and exterior elements of the buildings in Karantina have traces of moisture, water stains, and peeled paint. This was likely caused by the wrecked and deteriorated facades, ceilings, walls, columns, leaking pipes, aging structures, window frames, roofs, and terraces. Thus, these buildings, suffering from mold growth and humidity, are considered a health threat for any inhabitant, especially children and women who spend most of their time indoors.

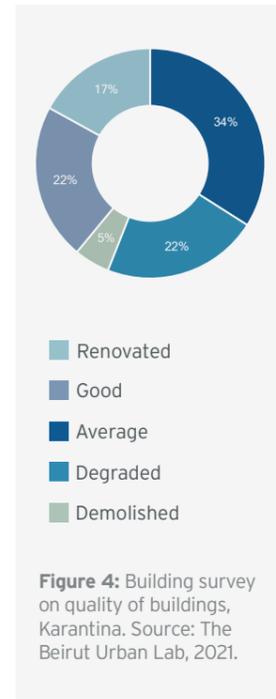


Figure 4: Building survey on quality of buildings, Karantina. Source: The Beirut Urban Lab, 2021.

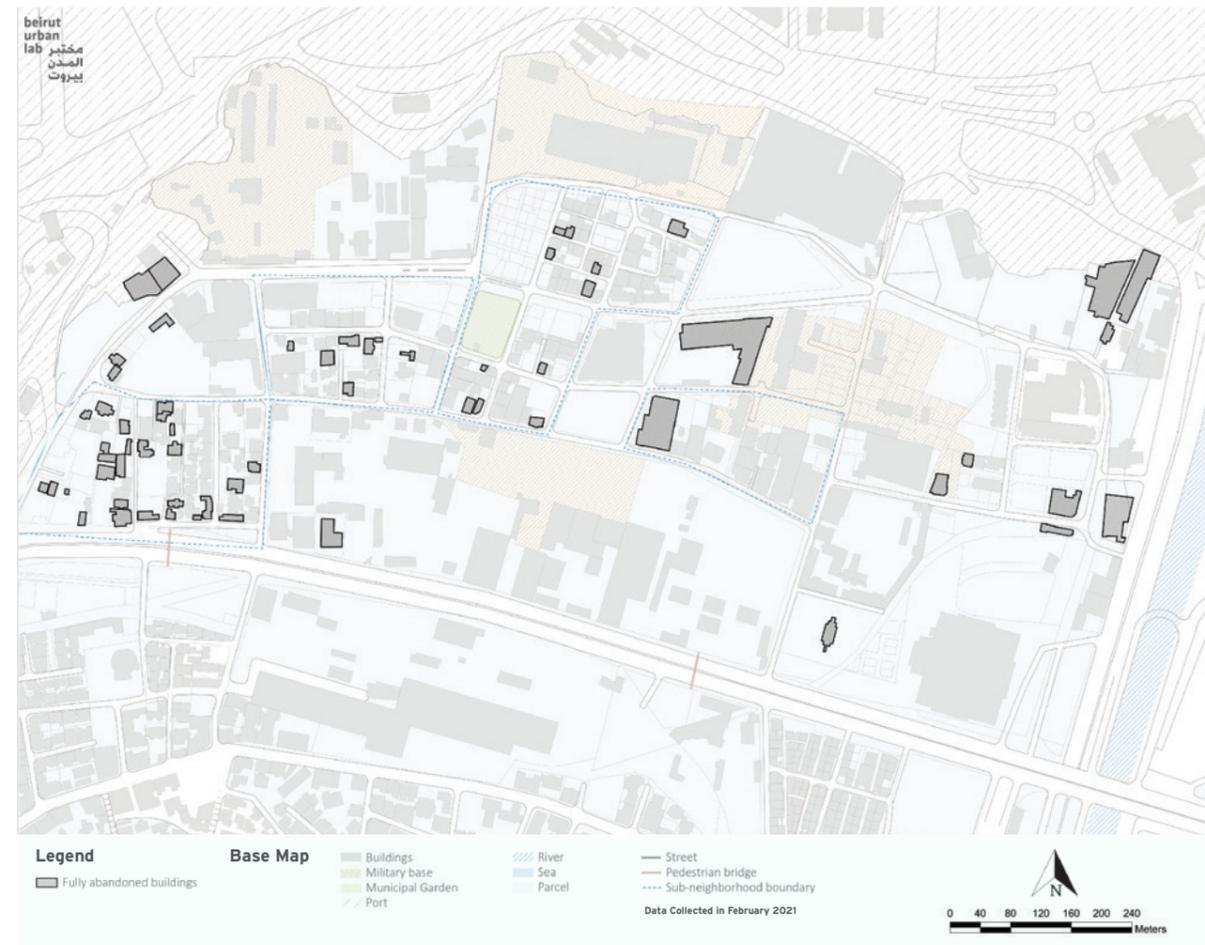


Figure 5: Mapping of abandoned buildings, Karantina. Source: The Beirut Urban Lab, 2021.



Figure 6: The images above were taken from inside the residential buildings, showing traces of severe mold, humidity, and dampness. Source: Abir Cheaitli, 2021.

Figure 7: The images above show the exterior conditions of residential buildings. Source: Abir Cheaitli, 2021.

After the port blast, the conditions of many buildings became worse, and a few buildings were in danger of collapsing (Figure 8). Damages to buildings varied according to their pre-blast status. The Beirut Municipality and UN-Habitat rapid building assessment categorized the damage as follows: total collapse, unsafe/evacuate, restricted use, and safe/minor damages<sup>2</sup> (UN-Habitat, 2020).



Figure 8: Collapsed buildings after the port blast in Karantina. Source: Abir Cheaitli, 2021.

<sup>2</sup> Building categories in the Rapid Assessment by the Municipality of Beirut and UN-Habitat (2020): Total collapse: Buildings that had experienced total structural failure. Unsafe / evacuate: Buildings that are structurally unsound and require evacuation. Restricted use: Buildings that were subjected to considerable damages in their architectural components (falling architectural elements that might affect public safety). Safe / minor damage: Buildings that were subjected to minor defects, such as broken glass. Buildings that were not affected at all also fall under this category.

The results of the household questionnaires showed that 66% of the residents of Karantina mentioned that their buildings were structurally affected by the port blast, 86% had cracks in concrete walls, and 91% had broken windows and doors (Figure 9). When asked about any structural damage, 31% of the residents of Karantina mentioned that their houses are no longer structurally sound, and 30% said that they were partially affected (Figure 10). During the interviews, many of the residents mentioned that after the port blast, leakage and humidity increased inside the living spaces during rainy days due to the existing poor building conditions.

Repair works further deteriorated the condition of some of the buildings. As mentioned during the interviews, many residents complained about the bad quality and incomplete repair works. Figure 11 shows a resident who complained about the poor installation of the doors in her house. She added, "I do not have the financial capacity to fix the bad work done by the NGOs"<sup>3</sup>. Furthermore, the economic condition of the residents of Karantina prevented them from repairing their houses or relocating elsewhere. Even 5 months after the blast, 67 % still didn't finish repairs (BUL, 2021). Many residents had to remain in Karantina while their houses were being painted, exposing them to hazardous volatile organic compounds<sup>4</sup> emissions which could result in health symptoms such as headaches, dizziness, nausea, trouble breathing, and exposure to mold infections that might generate allergies and irritations.

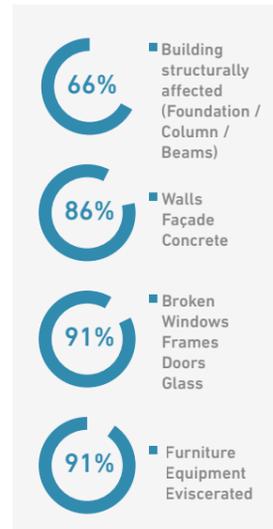


Figure 9: Results from the household questionnaires on the level of damage to people's home. Source: The Beirut Urban Lab, 2021.

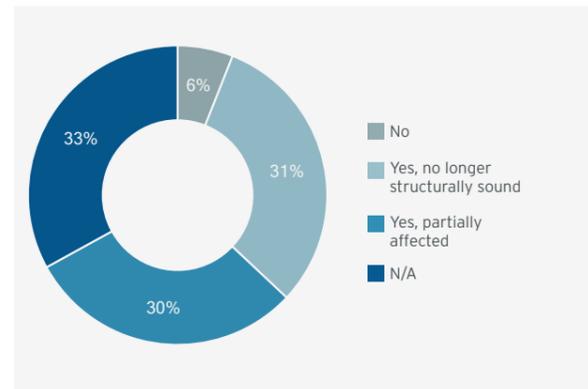


Figure 10: Answers to the household questionnaire regarding structural damage to buildings. Source: The Beirut Urban Lab, 2021.



Figure 11: The interior of a residential building showing the poor installation of a door after the port blast. Source: Abir Cheaitli, 2021.

Moreover, overcrowding worsens the indoor air quality in buildings. As mentioned in the descriptive memory report, one of the major observations is the overcrowding of households in one apartment. This was mainly observed with the Syrian families. Numbers showed that 50 Syrian households out of 197 live in shared apartments with a range of 8 to 15 individuals living in one apartment (Beirut Urban Lab, 2021) (Figure 12). These types of living arrangements are already common in the Syrian culture but were further enforced in Lebanon as a result of the economic collapse and the deteriorating financial situation of the Syrian refugees when they arrived in Lebanon after the start of the war in Syria in 2011.

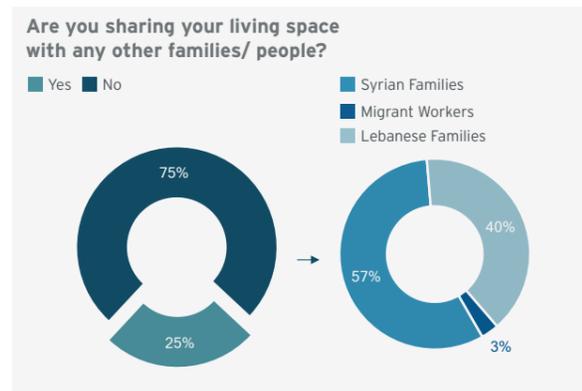


Figure 12: Answers to the household questionnaire regarding the common use of living space between families and individuals. Source: The Beirut Urban Lab, 2021.

Furthermore, the behavior of the landlords who allow for rent pooling to maximize economic profits has favored the practice of overcrowding. From an environmental quality perspective, low-income overcrowding households are more likely to suffer from environmental hazards and poor indoor air quality. Consequently, hazards from biological pathogens have the most serious impact on human health. According to Brebbia (2009), "Crowded conditions, poor sanitation, and inadequate water supplies, poor facilities for preparing and storing food, and inadequate hygiene, contribute to biological pathogen-induced ill health" (Brebbia, 2009, p.273).

## B. Open and Public Spaces

### B.1 Streets and Sidewalks

“ The streets are unorganized and dirty due to the neglect from the municipality<sup>5</sup> الشوارع غير منظمة ومتسخة من ورا إهمال من البلدية ”

Public spaces are a vital part of everyday urban life (Jacobs, 1961; Whyte;1980; Hillier, 1996; Campos, 1997 and 1999, Carmona, 2004; Gehl, 2010 and 2011). Streets, sidewalks, parks, and residual spaces are physical and social environments for daily practices and interactions. The descriptive memory report indicated that most of the public spaces in Karantina need major enhancements, repairs, and upgrades. The fieldwork revealed that the poor quality of the public and shared spaces is the result of government negligence, the appropriation of the public and private spaces by the army, exploitive economic land-uses like industrial activities, and common negative habits like littering.

“ Kids play on the streets because they don't have another option<sup>6</sup> ما في مكان يلعبوا في الاولاد وبضلن بالشارع ”

Accordingly, the answers to the household questionnaire showed that 50% of the households in Karantina were not satisfied with the quality of the public and shared spaces and 72% avoided using these spaces in their free time (Figures 13 and 14). Furthermore, the answers also revealed that the elderly were not satisfied with the quality of the public spaces, as 42% preferred to spend their time indoors (Figure 15).

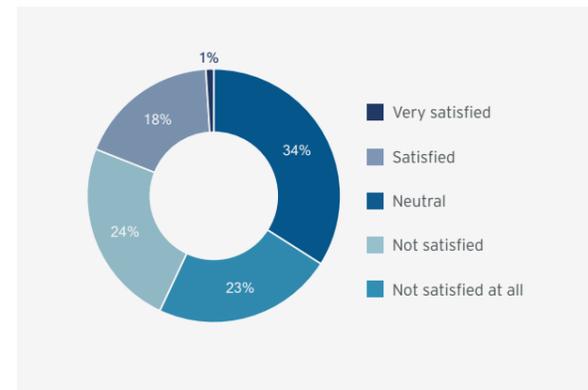
The dissatisfaction with the quality of public spaces is due to the underserved and deteriorated condition of the streets and sidewalks. The lack of proper maintenance by the Municipality of Beirut has led to the decline of these public amenities. Figures 16, 17 and 18 from the fieldwork show that Karantina lacks adequate landscape and streetscape elements such as urban furniture (benches, streetlights, and trash bins), traffic signs, speed calming measures, and pedestrian crosswalks. The residential sub-neighborhoods suffer the most as these public amenities are essential to creating livable environments.

<sup>3</sup> KH. I. A., (2020-November-10), (Abir Cheaitli- Interviewer)

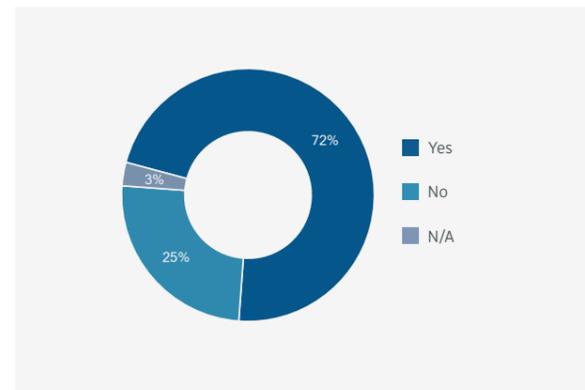
<sup>4</sup> Volatile organic compounds are emitted as gases from certain solids or liquids and include a variety of chemicals, some of which may have short- and long-term adverse health effects (Environmental Protection Agency, 2021)

<sup>5</sup> L.M.H., (2020-December-12), (Mohammad Amsha- Interviewer)

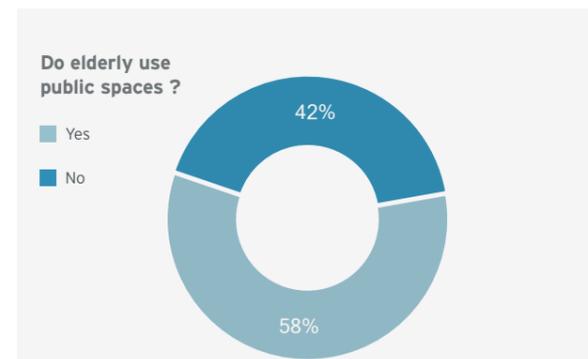
<sup>6</sup> A.S.H., (2020-December-12), (Yehya al Said- Interviewer)



**Figure 13:** Answers to the household questionnaire regarding the level of satisfaction with the quality of the public spaces. Source: The Beirut Urban Lab, 2021.

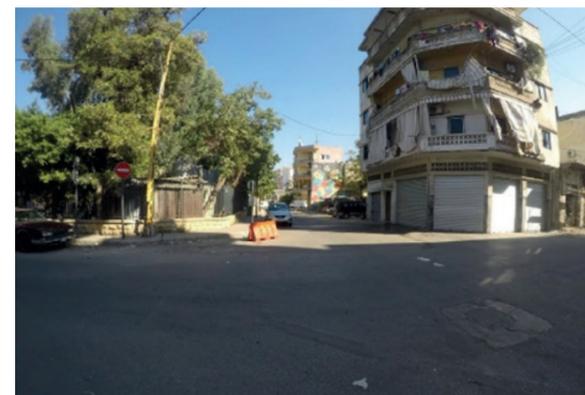


**Figure 14:** Answers to the household questionnaire regarding the amount of time people spent in public spaces. Source: The Beirut Urban Lab, 2021.



- Sidewalks
- Vacant Lots
- Streets
- Public Park
- Church / Mosque
- Balcony
- Stay in bed
- Neighbors inside the building

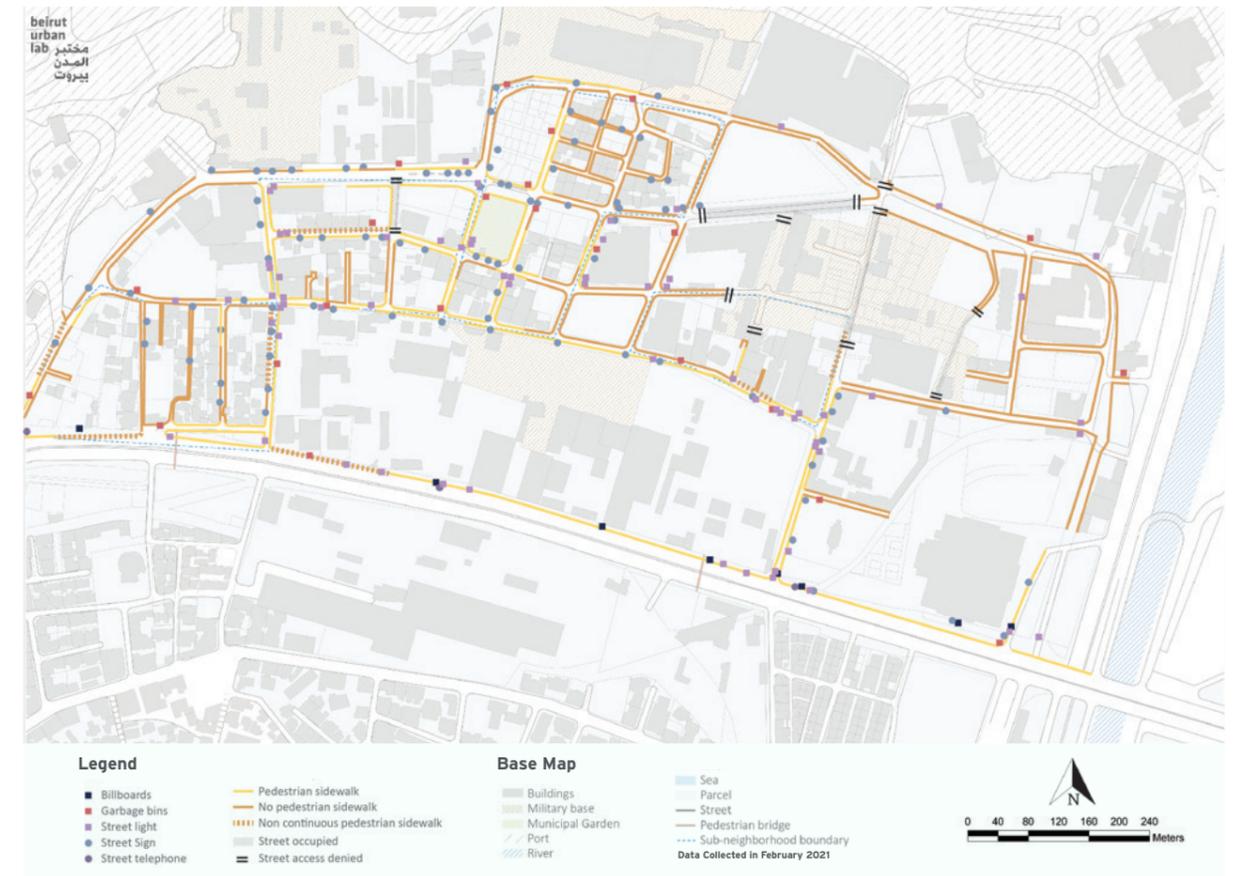
**Figure 15:** Answers to the household questionnaire regarding the elderly use of public spaces. Source: The Beirut Urban Lab, 2021.



**Figure 16:** Streetscape intersection in Al-Khodor sub-neighborhood that lacks traffic and safety measurements for vehicles and people. Source: Abir Cheaitli, 2021.



**Figure 17:** The street entrance to Karantina showing an underserved streetscape with wrecked sidewalks. Source: Abir Cheaitli, 2021.



**Figure 18:** Mapping of the urban furniture and sidewalk availability in Karantina. Source: The Beirut Urban Lab, 2021.

Furthermore, accessibility and walkability in Karantina were hindered due to the militarization of some streets and sidewalks and thus, further degrading their physical conditions. Figures 19 and 20 show that the military barriers and checkpoints caused the closure of some streets and sidewalks, in the process, preventing vehicular circulation and pedestrian mobility. Encroachments have blurred the boundaries between what is public and what is private property. However, some residents and business owners claimed during the interviews that the presence of the military in Karantina provided them with a sense of security and safety; thus, bargaining their right to public access over the security provided by the military.

These problems compromised the quality of public and shared spaces that accommodated daily practices of the local communities, rendering these spaces unsafe, unwelcoming, unhealthy, and unfriendly for different user groups like children and elderly people.



**Figure 19:** Security elements and encroachments by the military. Source: Abir Cheaitli, 2021.

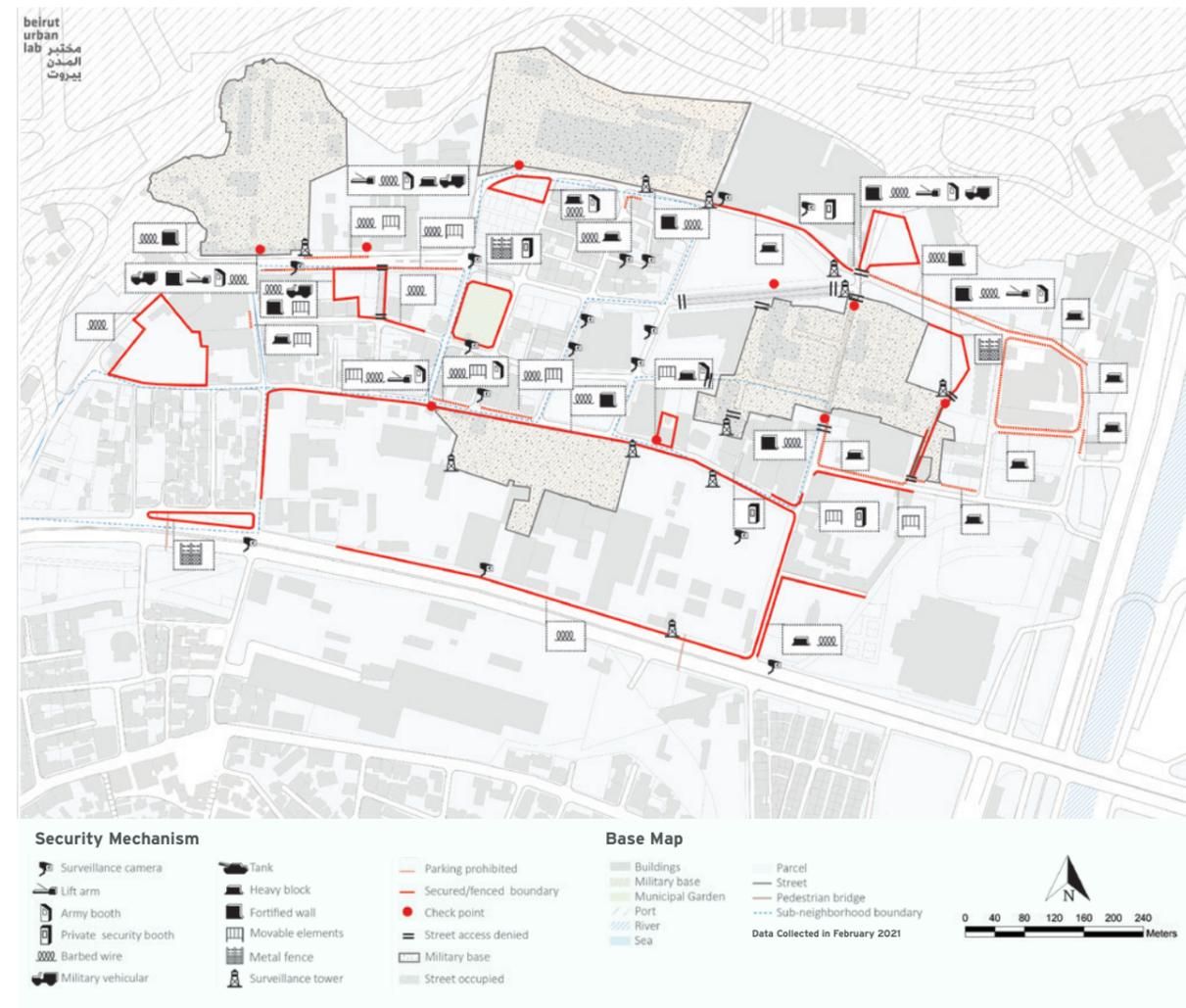


Figure 20: Mapping of the security mechanisms in Karantina. Source: The Beirut Urban Lab, 2021.

## B.2 Public Parks

“There are no public parks for us to use, the only one in the area is always closed”<sup>7</sup>  
 ما في اماكن عامة نقعد فيها غير الحديقة العامة يلي هي أصلًا بتضل مقفلة

Public spaces in Lebanon face several challenges that range from the lack of proper urban planning regulations, the high prices of land in Beirut, the lack of maintenance policies by local authorities, and the limited public awareness on the use and importance of these spaces (Nahnoo, 2018).

Karantina has two public parks that are currently closed. One is located midway between Al-Khodor and Al-Saydeh sub-neighborhoods called ‘Karantina’s play garden’, and the other one is located at the interface between the Charles Helou Highway and Al-Saydeh sub-neighborhood called ‘the Autostrad park’ (Figure 21).

7 B.A.I, (2021-January-26), (Yehya al Said- Interviewer)

Officials say that the closure is because of the pandemic, while the residents argue that the Municipality of Beirut is unable to maintain and operate the parks. The residents complained during the town hall meetings<sup>8</sup> that the park rangers have been using the space after the port blast to eat and socialize while limiting access to people.

This has generated a feeling of exclusion among the residents from public spaces. Around 70% of the responses gave negative explanations when asked about their feeling towards the garden. This had mainly to do with the presence of guards, the limited accessibility, and the closure of the park by the municipality (Figure 22).

In addition, many residents, especially those living in Al-Saydeh sub-neighborhood, considered the Karantina play garden remote from their surroundings. Out of the 50 households that answered yes, they go to Karantina’s play garden, only 3 respondents were from Al-Saydeh, 2 from Al-Senegal, and 45 are from Al-Khodor (34 were Syrian and 11 were Lebanese). The residents of Al-Saydeh conveyed their reservation on the Karantina park during in-depth interviews claiming that the park serves more the residents of the Al-Khodor sub-neighborhood as well as the Syrian refugees living there and consider that the presence of the Arab tribes and the Syrian refugees creates unsafe environments for their kids.

Furthermore, inaccessibility to public parks is not the only issue in Karantina, the minimum green space per capita is way below the recommended area by the World Health Organization that is a 9 square-meters of accessible, safe, and functional green space. Beirut has only 0.8 sq. m per person (Nazzal & Chinder, 2018), while Karantina has 1.4 sq. m per person (Beirut Urban Lab, 2021)<sup>9</sup>.

## B.3 Heritage Landscapes

A mapping of green spaces and landscapes - including landscape heritage attributes - by The Beirut Urban Lab team (Figure 23) showed that monumental trees are distributed across Karantina either as clusters around the old slaughterhouse and military bases or as single standing trees in the residential sub-neighborhoods. Some of these trees in the residential clusters are points of encounter for social gatherings and are considered major landmarks in Karantina. During an interview, one of the residents said that “under this tree, members of the community gather, hold meetings, or just chat”<sup>10</sup>.

Another resident continued “we bring our coffee and plastic chairs and have our morning chats with neighbors under this tree”<sup>11</sup> (Figure 24). When another resident was asked what she likes the most in her sub-neighborhood she said, “a tree that is 200 years old”<sup>12</sup>. Nevertheless, many trees seemed to be left unmaintained and unprotected (Figure 25), thus increasing the risk of being cut down. The recent removal of monumental trees was noticed during a site visit in May 2021. The tree was located inside a residential house and was cut down without any previous notice or permission from the concerned authorities (Figure 26).

8 The first town hall meeting on 2021-April-11, and the second town hall meeting on 2021-June-30. Both were initiated by the BUL at the Karantina play garden.

9 3,716 (total area of parks in Karantina) / 2000 (population of Karantina)

10 M.M., (2020-November-10), (Abir Cheaitli- Interviewer)

11 KH.I.A., (2020-November-10), (Abir Cheaitli- Interviewer)

12 B.S., (2021-January-18), (Daniel Khadra- Interviewer)



Figure 21. The Autostrad Park. Source: Abir Cheaitli, 2021.

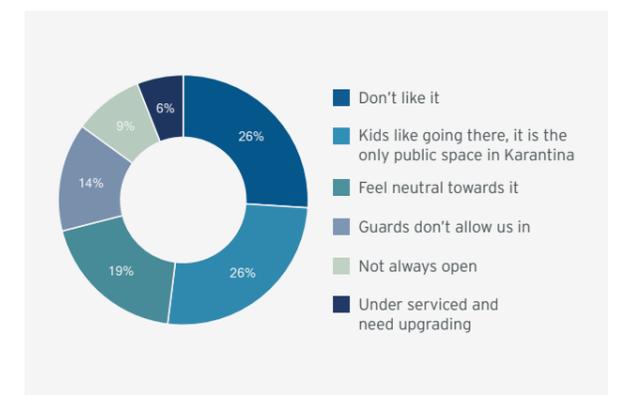


Figure 22: Answers to the household questionnaire regarding how people feel about Karantina’s play garden. Source: The Beirut Urban Lab, 2021.

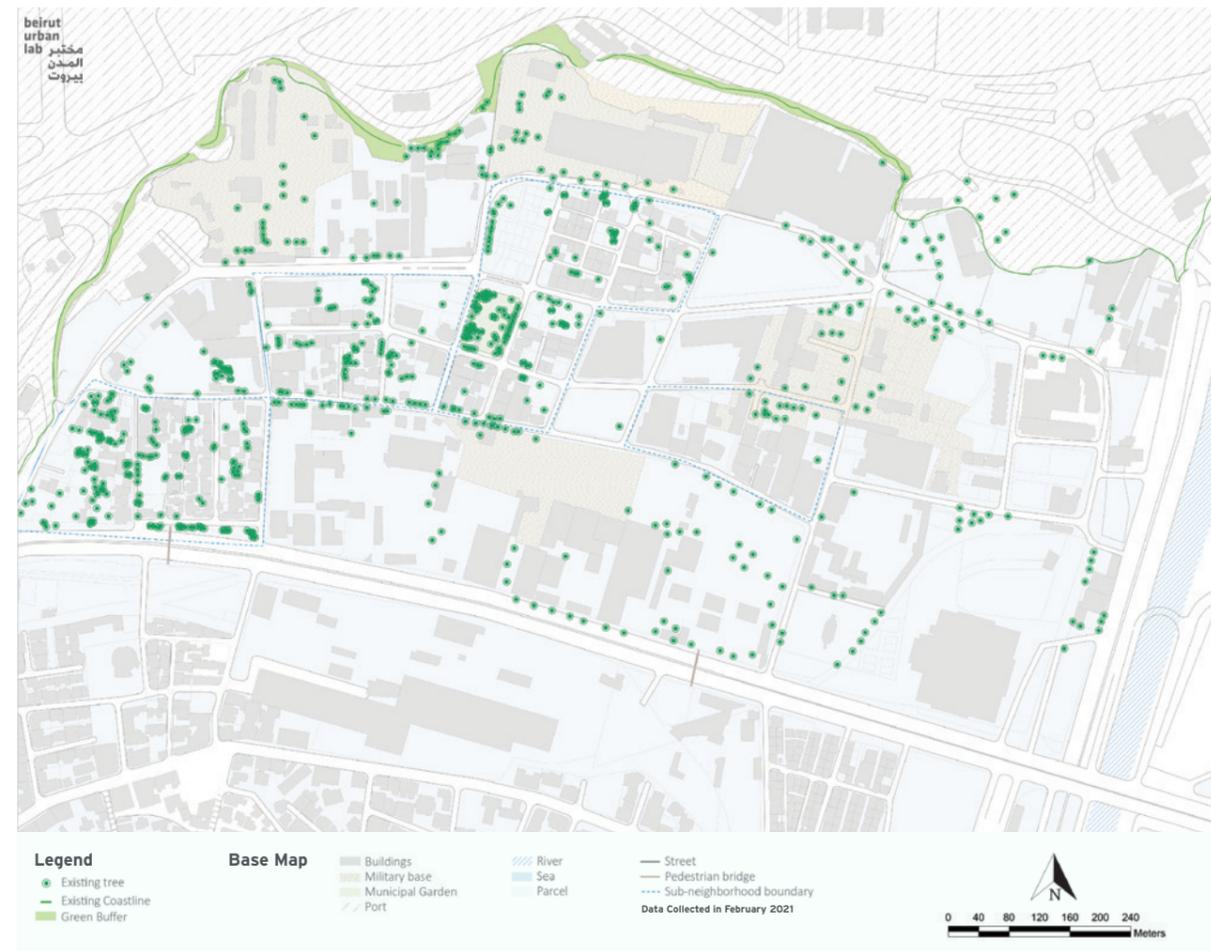


Figure 23: Existing open spaces and heritage trees in Karantina. Source: The Beirut Urban Lab, 2021.



Figure 24. A heritage tree that is considered a landmark in Al-Khodor sub-neighborhood. Source: Abir Cheaitli, 2021.

Figure 25. Existing heritage trees in Karantina. Source: The Beirut Urban Lab, 2021.

Unlike the rest of the surrounding neighborhoods, Karantina hosts a diversity of trees and vegetation. However, the existing greenery is not sufficient to purify the air quality given that the area accommodates different industrial and economic activities - including the slaughterhouse and waste management facilities. Studies show that the lack of greenery correlates with poor air quality, high air temperatures, and a poor urban environment (Zupancic, Westmacott, & Bulthuis, 2015)<sup>13</sup>.



Figure 26. Photos showing the same area before and after cutting down a monumental tree in Al-Khodor sub-neighborhood. Source: Abir Cheaitli, 2021.

### C. Municipal and Infrastructural Services

The development and management of infrastructures such as water, sanitation, electricity, cleanliness, in addition to the removal of waste, are all under the responsibility of the government. The service provision, refurbishment, and maintenance of infrastructures require technical and professional expertise which is not provided in Karantina by the local authorities. Residents from the three sub-neighborhoods demand more attention from the Municipality of Beirut to provide adequate infrastructure and the required maintenance. Answers to the household questionnaire showed that Al-Khodor sub-neighborhood suffers from floods during winter, some say that "it is an area that is forgotten from all services and infrastructure"<sup>14</sup>, or "the infrastructure is inadequate when winter season starts, the streets are flooded with water"<sup>15</sup>. While residents from Al-Saydeh, in addition to complaining about street floods, had concerns about the cleanliness of the streets, saying that "the streets are not clean or well maintained"<sup>16</sup> or "the municipality has fallen short of cleaning the streets and maintaining the sewage systems".<sup>17</sup>

“ Electricity and water are always available in the area, which means here it is better than other areas in this regard<sup>18</sup>  
الكهرباء والمياه المتوفرين دائماً بالمنطقة  
يعني هنا أفضل من غير مناطق من هذه الناحية

14 M.M.H., (2021-January-02), (Mohammad al-Satouf- Interviewer)  
15 W.F.J., (2021-January-31), (Yehya al Said- Interviewer)  
16 M.K., (2021-January-19), (Gorge Antoun Tatarian- Interviewer)  
17 A.D., (2021-January-12), (Gorge Antoun Tatarian- Interviewer)  
18 W.F.K.H., (2021-January-31), (Yehya al Said- Interviewer)

### C.1 Electricity

The Electricity of Lebanon (EDL) has a building in Karantina occupying a large area near Al-Saydeh sub-neighborhood (Figure 27). Yet before the port blast, Karantina suffered from daily cuts in electricity like any other neighborhood in Beirut with a shift of electrical rotation of 3 hours per day. However, since the explosion, the residents of Karantina have been receiving continuous electricity service from the EDL.<sup>19</sup>

According to the answers to the household questionnaire, 91% have subscriptions to private diesel generators and 98% get electricity from EDL (Figure 28). Nevertheless, the purchase of diesel generators to replace the constant electrical shortage is common in Lebanon, and Karantina is not an exception. Karantina is expected to hold larger generators to cover all the industries in the area.

During the fieldwork, electrical generators were noticed and were installed in an unregulated manner on sidewalks, streets, buildings, residual spaces, and building entrances (Figure 29). Many of those generators are in proximity to residential buildings (Figure 30), thus exposing the residents to high levels of air pollutants.

Their stack exhaust heights were also unregulated and placed in an ad-hoc manner between the ground level and the top of the nearest building. According to Shihadeh et al. (2018), exposure to diesel exhaust is associated with “heart and lung disease, neurological and developmental disorders in children, and a variety of cancers.” Moreover, “the use of diesel generators for only 3 hours per day accounted for 38% of the daily carcinogen exposure in the Hamra area of Beirut, and it accounts for 40% of airborne Pulmonary Arterial Hypertension” (Shihadeh et al., 2018).

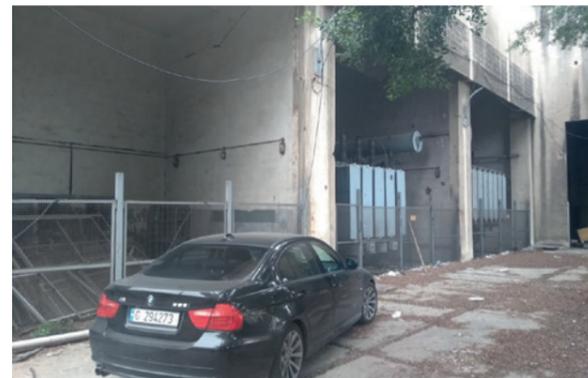


Figure 27. The EDL building in Karantina. Source: Ali Ghaddar, 2021.



Figure 29b. Generators that serve residential houses. Source: Abir Cheaitli, 2021.



Figure 29d. Private generators providing electricity to warehouses that are used to store medicine for the governmental hospital. Source: Abir Cheaitli, 2021.



Figure 29c. Two private generators that are located at the top floor of a building because of the lack of space on the ground level. Source: Abir Cheaitli, 2021.

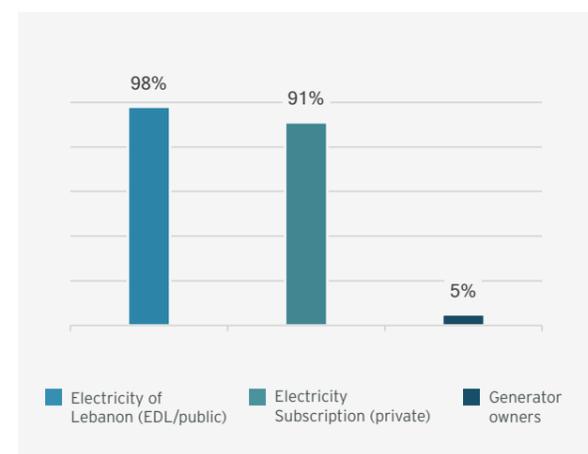


Figure 28: Answers to the household questionnaire regarding access to electricity. Source: The Beirut Urban Lab, 2021.



Figure 29a: The electrical generator of the Bakalian flourmills. Source: Abir Cheaitli, 2021.



<sup>19</sup> The electrical supply in Karantina became limited to few hours per day similar to other areas in Lebanon after the economic crises intensified by the end of 2021.

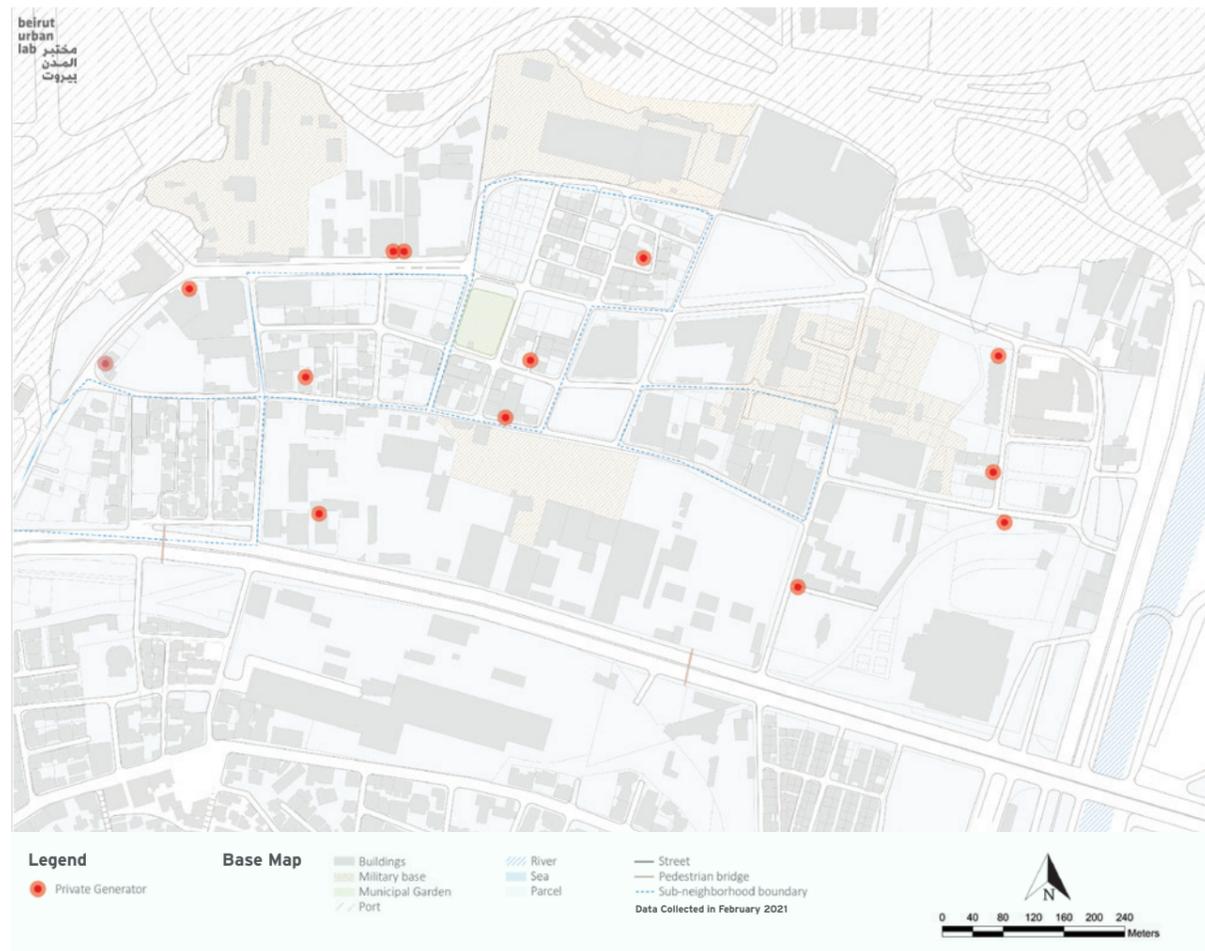


Figure 30: Mapping of private generators on public spaces, Karantina. Source: The Beirut Urban Lab, 2021.

### C.2 Public Water Systems

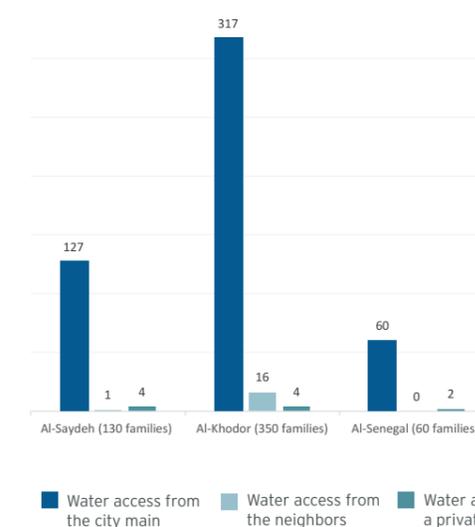
One of the few services that residents are satisfied with is water provision. 54 residents mentioned that water is available most of the time and it is one of the things that they most like about Karantina. Water is distributed in the Medawar area through two networks, one that is an old pipe grid and needs major enhancements, and the second is a new grid implemented in 2008 (Figure 31).

As claimed by the Mukhtar Francois Jalakh, the water company assigned by the authorities in Beirut has issued warnings to residents that it will stop distributing water through the old grid, and residents must submit a request to be networked to the new grid. This was problematic to some residents as the water company owe pending payments since 1975, even though most of the residents in Karantina were displaced during the civil war years (Lebanese University, 2016). Thus, till now there are apartments that are connected to the old water systems, and others informally get water through hook-ups to their neighbor's connection.

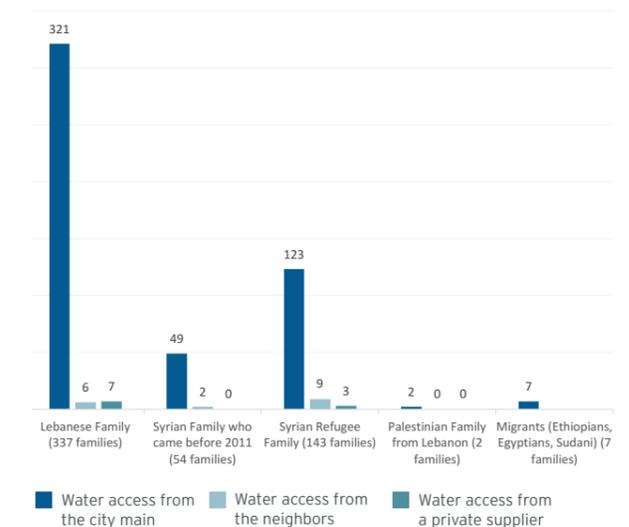
The analysis of the data showed that in Al-Khodor, 317 families out of the 350 surveyed families are connected to Beirut's main water grid, and 16 families get water informally from their neighbors. While in Al-Saydeh, 124 out of the 130 surveyed families are connected to Beirut's main water grid, and 1 family gets water from its neighbors. Informalities were mostly among Syrian refugee families, whereby 6% of the families are hooked to their neighbors in comparison to the Lebanese families which is 1% (Figures 32a and 32b).



Figure 31: Water grid in Karantina. Source: The Beirut Urban Lab, 2021.



Figures 32a. Answers to the household questionnaire regarding access to water services by sub-neighborhood. Source: The Beirut Urban Lab, 2021.



Figures 32b. Answers to the household questionnaire regarding access to water services by nationality. Source: The Beirut Urban Lab, 2021.

### C.3 Rain and Wastewater Management

“ Most of the streets flood on rainy days<sup>20</sup>  
الطرقات اغلبا بطوف بالمى وقت تشتي الديني

In the absence of a drainage system for collecting and directing rainwater in Medawar, the falling water during the winter seasons flows through a natural pathway that heads towards the sea. However, there is an old pipeline in Burj Hamoud that collects a portion of the Achrafieh rainwater and channels it into the Beirut River, but it requires major enhancements and maintenance (Lebanese University, 2016).

During fieldwork in January 2021, a rainy season in Lebanon, puddles of water on public spaces were noticed especially on streets (Figure 33). The interviews with the residents revealed that during the winter season, the streets become unsafe to drive on since they are flooded with water, and people with vehicles need to wait for the water to dry to use the streets.

As for wastewater, Karantina is connected to an old and degraded sewage system that channels the wastewater into the Beirut River without any treatment (Lebanese University, 2016) (Figure 34). Thus, sewage from residential buildings, industrial and commercial buildings, and other facilities such as the hospital end up in the concrete river, exposing Karantina and its residents to various environmental hazards.



Figure 33. Wastewater discharged on streets and vacant lots. Source: Abir Cheaitli, 2021.



Figure 34: Wastewater pipeline. Source: The Beirut Urban Lab, 2021.

During the thematic group discussions, specifically on the quality of the urban environment<sup>21</sup>, the residents mentioned that they collectively take initiatives to open and clean clogged storm sewer inlets at their own expense in fear of potential flooding. On other streets where inlets are not cleaned and opened, wastewater flood on the surface of streets and open spaces. The residents of Karantina are aware of the environmental risks of wastewater. The answers to the household questionnaire regarding the major needs in Karantina showed that approximately 89% of respondents emphasized the necessity of a proper sewage infrastructure (Figure 35).

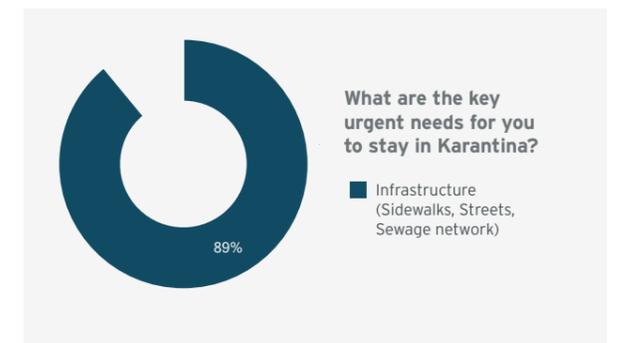


Figure 35: Answers to the household questionnaire regarding the infrastructural needs of people. Source: The Beirut Urban Lab, 2021.

Wastewater contains hazardous biological contaminants, chemical compounds, and gases that may have direct impact on the surrounding environmental air quality. In addition, hazardous sources from floods are dangerous to the health, hygiene, and comfort of households since they can infiltrate the human ecosystem (World Health Organisation, 2012).

20 A.H.,(2021-January -01), (Yehya al Said- Interviewer)

21 Thematic group discussion on the quality of the urban environment was held on 2021-May-21.

### C.4 Municipal Solid Waste Management

The descriptive memory report mentioned that the streets of Karantina are partially clean; every three days Ramco garbage collectors clean the streets. Nevertheless, during the one-to-one interviews, the residents complained about littering and insufficient and improperly placed garbage bins. Many criticized the cleanliness of public spaces and the accumulation of garbage on the streets, sidewalks, and leftover spaces. They mentioned that some of the residents and businesses discharge garbage into these spaces without taking into consideration the public good (Figure 36).

In some spots there is an attempt to encourage the habit of recycling solid waste among residents by placing sorting bins, in other locations this initiative is absent. (Figure 37). However, continued littering and lack of clean public spaces is affecting the quality of the public realm. It can also cause air, land, and water pollution. In addition, poor collection and disposal of urban solid waste can cause flooding by clogging sewer openings.



Figure 36. Littering on residual spaces. Source: Abir Cheaitli, 2021.



Figure 37. Waste bins in Karantina. Source: Abir Cheaitli, 2021.

**“ We are living in a polluted area after the blast<sup>22</sup>  
في تلوث عايشين في خلق من ورا الانفجار**

Furthermore, fieldwork and informal conversations showed that the construction and demolition waste (C&DW) from the port blast was disposed in the temporary slaughterhouse and current landfill in Karantina (Figure 38). According to the UNDP’s assessment (2020), the volume of the C&DW from the port blast itself and the potential demolition activities in Beirut (excluding the clearance of the Port of Beirut Port) was estimated at 657,386 cubic meters in the red zones (Figure 39).



Figure 38. C&DW from the port blast disposed in the new temporary slaughterhouse. Source: Batoul Yassine, 2021.

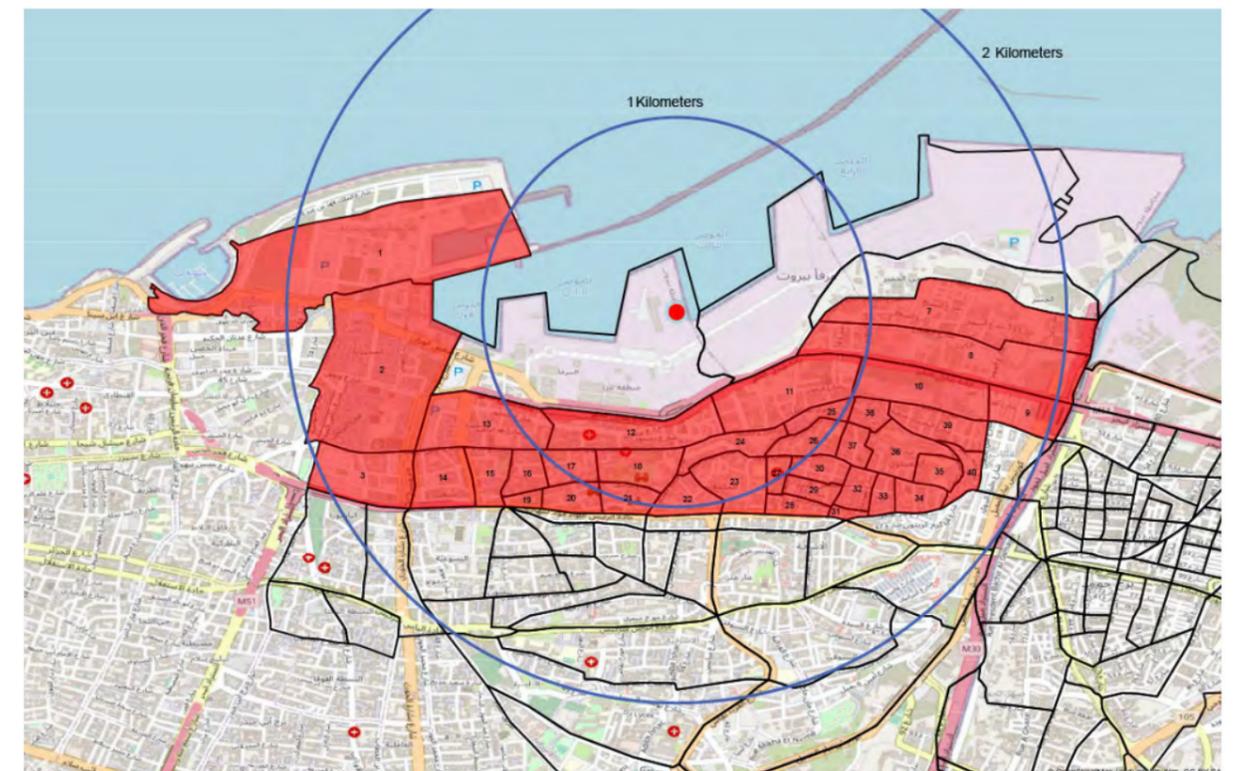


Figure 39: C&DW assessment in the red zones. Source: UNDP Lebanon, 2020.

In Karantina, piles of rubble from the port blast and the reconstruction works were observed in multiple locations near residential buildings (Figure 40). The debris of the destroyed and damaged structures poses additional environmental risks to the public health and livability in the area. The UNDP (2020) report explains that asbestos<sup>23</sup>, known to have a carcinogen risk, was found in damaged structures and rubble piles that were not safely disposed of. (UNDP Lebanon, 2020)

The residents expressed their concerns about the debris even though there has been an initiative co-lunched by UN-Habitat directly after the blast, to properly manage the contaminated post-disaster debris. The proposals aim to enhance the activities of sorting, storing, and crushing operations in a safe, fenced, and contained environment, convert the C&DW into multipurpose material, rebuild quarries and rehabilitate mountains. However, residents believe that the reason C&DW from the port blast was dumped in the new slaughterhouse was to keep it closed.



Figure 40. Construction and demolition waste from the port blast. Source: Abir Cheaitli, 2021.

22 R.H., (2021-January -18), (Micheal Khadrah- Interviewer)

23 Asbestos is commonly found in corrugated cement roofs and pipes.

## D. Impact of Surroundings and Internal Land-use Practices

“ Pollutants are being emitted from the many factories in the area<sup>24</sup>

يوجد تلوث صادر من كثرة المعامل في المنطقة

“ The sounds coming from the factories and the trucks is very bothering<sup>25</sup>

يزعجني الضجيج الصادر من المعامل والشاحنات

Air quality, acoustic comfort, visual, and thermal comfort are considered as essential parameters to assess environmental quality (U.S. Green Building Council, 2014). Many hazards that affect the environmental quality are the result of land-use practices that could be inside the designated area or around its peripheries. Common hazards could be chemical pollutants such as lead, lethal wastes, and ambient air pollution, and common physical hazards could be accidental fires and poisonings, floods, or traffic accidents (U.S. Environmental Protection Agency, 2021).

As mentioned in the neighborhood profile, Karantina’s geographical location and natural edges created harsh borders (the highway, the port, and Beirut River) that resulted not only in its isolation from the rest of Beirut but also in the degradation of the quality of the urban environment and its parameters. Additionally, the closed slaughterhouse, the fish market, the waste management facility, and the temporary garbage landfill have played a major role in projecting pollutants and degrading the quality of the urban environment. They are posing continuous threats to the physical, social, and environmental characteristics of Karantina. When residents were asked to name three things that they most dislike about their urban environment in Karantina, most of the answers revolved around environmental factors. Figure 41 shows that the residents disliked the degradation of the infrastructure and the smells that are generated from business activities, the port, the circulation of trucks, and the waste management facility. Many of the land-uses also contribute to levels noise pollution, especially from ships, trucks, steel modeling, and other industrial activities that negatively impact the residents.

During the second town-hall meeting, The Beirut Urban Lab research team presented a preliminary vision for the community. Most of the residents insisted that the vision should be reworked to include healthy environments as one of its main premises. Thus, the vision was rewritten to incorporate parameters for health and well-being.



24. Z.H., (2020-December-24), (Mohammad Amsha- Interviewer)  
 25. K.H.R., (2020-december-24), (Mohammad Amsha- Interviewer)

Qualities of the urban environment	Severe Problem	Serious Problem	Minor Problem	Total
Underserviced and decaying infrastructure	69	55	50	174
Floods during winter	13	12	33	58
Cleanliness of public spaces (streets, sidewalks, residual spaces)	25	25	14	64
Pollution in general (air, water)	19	36	7	62
Smells (port, landfill, river)	79	56	30	165
Noises (port/industries/ everyday social practices)	50	42	27	119
Waste bins cleanliness and location	30	18	4	52
Presence of the waste management facility in the area	76	29	17	122
Presence of the landfill in the area	16	7	2	25
Lack of public spaces	7	26	17	50
Truck activities	25	39	42	106
Stray dogs	28	36	25	89

Figure 41. Answers to the household questionnaire regarding the elements of the urban environment that the residents dislike the most. Source: The Beirut Urban Lab, 2021.

### D.1 Slaughterhouse

The presence of slaughterhouses in Medawar was recorded as far as 1862 according to the Mansell Map (Figure 42). In the 1910s, slaughterhouses began to cluster more within the current boundaries of Al-Khodor in Karantina. The practice became an important economic asset for the area and a part of its heritage that is deeply rooted in the community. In 1964-1965, a German company built a formal slaughterhouse facility that operated under international health guidelines (The Daily Star, 2014). The facility was closed during the civil war (1975-1992) and reopened in its current location in 1994. Since 2014, the slaughterhouse has been closed.



Figure 42: Map of Medawar by A.L. Mansell which dates to the 1862 showing the first location of slaughterhouse in red. Source: A.L. Mansell. Beirut: The Ancient Berytus. 1862. Map. The National Archives, Kew.

The slaughterhouse posed many risks to the residents of Karantina for a long time as a result of failing to meet health requirements and hygienic standards. Moreover, the unprofessional treatment and slaughter of animals exposed employees to a high range of pollutants such as wastewater contaminants and improper animal waste disposal (The Daily Star, 2014).

As a result, in 2014, the Ministry of Public Health took the decision to permanently shut down the slaughterhouse. Nevertheless, the former governor of Beirut promised the residents that another location inside Karantina would be selected for the new slaughterhouse which would be administered under strict regulations. The new warehouse was never opened because of the port blast despite being in the process of getting refurbished (Figure 43).



Figure 43. The temporary slaughterhouse. Source: Abir Cheaitli, 2021.

Although many residents and workers were against the closure of the old slaughterhouse, others supported the decision; the latter viewed the slaughterhouse as a risk to their lives and the health of their children. In 2015, the minister of health filed a lawsuit that claimed, "19 workers at the Beirut slaughterhouse had died of cancer over seven years. "It is extremely worrying as the total number of slaughterhouse employees was only 70" (eco-centra, WordPress, 2015). Due to the lack of research, health problems in Karantina cannot solely be attributed to the slaughterhouse because of many polluted land-use activities and the dilapidated built fabric as mentioned previously in this report.

## D.2 Municipal Waste Management Facility and Landfill

“ Sukleen is the only catastrophe<sup>26</sup>  
سوكلين الكارثة الوحيدة

“ Unpleasant odor is being emitted from the landfill that affects our health and the health of our kids<sup>27</sup>  
في روائح بتطلع من المكب بتأثر على صحتنا وصحة ولادنا

In addition to the waste landfill in Bourj Hammoud that poses major impacts on the environmental air quality of coastal Beirut, another temporary garbage landfill is found in Karantina. The temporary landfill threatens the quality of the urban environment (Figure 44).

In 2015, after officials closed Lebanon's primary landfill in Naameh, the governor of Beirut instructed the contractor SUKLEEN to begin storing garbage in Karantina on a site across the Bakalian Flour Mill (Figures 45 and 46) (Issa, 2016). The garbage landfill in Karantina was supposed to be a temporary solution to the 2015 trash crisis. The governor of Beirut promised that the trash would be removed once an alternative location was found, but until now, the landfill is still open.

<sup>26</sup> N.M.KH., (2020-December-30, (Mohammad Awad al Sattouf-Interviewer)

<sup>27</sup> B.Z.S., (2021-January-12), (Yehya al Said- Interviewer)

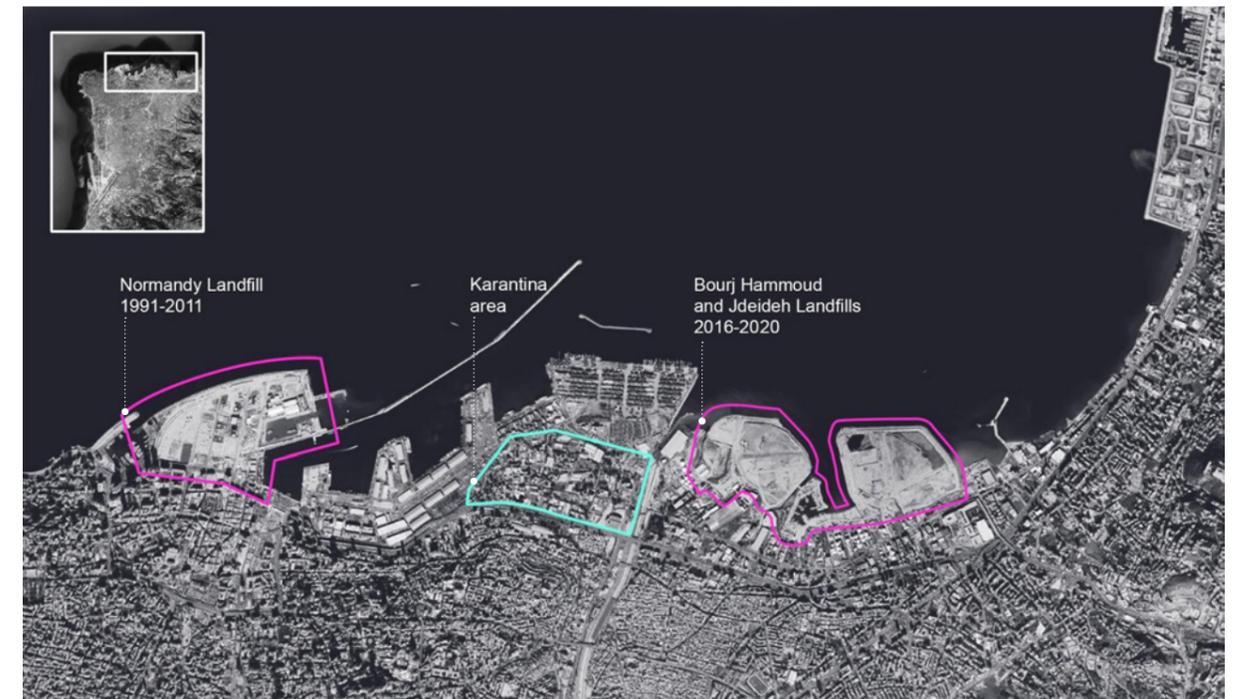


Figure 44: Bourj Hammoud and Jdeideh municipal solid waste landfills. Source: <https://massispost.com/>.



Figure 45. Karantina's waste landfill in 2016. Source: [www.voanews.com](http://www.voanews.com), 2016.



Figure 46. Karantina's waste landfill in 2021. Source: Abir Cheaitli, 2021.

SUKLEEN was responsible for collecting and treating waste at Karantina and Amrousieh since 1994, whereas SUKOMI was responsible for the treatment and disposal of waste in Naahmeh (Azzi, 2017). During the thematic group discussion on the quality of the urban environment, it was mentioned that the emitted smells were considered tolerable when SUKLEEN oversaw the waste facility. However, after Ramco took charge of waste collection in 2018, foul smells covered the whole area of Karantina with residents describing it as unbearable.

The port blast caused serious damage to the waste management facility (Figure 47). Its roof and walls collapsed and most of the machines were damaged. The facility is currently not operating. Garbage is collected and piled in the designated landfill. As a result, unsorted waste has been accumulating without any proper treatment. The answers to the household questionnaire revealed that around 165 households complained about the repugnant odor from the waste management facility and the landfill (Figure 41). In addition, 70% of the residents have demanded that the temporary garbage landfill be relocated due to the strong smells that Karantina is suffering from, especially at night (Figure 48).



Figure 47. An interior view of the waste management facility after the port blast. Source: Ali Ghaddar, 2021.

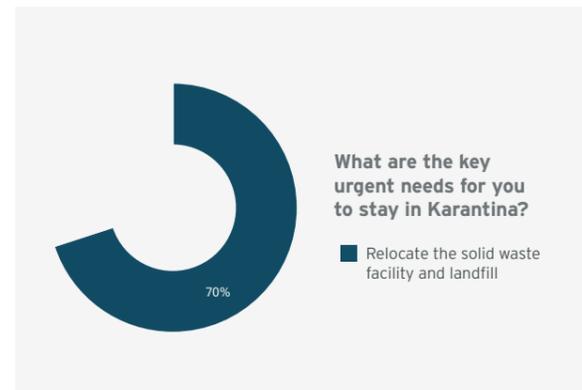


Figure 48: Answers to the household questionnaire regarding the urgent needs of the residents concerning the relocation of the waste facility and landfill. Source: The Beirut Urban Lab, 2021.

They noted that each night smoke comes out of the landfill, indicating that the waste is being burnt instead of being treated. They were highly worried about the constant inhalation of smoke from the open burning of garbage and its consequences on their health and well-being of their children. This was especially evident during both town hall meetings (11 April and 30 June).

Experts assert that any landfill that does not comply with the international best practices and does not carry out an Environmental Impact Assessment may impose dangerous health risks on nearby residents. In 2017, Human Rights Watch studied the health risks from increasing open waste burning instead of a holistic and effective waste management strategy in Beirut. They stated that “residents in the areas where waste was being dumped and burned reported health problems including chronic obstructive pulmonary disease, coughing, throat irritation, skin conditions, and asthma. Air pollution from open waste burning has been linked to heart disease and emphysema and can expose people to carcinogenic compounds” (MassisPost, 2020).

“ There are a lot of stray dogs during the day and night and their barking doesn't let us sleep all night<sup>28</sup>  
في كلاب داشرة أثناء النهار والليل وما بخلونا نام بالليل من كثرة أصواتن

On another note, while conducting fieldwork for the household questionnaire, many residents mentioned that recently, and especially after the port blast, stray dogs were spotted in Karantina. This led to complaints from the residents that they are not able to sleep at night because of the barking. They also mentioned that there has been an increase in the number of mosquitos in Karantina in the wake of the port blast. Research has shown that there is a correlation between the increase in the number of stray dogs and mosquitos in littered public spaces or landfills with inefficient and inadequate waste management operations (Wright, Nicolette, et al., 2021). Open garbage landfills serve as a food source for free-roaming dogs, and they also serve as habitats for “the proliferation of disease-carrying vectors such as flies, mosquitoes, and rodents that are directly or indirectly may have an adverse effect on public health” (Nor Faiza, et al., 2019).

Although Lebanon lacks mandatory recycling law, it has a national waste strategy for garbage collection and disposal not yet implemented. Therefore, the residents are worried that the current landfill in Karantina will remain open for a long period.

### D.3 The Port of Beirut

“ After the explosion, I do not feel safe living near the port<sup>29</sup>  
وجود المرفأ بعد الانفجار بطل عم يطمني

The port used to carry 60% of Lebanon's imports and store medicine and food. It was considered as an essential economic artery with huge transportation and logistics services for Lebanon and the Gulf (Figure 49). The modern port dates back to the 1880s and back then, it contributed to the development of Beirut into a commercial and economic center. In the 20th century, “Beirut became a key seaport serving the oil trade and related passenger and cargo movements in the Levant and the Gulf” (Fregonese, 2020). Nevertheless, the proximity of the port to Karantina negatively affects the quality of life of the residents, endangers their health, and imposes life-threatening risks.



Figure 49. Port of Beirut. Source: Ali Ghaddar, 2021.

Experts claim that ports pose public risks from the on-port property and off-port property accidents. It is known that “port terminals, freight transportation corridors, intermodal facilities, trans-loading facilities, container inspection facilities, container storage yards, warehouses, distributions centers, marine fuel, oil, and gas storage terminals, and hazardous cargo, pose significant public safety hazard risks” (Envhealthcenters, 2012, p.6).

A major example that is relevant to Karantina is the 2020 port blast that was equivalent to a 3.5 magnitude earthquake and believed to be caused by 2,750 tons of ammonium nitrate stored in the warehouse at the port (USA Today, 2020). Since the buildings in Karantina do not follow any safety standards, and with their proximity to the port, the explosion caused catastrophic effects. Regulations in the zoning plan for Beirut do not specify any adequate public health and safety measurements to protect residents from the risks of an explosion.

On the other hand, one-to-one interviews with the residents revealed that the economic activities, practices, and transportation systems in the port are in constant operation. Therefore, ships may be an additional source of pollution to the several sources in the area (Envhealthcenters, 2012). However, the residents of Karantina were more concerned with the truck activities.

“ The streets are filled with trucks, they cause accidents, air pollution and a lot of noise<sup>30</sup>  
كميونات البور ملئة بل شوارع وتسبب بحوادث سير

“ A large number of trucks leads to pollution, noise, and traffic in the area<sup>31</sup>  
كثرة الشاحنات في المنطقة تؤدي إلى تلوث و ضجيج وعجقة

28 I.M.H.H., (2020-December-30), (Mohammad Amsha- Interviewer)

29 E.M., (2021-Janaury-07), (Yehya al Said-Interviewer)

30 A.B.H.,(2020-December-30), (Mohammad Awad- Interviewer)

31 KH.W., (2020-December-29), (Mohammad Amsha- Interviewer)

During the thematic group discussions on the spatial, economic, and social connectivity and the quality of the urban environment, many residents mentioned that they are disturbed by the sounds of horns in Karantina. Moreover, trucks contribute to the deterioration of the physical and environmental quality, and as well as pose a threat to the children who frequently play in the streets.

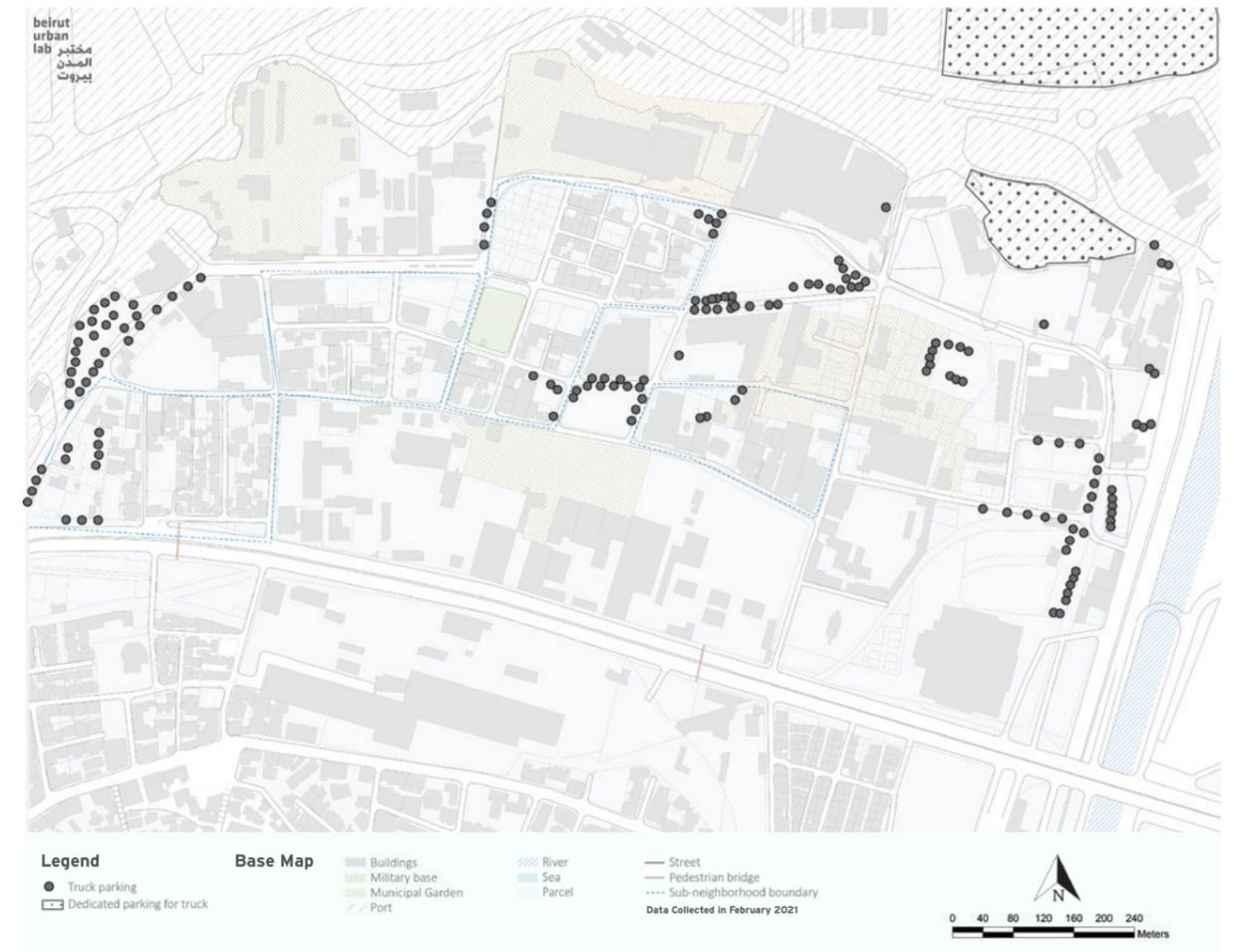
The shortage of designated parking spaces for transit trucks in the port and surrounding areas led truck drivers to park their vehicles in the shared spaces in the neighborhood (sidewalks, streets, and residual spaces) and along the Charles Helou Highway, causing traffic and appropriation of public space (Figures 50, 51, and 52)



**Figure 50.** Trucks parking on an empty lot. Source: Abir Cheaitli, 2021.



**Figure 51.** A driver waiting beside his truck for the next operation. Source: Ali Ghaddar, 2021.



**Figure 52:** Mapping of truck parking in Karantina. Source: The Beirut Urban Lab, 2021.

Regarding the environmental concerns, many residents complained that a heavy smell of diesel accompanies the constant movement of trucks, and the smell reaches inside the buildings (Figure 53). Another practice that resulted in emitting heavy smells is the transport and loading of livestock that occurs twice a month in the port (Figure 54). Many residents from Al-Khodor mentioned in the answers to the household questionnaire that the smell of animals is toxic and strong. Houses are not properly equipped to seal outdoor smells or pollutants; thus, the residents must endure the high level of discomfort.

Karantina is home to several warehouses which are used for storage and distribution. These are magnets for cargo trucks that transport goods all over Lebanon. Most of the routes that the truck drivers use to supply the port and the warehouse are within the residential boundaries of Karantina. Based on the thematic group discussions on the quality of the urban environment, trucks use inner routes within the residential sub-neighborhoods to operate during non-working hours and avoid public officials. This resulted in damage to private and public property, the creation of potholes, and the removal of asphalt from the streets, posing a threat to children and elderly.

During the discussion, a resident mentioned that “trucks that enter from and to the port decide to pass inside this area while they can pass from the outer roads. They are closing in the traffic in the morning, damaging our cars, and their smoke is causing a lot of pollution, especially that they pass near houses”<sup>32</sup>. Another resident from Al-Saydeh mentioned that a group of residents including him tried to prevent trucks from using inner streets by placing cement blocks that only allow access to small vehicles. However, the truck drivers later removed the cement blocks.



**Figure 53.** Daily emissions from the load of truck in Karantina. Source: Abir Cheaitli, 2021.



**Figure 54.** Truck cargo with cows coming from the port. Source: Ali Ghaddar, 2021.

<sup>32</sup> A resident in Al-Sayde mentioned during the thematic group discussion on Quality of the Urban Environment (2021-May-21)

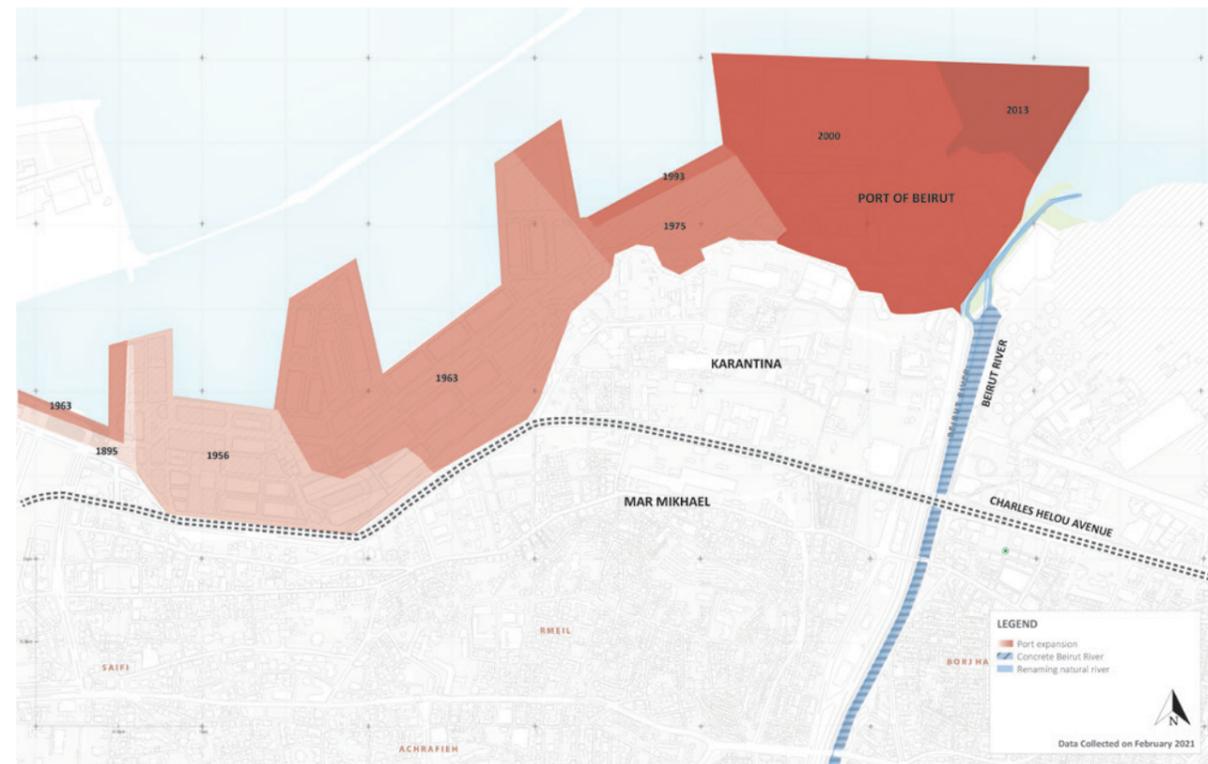


Figure 55: The expansion of the port over 40 years around Karantina. Source: The Beirut Urban Lab, 2021.

The port also affected the aesthetic and natural view from Karantina. The residents recalled how their houses used to overlook the Mediterranean Sea. The coastline used to operate as a public amenity and public space for leisure, where residents came to fish, play, and swim. However, this changed after the end of the civil war and the expansion of the port facility in the 1990s. The port underwent a major renovation of its infrastructure and extended its territory to include a new container terminal that can increase its productivity (Port of Beirut, 2021) (Figure 55). The port currently occupies over 1.2 million square meters and, as a result, Karantina currently overlooks ships, smoke chimneys, cranes, and stacked containers (Figure 56).



Figure 56. View of shipping cranes from a residential house in Karantina. Source: Ali Ghaddar, 2021.

During the thematic group discussion on the quality of the built environment, a resident stated that “We have a beach next to us, and it is a great place that we can use; however, we are not able to benefit from it because it is closed by the public authorities. It would be great if you can do something about this”.<sup>33</sup>

<sup>33</sup> A resident in Al-Sayde mentioned this during the thematic group discussion on Quality of the Urban Environment (2021-May-21)

## D.4 The Charles Helou Highway

The Charles Helou Highway that borders Karantina to the south also has negative impacts on air quality (Figure 57). It is a major transportation artery that remains heavily congested during the day with vehicles commuting to and from Beirut, increasing the levels of pollution. Initially, the highway was constructed to reduce travel time, allow the surrounding neighborhoods to develop economically, promote the housing market, and lower the cost of transportation. However, it resulted in high levels of sound, air, and visual pollution, as well as physical, social, and economic ruptures<sup>34</sup>.



Figure 57. Traffic on the Charles Helou Highway. Source: Sima Diab, 2019/ww.wired.com.

A two-year research study on air pollution by the American University of Beirut and Saint Joseph University between 2008 and 2010, in collaboration with the National Council for Scientific Research, concluded that “about 93% of Beirut’s population is exposed to high levels of air pollution” (Wadvalla, 2011). The study demonstrated that in 2010, across Beirut, “the average concentration of nitrogen dioxide, a harmful air pollutant resulting from the combustion of fuel, was 58 micrograms per cubic meter of air.” According to the World Health Organization, anything above 40 micrograms per cubic meter of nitrogen dioxide is considered unsafe (Wadvalla, 2011). Despite the importance of this study, the transportation system of Beirut became worse, with higher levels of traffic that expose the residents of Beirut to hazardous air pollutants.

The following section of the report discusses the quality of the social realm and everyday behaviors to understand the alternative practices of the residents to compensate for living in a degraded, neglected, constrained, and abused urban context.

## 5.2 THE QUALITY OF SOCIAL PRACTICES

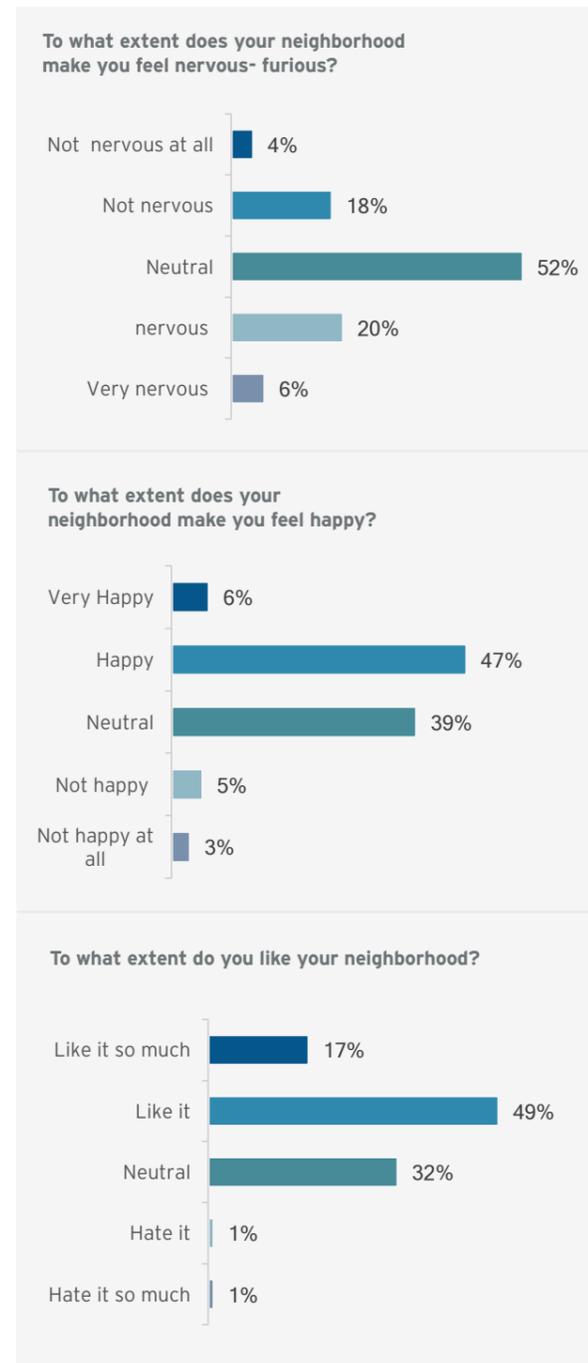
### A. Socio-cultural Environments and Everyday Social Practices

Socio-spatial practices are essential when considering the quality of the urban environment. Everyday practices are influenced by the physical, social, and environmental qualities of the urban context (Carmona, 2019). Karantina has evolved into a village-like with sub-neighborhoods where people live, grow up, interact, and spend quality time with each other. It has few designated public parks and no community centers; thus, the residents practice their daily socio-spatial activities on streets, sidewalks, and vacant lots that are unsafe and underserved.

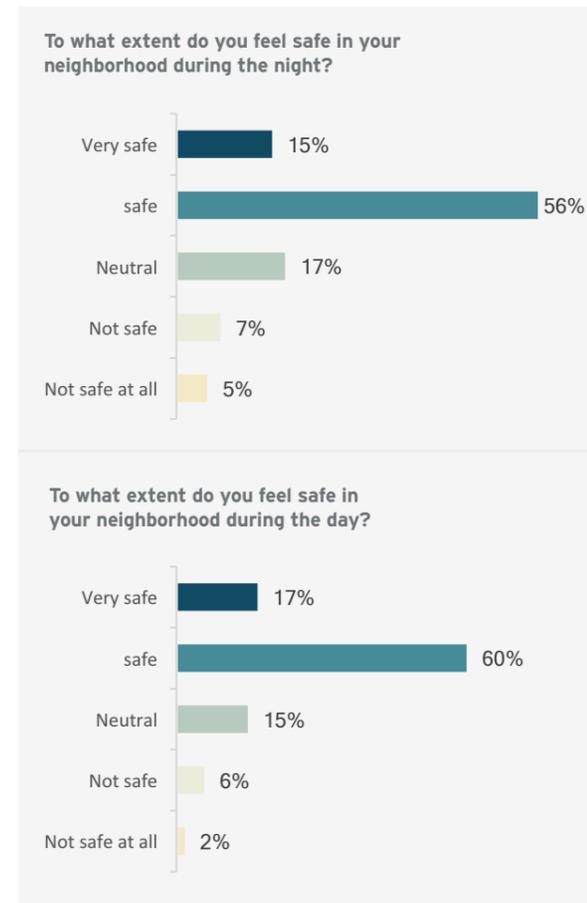
The collected data revealed that 66% of the surveyed households like their sub-neighborhoods, 53% are satisfied with their environment, and only 26% feel nervous about living in Karantina (Graph 58). The residents shared with the research team that they feel nervous because of several factors, one of which is the port blast and the general unsafety of living close to the port. Some of residents in Al-Saydeh sub-neighborhood also shared their concern about the increase in the number of Syrian refugees in Karantina after the economic crisis.

Feelings of safety and security in public and shared spaces in Karantina are not attributed to service provision that is limited, but rather to the social connections that developed between the residents. The analysis of the answers to the household questionnaire regarding the feeling of safety and security in Karantina showed that around 77% of residents feel safe during the day and 71% feel safe during the night (Figure 59). A group of women in Al-Khodor sub-neighborhood mentioned in an informal conversation that they feel safe to walk on streets during the day and night because they are surrounded by their relatives, family members, and trusted neighbors.

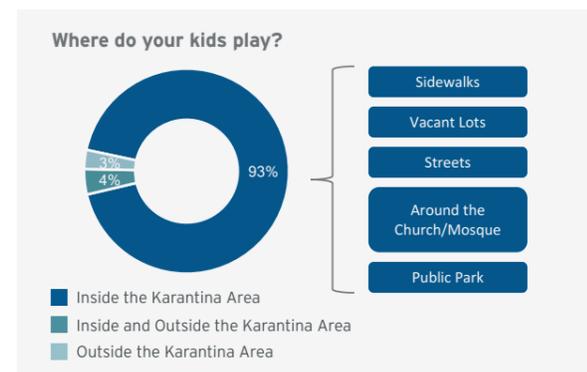
<sup>34</sup> This idea will be further elaborated in the “spatial, economic, and social connectivity” transversal issue.



**Figures 58.** Answers to the household questionnaire regarding the feeling of the residents towards the neighborhood. Source: The Beirut Urban Lab, 2021.



**Figures 59.** Answers to the household questionnaire regarding the feeling of safety of the residents during the day and night. Source: The Beirut Urban Lab, 2021.

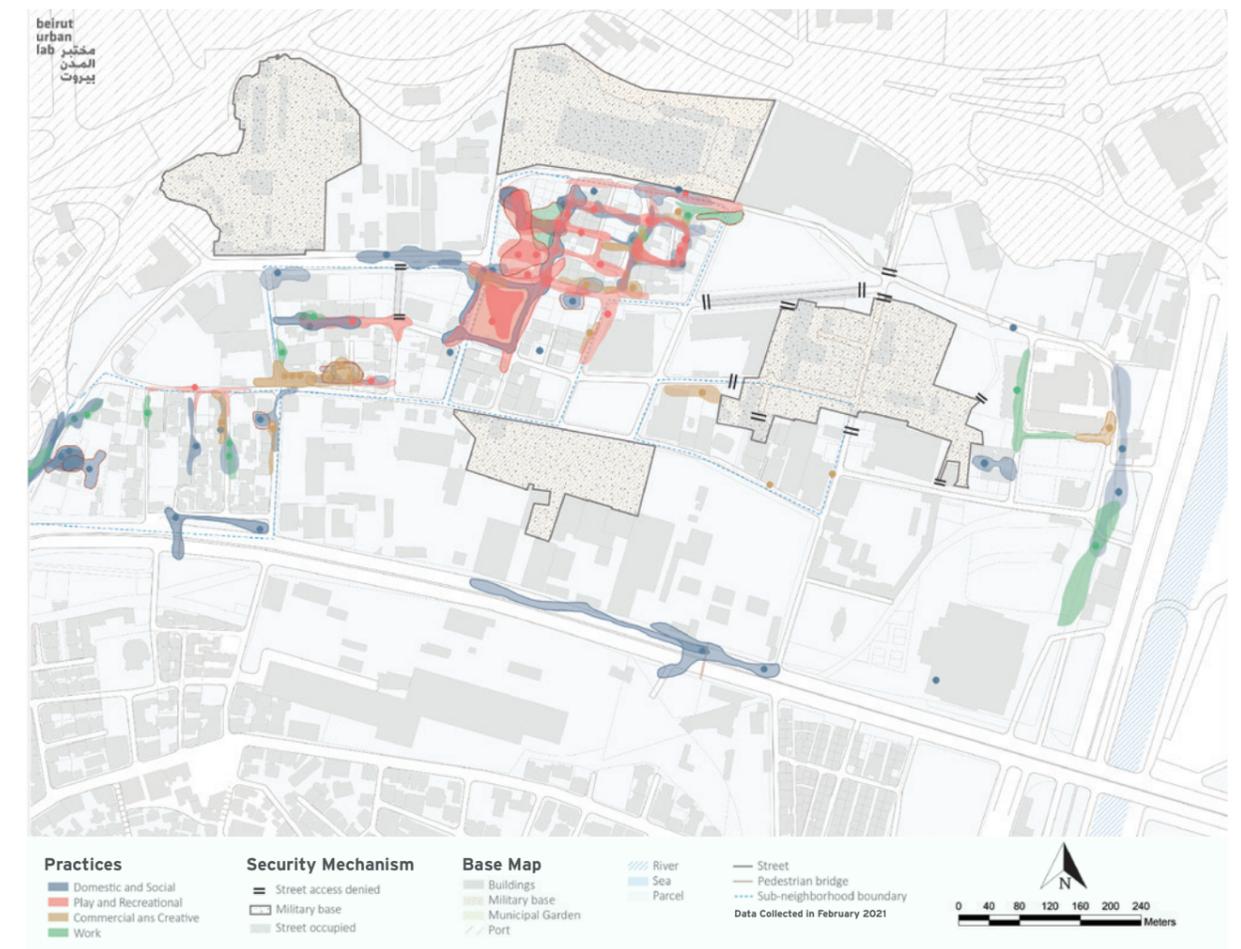


**Figure 60:** Answers to the household questionnaire regarding areas for children to play. Source: The Beirut Urban Lab, 2021.

Additionally, parents in Karantina feel comfortable to allow their children to play outside, despite the danger from the truck circulation and the underserved streets. 93% of the surveyed households reported that their kids enjoy playing in public and shared spaces such as sidewalks, vacant lots, streets, around the church and mosque, and inside the public parks when they are accessible (Figure 60).

“ We gather on the streets due to the lack of public spaces<sup>35</sup>  
 من قلة الأماكن العامة بالمنطقة منظر نقعد بالشارع

The research team mapped concentrations of socio-spatial practices in Karantina . The practices were categorized as follows: play and recreational practices, domestic and social practices, commercial and creative light industries, and temporary working spaces. The observation and documentation of the socio-spatial practices were then rendered and overlapped with a series of heat maps (Figure 61).



**Figure 61:** Heat map showing the concentrations of socio-spatial practices in Karantina. Source: The Beirut Urban Lab, 2021.

The maps show that the agglomeration of play, recreational, and domestic practices have a strong presence within the residential sub-neighborhoods, particularly in Al-Khodor sub-neighborhood. One explanation for that is that Al-Khodor sub-neighborhood has the densest population among the three residential clusters and is within closer proximity to the public park. Children use the streets, sidewalks, and the empty lots surrounding the park to play, especially that the park is closed most of the time (Figure 62). However, the socio-spatial practices in the industrial zone are limited to the truck drivers who usually appropriate the sidewalks and the vacant land especially on the western entrance of the port that is degraded and underserved.

35 M.A.H., (2021-January-25), (Yehya al Said- Interviewer)



Figure 62. Everyday practices in Karantina. Source: Abir Cheaitli, 2021.

### 5.3 THE QUALITY OF PUBLIC HEALTH

“ We live in an infested area; it is portrayed as such<sup>36</sup>  
 نحن بمنطقة موبوءة، موصوفة بالوباء

As the previous sections of this report demonstrated, the quality of the built environment in Karantina faces many physical, social, and environmental challenges that directly or indirectly impact public health and well-being. Data from the household questionnaire found that 51% of the surveyed households mentioned that at least one family member suffers from chronic illness while 32% did not mention any illness. 4% of the households surveyed reported physical disabilities and 1% suffer from mental health problems. The household survey also focused on vulnerable members of households, mainly women. Data showed that 3% of the families include pregnant women and 4% include women who are lactating (Figure 63).

The residents also attributed poor quality of life to indoor and outdoor air pollutants. A resident from the thematic group discussion stated that “We live in a polluted area. The highest number of cancer cases is present here. Multiple sources are causing this including the sewage in the Beirut River water which throws in here and the waste factory that was supposed to work only for Beirut, but it appears it’s working for many areas in Lebanon”. They also problematized the lack of access to health services; 78% of residents mentioned that they do not have access to public or private health insurance and services. (Figure 64).

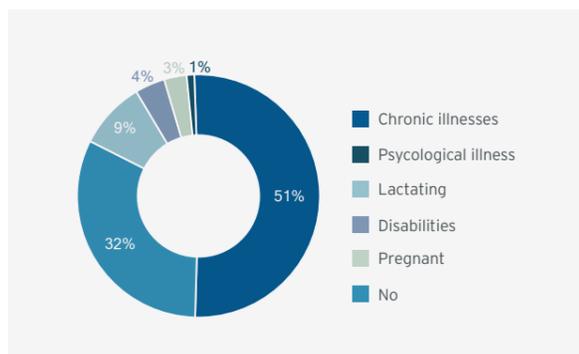


Figure 63: Answers to the household questionnaire regarding the well-being of people. Source: The Beirut Urban Lab, 2021.

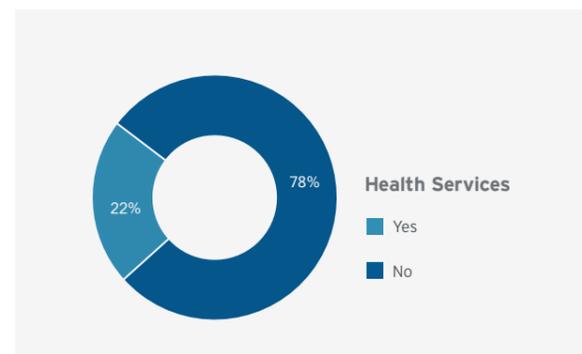


Figure 64: Answers to the household questionnaire regarding access to health insurance. Source: The Beirut Urban Lab, 2021.

During the thematic group discussion on the quality of the urban environment and the first town hall meeting, many residents mentioned that “there are no proper health centers in Karantina, and Karantina’s public hospital is only by name a public hospital.” They suggested that the services of the hospital are still expensive. Another resident said: “There is no dispensary or free medication provided in the area. If a child gets sick one must pay 200,000 Lebanese pounds to the doctor; how can we afford this while most of us are unemployed?”

Therefore, low-income families in Karantina face major challenges in accessing adequate healthcare and are subject to difficult conditions that risk their health, comfort, and well-being.

## 6. SYNTHESIS AND RECOMMENDATIONS

This report was based on an understanding of how various practices influence the quality of the urban environment. It examined a range of components that define the quality of the built fabric, such as buildings, open and public spaces, municipal infrastructure, and land-use activities and the quality of the environment. It also examined the quality of social practices, such as household arrangements, socio-cultural activities, and everyday practices, in addition to the quality of public health.

The assessment of the abovementioned aspects, and concerns about the urban environment, revealed that Karantina suffers from a poor, degraded, and intimidating urban environment. It is polluted, lacks green spaces, has weak streetscapes, is unsafe for children, and is risky for the elderly to navigate. The research process also encouraged the residents to openly communicate their feelings and concerns about the things that bother them in Karantina (Figure 65). Most of the concerns were about the quality of the urban environment, which highlights the general importance of the subject.



Figure 65: Answers to the household questionnaire regarding the concerns of the residents about the quality of the urban environment. Source: The Beirut Urban Lab, 2021.

36 A resident during the thematic group discussion on Quality of the Urban Environment (2021-May-21)

## FINDINGS

- 01** Unsustainable and non-environmentally friendly land-use practices by micro businesses (key-freights, logistics, and mechanical garage), governmental facilities (waste management, hospital, fish market), and industries (food production and metal welding) cause significant and overlapping physical, social, and environmental threats to the inhabitants and dwellers. The edge condition of Karantina, which is bordered by the highly contaminated Beirut River, the congested Charles Helou Highway, and the unsafe Beirut Port, also decreases the quality of the urban environment. These practices have caused air pollution, vegetation destruction, water waste, soil contamination, and waste without proper sorting. For example, activities in the old slaughterhouse were considered unsustainable; various studies on Karantina revealed that it has negatively influenced the environment by causing sources of pollution and health complications for a high percentage of employees. Many residents felt relieved when the slaughterhouse closed in 2014 while others disagreed. The practice of slaughtering animals is considered an economic asset in Karantina and a cultural and heritage practice for many residents. The Governor of Beirut planned to open a new temporary slaughterhouse near the fish market; nevertheless, the port blast caused severe damage to the newly built facility.
- 02** Another example is the unmonitored and unregulated activities of the municipal waste management facility and the temporary landfill that reduced the quality of the urban environment in Karantina. The landfill was a temporary solution to the garbage crisis in 2015. However, it is still operating and is filled with construction and demolition waste from the port blast. Piles of rubble are accumulating without proper management and assortment. The presence of rubble piles in close proximity to residential areas contributes to multiple health risks and environmental hazards. Furthermore, the waste management facility was demolished after the port blast and has been out of service since last year. As a result, according to several residents, the collected solid waste is burnt on site. This results in air, soil, water pollution, unpleasant sight, in addition to an increase in the number of stray dogs and mosquitos.
- 03** Physical Environment: The “conditions in the environments in which people are born, live, learn, work, play, worship, and age, affect a wide range of functioning, and quality of life outcomes and risks” (Schilling, & de Leon, 2017, p.3). In Karantina, years of deterioration, negligence, and national economic and political crises have caused the degradation of the physical structures of many buildings. Karantina has around 364 buildings, many of which need major interior and exterior architectural rehabilitation ranging from deteriorated facades, ceilings, walls, and columns, or leaking pipes, aging structures, window frames, roofs, and terraces. The port blast further damaged several degraded buildings. Structural damages result in threatening and unhealthy living environments such as high levels of humidity, thus affecting the health and well-being of the inhabitants. After the port blast, several organizations tried to repair the physical elements of the buildings; some did comprehensive repairs while others negatively impacted the interior living conditions through incomplete and ineffective repairs.
- 04** The existing poor living conditions are exacerbated by overcrowding, which is prominent in Karantina due to the economic crises and flexible rental arrangements. Therefore, good indoor quality is a crucial living condition to maintain a healthy urban environment for the inhabitants. Abandonment of apartments and buildings is another factor that affects the urban environment in Karantina. The decaying structures and infrastructures of the vacant buildings and apartments have been proven to cause multiple public health problems with living near vacant and abandoned buildings or vacant lots, including higher rates of chronic illness, mental health problems, and homicide (Schilling, & de Leon, 2017).
- 05** Negligence from public officials: The physical quality of the streets, sidewalks, and municipal infrastructure is in a degraded condition since Karantina receives little attention from public officials. Provisioning, refurbishment, maintenance of municipal infrastructure, waste management, and the cleanliness of public spaces are practices that are absent in Karantina. Streets and sidewalks require major enhancements, repairs, and upgrades as they are unsafe, intimidating, unclean environments for people, especially for kids and elderly. The decaying public infrastructure (inlets, channels, and sewage systems) exposes the public realm to wastewater floods, especially in winter seasons. As a result, wastewater mixed with to stormwater, flood on the surface of public spaces.
- 06** Another practice that is deteriorating the quality of public spaces is littering and the lack of proper cleanliness of streets, sidewalks, and leftover spaces. Improper behavior from the public, inadequacy in the placement of garbage bin, and shortage of collection services are some reasons for littering. Nevertheless, these spaces are regularly used by residents to practice their daily socio-spatial activities. The residents and children use these unsafe spaces because of the closure of existing public parks after the port blast, and they were already scarce in number.
- 07** The mapping of the data shows that Karantina hosts a rich variety of old heritage trees that the residents have been using as their social focal points. As stated in this report, Karantina suffers from high levels of pollution, and the clustering of trees helps to clean the air. Trees provide invaluable ecosystem services such as the creation of microclimate, shelter for wildlife, the release of oxygen, carbon sequestration, and soil conservation, offer shade, enhance the aesthetic quality of streetscapes, and encourage eco-tourism (Turner-Skoff, & Cavender, 2019, Down-to-earth, 2018). In addition, trees can create adequate cultural and ecological environments for people to meet, socialize, and perform their everyday activities. However, public officials do not maintain the trees and, as a result, many of them are being removed.
- 08** Appropriation and encroachment: Lefebvre (1992) emphasizes how “people should own the city, have a take in its process of spatial production and claim it as a right, through their practices and experiences, especially in the cities’ open spaces” (Lefebvre,1992, cited in Harb, 2017). Another practice that has negatively affected the urban environment is truck drivers, the military, and the owners of private generators appropriating and encroaching on public spaces. Heavy trucks circulate within Karantina without a set schedule or dedicated routes. As a result, they cause physical damage to the public spaces such as streets, roads, vacant lots, and private property such as cars and front gates. Additionally, in the absence of designated parking spaces, the drivers leave their trucks in empty open spaces, either on sides roads or vacant roads.
- 09** The appropriation of public spaces was also evident in the security mechanism that the military imposes on Karantina. Dikeç (2002) explains how “ruling authorities develop narratives, strategies, and mechanisms to naturalize their domination over the city and its public spaces, and their exclusion of ordinary dwellers, especially poor and marginalized groups. Possibilities for diverse and multiple spatial practices and experiences within such spaces become constrained and contingent” (Dikeç, 2002, cited in Harb, 2017). In addition to closing several streets and sidewalks, cement blocks, checkpoints towers, wire-mesh, and other security mechanisms are placed in an ad-hoc manner either on private or public properties.

- 10** The presence of a military base to the west side of Karantina, in addition to the expansion of the port throughout the years have prevented residents to access the coastline. The coastline used to operate as a public amenity and space for leisure, where residents used to fish, play, and swim.
- 11** The owners of private generators also impact the use of private and public spaces in Karantina. The electricity crises in Lebanon required that residents and commercial facilities purchase diesel generators and locate them in an unregulated manner, on sidewalks, streets, buildings, residual spaces, and building entrances. Many of the generators not only have appropriated public spaces but also are close to residential homes, exposing residents to elevated levels of air pollutants and airborne carcinogens.
- 12** Everyday social-spatial practices: The “urban forms and features of the built environments influence social cohesion in local neighborhoods” (Dempsey, 2009, p.1). Several of the socio-spatial practices that were documented in the research influenced the residents of Karantina directly or indirectly. The differences between the sub-neighborhoods in Karantina are evident even when there is no clear division between residential clusters. Interviews, mappings, and fieldwork showed that Al-Khodor, Al-Saydeh, and Al-Senegal sub-neighborhoods evolved into three small residential villages over time. During several conversations, the residents used the term village to describe their residential clusters and everyday practices and experiences.

However, closure of public spaces, the land-uses and commercial activities, the quality of the infrastructure, and the historical events generated independent sub-neighborhoods and exacerbated the fear of the other. This fear was translated physically and socially into the urban fabric through the formation of small residential villages. Nevertheless, the analysis of the socio-cultural practices showed that despite the poor quality of the urban environment, residents experience a strong sense of belonging and social cohesion in Karantina. Social ties and community engagement in the sub-neighborhoods are vital<sup>37</sup>. They provided the residents with a sense of safety and security.

## RECOMMENDATIONS

- 01** A livable city develops urban services that bring its inhabitants better well-being, health, and comfort (Aldairi et al., 2017). The complex nature of the urban environment, with its multitude of concerns, requires a holistic approach that focuses on the interrelationship between the environment, economy, and society, and stresses both research and policy outcomes. An effective urban environmental sustainability policy should control pollutant emissions, enforce waste management, and encourage the production of clean energy and water consumption.

This policy should not only be directed to the business district but also to the residents that contribute to creating a livable Karantina. Through a sustainable development approach that incorporates the future and the present short, medium to long-term goals, Karantina will be more livable. The strategy should meet “the needs of the present, without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). It should also provide tools and techniques to facilitate and support communication between residents and professionals around environmental issues, which will assist in the creation of action plans and recommendations for Karantina. At the same time, it should encourage public participation in research.

- 02** Rehabilitation strategies for buildings, incentives for reusing structures, and imposing vacancy tax are recommended to mitigate the negative environmental impacts, albeit minimal, of vacancies and abandonment. Reducing overcrowding is a goal for the local governments since there is a need to “build and refurbish housing, subsidize social or public housing, regulate private rental housing, implement tax and planning policies that encourage the building of affordable housing, and work with community leaders in informal settlements” (World Health Organisation, 2018, p.29). This will also reduce the number of vacant lots, buildings, and apartments in the area, and it will decrease urban overcrowding.
- 03** Public officials should be held accountable for neglecting their responsibilities to maintain and manage public spaces and the infrastructure in Karantina. The 4U Anti-Corruption Unit Center<sup>38</sup> and Transparency International<sup>39</sup> advocate for incorporating mechanisms into local government structures to counter public corruption and mismanagement. This can be achieved through digital complaint mechanisms, legal counseling services, media-based accountability platforms, and participatory budgeting (U4 Anti-corruption resource center, 2019). For example, formal methods or a digital platform can be useful; they can operate as a space for communication that residents can use to file complaints, request government information, and whistle-blow on corruption. They require a multi-faceted approach that focuses on the individual’s responsibility towards public spaces and the preservation of physical and ecological attributes.
- 04** Assistance from NGOs in environmental health can aid in organizing activities and awareness campaigns to inform citizens of the harmful consequences of cutting trees and littering on the urban environment. The government can enact a special law to restrict the removal of heritage trees. Additionally, landowners can be rewarded with incentives to preserve these trees.
- 05** For Karantina to reclaim its public spaces, a strategy should be drafted to involve public officials, developers, residents, and civil society to prevent any kind of encroachment and appropriation. Regarding truck activity, the strategy should require the port officials and private industries to provide a study of truck parking requirements. Public officials also need to initiate regulations and policies to mandate the provision of parking while considering the factors that necessitate truck transportation such as the port, supply chains, and logistics. There is a need for law enforcement to prevent truck drivers from circulating inside Karantina using illegal parking tickets.
- 06** Private generators should also be prohibited near residential or business areas since they cause significant environmental and health problems. The Municipality of Beirut needs to provide a designated area for private generators, especially for the business district. As for the military’s encroachments and appropriations of private and public spaces, Harb (2017) advocates for consulting with civil society groups that are engaged in a variety of public issues such as the environment and public spaces. They are known to mobilize these cases through voicing their opinions on legal platforms, social media, and awareness campaigns.
- 07** Strategies that promote social goals in the built environment need to remove any physical and social barriers that can reduce the participation of people in daily practices. Providing equal access to services, facilities, economic activities, and affordable housing can enhance social cohesion. The design of the streets should reinforce livability through a safe environment by providing urban furniture and traffic calming measures. Setting up cultural centers in civic buildings and providing public spaces can promote daily interaction between the different sub-neighborhoods that is conducive to a harmonious relationship. Also, ensuring secure rent rights and property ownership through the relevant legislation can provide a level of stability for vulnerable groups in Karantina.

<sup>37</sup> This finding are detailed in the report on Transversal Issue II: Spatial, Economic, and Social Connectivity in Karantina.

<sup>38</sup> The U4 Anti-Corruption Resource Centre is a permanent, donor-funded center that promotes a better understanding of anti-corruption issues and approaches in international development.

<sup>39</sup> The Transparency International is a global citizen organization and global coalition against corruption.

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# STRATEGIC FRAMEWORK

The Strategic Framework was the third step of the urban recovery strategy of Karantina. It presented a recovery framework for post-port blast Karantina that aligned with the position of the Beirut Urban Lab on urban recovery that is people-centered and socially just. It was largely based on the strategic diagnosis of the five transversal issues that were identified in the Descriptive Memory report on Karantina.

The direct threads that pulled into this strategic framework were the specific strategic objectives generated by the diagnosis process and its five tracks of investigation of the transversal issues. These strategic objectives were consolidated into a more general set of objectives, which maintained the cross-cutting approach that was embedded in the identified transversal issues and in the diagnosis work. The strategic framework carries forward ten key assets derived from the vision for Karantina.

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# 1. INTRODUCTION

The strategic framework of Karantina that was formulated and presented in this report was the third step in the urban recovery strategy for Karantina. It presented a recovery framework for post-port blast Karantina that aligned with the position of the Beirut Urban Lab on urban recovery that is people-centered and socially just. It was largely based on the strategic diagnosis of the five transversal issues that were identified in the Descriptive Memory report on Karantina.

The direct threads that were pulled into this strategic framework were the specific strategic objectives generated by the diagnosis process and its five tracks of investigation of the transversal issues. These strategic objectives were consolidated into a more general set of objectives which maintain the cross-cutting approach that was embedded in the identified transversal issues and in the diagnosis work.

The five general objectives were:

-  **A.** Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.
-  **B.** Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
-  **C.** Support, increase, and sustain cultural and economic vitality in Karantina.
-  **D.** Promote a sustainable development strategy that is participatory and phased over a period of time.
-  **E.** Improve the overall quality of the urban environment in Karantina.

Towards the articulation of the strategic framework step, the team conducted further research on the regulatory framework, best practices, and economic strategies that would be adequate for the local context. The team then developed the results of the diagnosis into a set of strategies that were intended to guide the elaboration of the action plans. The cross-cutting approach of the diagnosis allowed for some strategies to serve multiple strategic objectives within one comprehensive framework, thus, pursuing value-adding complementarities and synergies among different objectives that are related to different sectors. This approach allowed the framework to propose coalitions and enable coordination among the stakeholders who are active in different sectors, while providing each of them with guidelines that are relevant to their own priorities.

Another thread that was pulled between the diagnosis and the strategic framework was the vision for Karantina. During the process of articulating the strategic framework, the strategic objectives that resulted from the diagnosis were constantly validated and reworked where necessary through additional investigations, meetings with the community groups, and assessments against the vision that was crafted with the community. Such a process was intended to facilitate for a mission that is made up of strategic objectives that correspond to the vision before translating them into specific strategies and action plans.

The vision and mission were, therefore, both presented in this report.

# 2. VISION FOR KARANTINA

“ Karantina is a strategic, developed, and economically prosperous area. Its people are empowered and interconnected, its urban fabric is easily accessible, well planned, and environmentally conscious. It has adequate services, decent housing, and public and shared spaces.

الكرنطينا منطقة استراتيجية متطورة ومزدهرة اقتصادياً. إنها منطقة مجتمعها متمكن ومتربط تكون سهلة الوصول ومنظمة عمرانياً ونظيفة بيئياً. تتوفر فيها خدمات ملائمة، سكن لائق، ومساحات عامة ومشاركة.

The strategic framework for the urban recovery of Karantina carries forward ten key assets which represent main drivers of urban recovery and, consequently, constitute the core structuring links that connect the strategies that are outlined in the framework that is presented below. These strategies should be understood as aimed to enable Karantina to valorize these assets towards recovering Karantina and achieving the crafted vision above. These drivers of recovery are represented in the framework by color-coded squares, and each one represents a key asset:

	A DEVELOPED AREA
	AN ECONOMICALLY PROSPEROUS AREA
	AN EMPOWERED AND INTERCONNECTED COMMUNITY
	AN EASILY ACCESSIBLE AREA
	A WELL-PLANNED AREA
	AN ENVIRONMENTALLY FRIENDLY AREA
	ADEQUATE SERVICES
	DECENT HOUSING UNITS
	PUBLIC AND SHARED SPACES

The objectives together with the strategies that are proposed in this report were intended to operate within a framework that is aligned with the vision while guiding the identification of future projects, both soft and hard and both urban and infrastructural, toward a people-centered and socially just urban recovery that unfolds and can be phased over time. These projects varied in scale, budget, and timeline. It is, therefore, advisable to revisit the strategic framework cyclically, every 5 years, to assess the feasibility of the proposed strategies and specific projects as well as their ability to achieve the set goals before reworking the plans that are currently presented within a flexible framework. The main strategic objectives, related to affordable and inclusive housing units, connectivity, economic and cultural vitality, sustainable development, and urban environment are the following:

## 3. MISSION FOR KARANTINA

### A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.

-  1. Protect and expand the existing stock of affordable housing units.
-  2. Provide job opportunities for the residents of Karantina.
-  3. Improve the provision of public services in Karantina.
-  4. Provide access to new and inclusive housing units across a diversity of social and income groups.
-  5. Ensure that new developments meet inclusivity standards.
-  6. Limit the encroachment of the businesses into the residential sub-neighborhoods.
-  7. Decrease the vulnerabilities that are associated with informal practices.
-  8. Improve the livability and building conditions within the residential clusters.

### B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.

-  1. Connect Karantina spatially with its surroundings.
-  2. Reconnect Karantina with the sea and the Beirut Central District.
-  3. Integrate Karantina into the city-wide transportation network.
-  4. Improve accessibility to the different areas within Karantina and between them.
-  5. Strengthen the role of economic drivers to connect Karantina to the city-scale economy.
-  6. Provide access to job opportunities in micro, small, and medium businesses.
-  7. Connect the different businesses within Karantina.
-  8. Enhance the public realm and provide shared facilities and spaces to promote social connection across the three sub-neighborhoods.

### C. Support, increase, and sustain cultural and economic vitality in Karantina.

-  1. Restore and strengthen the role of the key economic drivers in Karantina.
-  2. Provide job opportunities for the residents of Karantina.
-  3. Support the existing micro businesses and sustain their operations in Karantina.
-  4. Increase the diversity and vitality of the traditional crafts and other manufacturers in Karantina.
-  5. Support the growth of port-related businesses.
-  6. Improve cultural vitality and leisure activities in Karantina.

### D. Promote a sustainable development strategy that is participatory and phased over a period of time.

-  1. Advance a development program for Karantina and remove existing obstacles to development.
-  2. Safeguard Karantina against the threats of gentrification and displacement.
-  3. Improve the overall quality of the built environment.
-  4. Improve the local infrastructural services and amenities.
-  5. Improve connectivity and accessibility to Karantina.
-  6. Engage the residents of Karantina in local development programs and long-term shared visions.

### E. Improve the quality of the urban environment in Karantina.

-  1. Improve the physical quality of the damaged and degraded buildings.
-  2. Reduce and contain hazardous wastes and harmful emissions.
-  3. Reduce sound and air pollution.
-  4. Improve the dilapidated water, sewage, and other infrastructural networks.
-  5. Improve the quality and safety of the public domain which supports the existing socio-spatial practices across the three sub-neighborhoods.
-  6. Protect and maintain the layer of landscape heritage.

## 4. THE STRATEGIC FRAMEWORK

General objective	Strategic objectives	Strategies
 <b>A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.</b>	<b>A1</b> ■ ■ ■ Protect and expand the existing stock of affordable housing units.	<b>A1.1</b> Regulate rents in Karantina.  <b>A1.2/A4.2/D1.1</b> Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.  <b>A1.3</b> Facilitate the ownership of the existing stock of affordable housing units.
	<b>A2/C2</b> ■ ■ ■ ■ ■ Provide job opportunities for the residents of Karantina.	<b>A2.1/B6.1/C2.1</b> Build the capacities of the residents of Karantina and match them with job opportunities.  <b>A2.2/B6.2/C2.2</b> Match the skilled workforce with the businesses in the area and connect them with the job market at a larger scale.  <b>A2.3/B5.1/C1.1/C2.3</b> Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market.
	<b>A3</b> ■ ■ ■ ■ ■ ■ ■ Improve the provision of public services in Karantina.	<b>A3.1/D4.2</b> Introduce services and facilities that are lacking in the area, such as schools, sports facilities, and affordable clinics.  <b>A3.2/B8.2</b> Facilitate access to existing public spaces, including the public park, and increase their number.
	<b>A4</b> ■ ■ ■ ■ ■ Provide access to new and inclusive housing units across a diversity of social and income groups	<b>A4.1</b> Diversify the typologies of housing units from studios to single family and multi-family apartments.  <b>A4.2/A1.2/D1.1</b> Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.
	<b>A5</b> ■ ■ ■ ■ ■ ■ ■ Ensure that new developments meet inclusivity standards.	<b>A5.1</b> Adopt an inclusive design approach when rehabilitating existing buildings or designing new housing units.
	<b>A6</b> ■ ■ ■ ■ ■ ■ ■ Limit the encroachment of the businesses into the residential sub-neighborhoods.	<b>A6.1</b> Regulate the transformations in the use of residential buildings.
	<b>A7</b> ■ ■ ■ ■ ■ Decrease the vulnerabilities that are associated with informal practices.	<b>A7.1</b> Advocate for the rights of tenants to reduce vulnerabilities and improve living conditions.
	<b>A8</b> ■ ■ ■ ■ ■ ■ ■ Improve the livability and building conditions within the residential clusters.	<b>A8.1/E1.4</b> Regulate the density of people per residential units to counter overcrowding.  <b>A8.2/E1.1</b> Offer financial packages and incentives to support the landlords in rehabilitating their residential buildings and maintain the stock of affordable housing units.

General objective	Strategic objectives	Strategies
 <b>B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.</b>	<b>B1</b>  Connect Karantina spatially with its surroundings.	<b>B1.1/D5.1</b> Re-stitch Mar Mikhael with the southern side of Karantina through a pedestrian network across the highway.
		<b>B1.2/D5.2</b> Increase the permeability of the edges of Karantina with the city.
		<b>B1.3</b> Create socio-spatial hubs around the economic drivers in relation to the sea.
	<b>B2</b>  Reconnect Karantina with the sea and the Beirut Central District.	<b>B2.1</b> Reclaim Karantina's old coastal line as a green promenade and revive it as a natural landscape heritage.
		<b>B2.2/B4.3/D5.3</b> Extend the sea promenade from the Beirut Central District to Karantina.
		<b>B2.3/D5.4</b> Relink Karantina to the sea through the port.
	<b>B3</b>  Integrate Karantina into the city-wide transportation network.	<b>B3.1/D5.5</b> Establish points of connection with city-scale and wider mobility modes (buses, taxis, etc.).
	<b>B4</b>  Improve accessibility to the different areas within Karantina and between them.	<b>B4.1/D5.6/E5.2</b> Remove all access restrictions to the public domain.
		<b>B4.2/D1.2</b> Subdivide the municipal lot and integrate it into plans for the development of Karantina.
		<b>B4.3/B2.2/D5.3</b> Extend the sea promenade from the Beirut Central District to Karantina.
	<b>B5</b>  Strengthen the role of economic drivers to connect Karantina to the city-scale economy.	<b>B5.1/A2.3/C1.1/C2.3</b> Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market.
		<b>B5.2/B7.1/C5.1</b> Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses.
	<b>B6</b>  Provide access to job opportunities in micro, small, and medium businesses.	<b>B6.1/A2.1/C2.1</b> Build the capacities of the residents of Karantina and match them with job opportunities.
		<b>B6.2/A2.2/C2.2</b> Match the skilled workforce with the businesses in the area and connect them with the job market at a larger scale.
<b>B7</b>  Connect the different businesses within Karantina.	<b>B7.1/B5.2/C5.1</b> Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses.	
<b>B8</b>  Enhance the public realm and provide shared facilities and spaces to promote social connection across the three sub-neighborhoods.	<b>B8.1/D3.3/E5.1</b> Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.	
	<b>B8.2/A3.2</b> Facilitate access to existing public spaces, including the public park, and increase their number.	

General objective	Strategic objectives	Strategies
 <b>C. Support, increase, and sustain cultural and economic vitality in Karantina.</b>	<b>C1 ■■</b> Restore and strengthen the role of the key economic drivers in Karantina.	<b>C1.1/A2.3/B5.1/C2.3</b> Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market.
	<b>C2 / A2 ■■</b> Provide job opportunities for the residents of Karantina.	<b>C2.1/A2.1/B6.1</b> Build the capacities of the residents of Karantina and match them with job opportunities.
		<b>C2.2/A2.2/B6.2</b> Match the skilled workforce with the businesses in the area and connect them with the job market at a larger scale.
		<b>C2.3/A2.3/B5.1/C1.1</b> Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market.
	<b>C3 ■■</b> Support the existing micro businesses and sustain their operations in Karantina.	<b>C3.1/C4.1</b> Offer financial incentives to micro and specialized businesses.
	<b>C3.2</b> Connect the micro and specialized businesses with online platforms and services to enhance their operations.	
	<b>C4 ■■</b> Increase the diversity and vitality of the traditional crafts and other manufacturers in Karantina.	<b>C4.1/C3.1</b> Offer financial incentives to micro and specialized businesses.
<b>C4.2</b> Train a new generation of craftsmen to sustain their crafts.		
<b>C5 ■■</b> Support the growth of port-related businesses.	<b>C5.1/B5.2/B7.1</b> Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses.	
<b>C6 ■■■■</b> Improve cultural vitality and leisure activities in Karantina.	<b>C6.1</b> Activate the open spaces in Karantina to host occasional, weekly, monthly, and annual cultural and economic festivals.	
	<b>C6.2</b> Engage artists and designers to work, network, and complement the existing crafts and the activities of industries in Karantina.	

General objective	Strategic objectives	Strategies
 <b>D. Promote a sustainable development strategy that is participatory and phased over a period of time.</b>	<b>D1</b> ■ ■ ■ ■ Advance a development program for Karantina and remove existing obstacles to development.	<b>D1.1/A1.2/A4.2</b> Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.
	<b>D2</b> ■ ■ ■ ■ Safeguard Karantina against the threats of gentrification and displacement.	<b>D2.1</b> Regulate development in the residential and industrial areas of Karantina.
	<b>D3</b> ■ ■ ■ ■ Improve the overall quality of the built environment.	<b>D3.1/E1.3</b> Provide a legal enforcement measure for building rehabilitation.
	<b>D4</b> ■ ■ ■ ■ Improve the local infrastructural services and amenities.	<b>D3.2/E1.2</b> Channel funds through donors to vulnerable landlords for building renovation.
	<b>D5</b> ■ ■ ■ ■ Improve connectivity and accessibility to Karantina.	<b>D3.3/B8.1/E5.1</b> Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.
	<b>D6</b> ■ ■ ■ ■ Engage the residents of Karantina in local development programs and long-term shared visions.	<b>D4.1/E4.1</b> Upgrade and improve the performance and management of the existing infrastructural networks to respond to density demands and adopt emerging technologies.
		<b>D4.2/A3.1</b> Introduce services and facilities that are lacking in the area, such as schools, sports facilities, and affordable clinics.
		<b>D5.1/B1.1</b> Re-stitch Mar Mikhael with the southern side of Karantina through a pedestrian network across the highway.
		<b>D5.2/B1.2</b> Increase the permeability of the edges of Karantina with the city.
		<b>D5.3/B2.2/B4.3</b> Extend the sea promenade from the Beirut Central District to Karantina.
		<b>D5.4/B2.3</b> Relink Karantina to the sea through the port.
		<b>D5.5/B3.1</b> Establish points of connection with city-scale and wider mobility modes (buses, taxis, etc.).
	<b>D5.6/B4.1/E5.2</b> Remove all access restrictions to the public domain.	
	<b>D6.1</b> Empower and strengthen the representation of different community groups in decision-making.	

General objective	Strategic objectives	Strategies
 <b>E. Improve the quality of the urban environment in Karantina.</b>	<b>E1</b> ■■■ Improve the physical quality of the damaged and degraded buildings.	<b>E1.1/A8.2</b> Offer financial packages and incentives to support the landlords in rehabilitating their residential buildings and maintain the stock of affordable housing units.
		<b>E1.2/D3.2</b> Channel funds through donors to vulnerable landlords for building renovation.
	<b>E1.3/D3.1</b> Provide a legal enforcement measure for building rehabilitation.	<b>E1.4/A8.1</b> Regulate the density of people per residential unit to counter overcrowding.
	<b>E2</b> ■■■ Reduce and contain hazardous wastes and harmful emissions.	<b>E2.1</b> Regulate the management of the solid waste.
	<b>E2.2</b> Clean and green the Beirut River corridor.	<b>E3</b> ■■■ Reduce sound and air pollution.
	<b>E3.1</b> Manage the traffic of trucks, their access, and parking in the area.	<b>E3.2</b> Regulate private generators, particularly the ones that are placed in proximity to residential buildings.
	<b>E3.3</b> Empower the Municipality of Beirut to monitor and coordinate efforts to protect the environment in Karantina.	<b>E3.4</b> Reduce the negative impact of the highway as a source of noise and air pollution.
	<b>E4</b> ■■■ Improve the dilapidated water, sewage and other infrastructural networks.	<b>E4.1/D4.1</b> Upgrade and improve the performance and management of the existing infrastructural networks to respond to density demands and adopt emerging technologies.
	<b>E5</b> ■■■ Improve the quality and safety of the public domain which supports the existing socio-spatial practices across the three sub-neighborhoods.	<b>E5.1/B8.1/D3.3</b> Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.
	<b>E5.2/B4.1/D5.6</b> Remove all access restrictions to the public domain.	<b>E6</b> ■■■ Protect and maintain the layer of landscape heritage in Karantina.
	<b>E6.1</b> Develop a legal framework for the identification and the protection of landscape heritage.	

## 5. OBJECTIVE A

**PROTECT THE EXISTING AFFORDABLE HOUSING UNITS IN KARANTINA AND PROVIDE A LARGER STOCK THAT IS INCLUSIVE OF A DIVERSITY OF SOCIAL AND INCOME GROUPS.**

“ I hope for a safe housing in Karantina that meets the economic and social needs<sup>1</sup>  
أتمنى المسكن الآمن في الكرنيتنا الذي  
يتوفر فيه الاحتياجات الاقتصادية والاجتماعية

“ I hope that Karantina becomes a safe area, that fosters coexistence among the people<sup>2</sup>  
أتمنى أن تكون الكرنيتنا منطقة آمنة وتعايش مشترك بين الأهالي

As was indicated in the descriptive memory and strategic diagnosis reports, Karantina hosted a stock of affordable housing units throughout its history for vulnerable groups, including low-income Lebanese families, refugees, and migrant workers. However, housing provision in Karantina reached a vulnerable state due to the multiple traumas the area experienced, ending with the most recent port blast and economic crisis in Lebanon. Increased threats of evictions and displacement of vulnerable groups were recorded in Karantina, especially after the port blast. This increase was largely due to rent hikes that rendered the area less affordable to its residents. Additionally, the dilapidated condition of the urban and built environment grew more acute over time with limited access to public spaces and services. These factors made access to 'decent housing - سكن لائق' even more challenging as desired by the residents when crafting the vision of Karantina.

Although Karantina has a diverse social fabric across nationalities, religions, age groups, and educational backgrounds, it cannot be described as inclusive. Residents tend to aggregate within enclaved sub-neighborhoods based on kinship and religious ties. Furthermore, inclusivity in Karantina is challenged in terms of physical accessibility to the stock of housing units for elderly people and people with physical disabilities. The aim, therefore, is to protect and increase the availability of affordable housing units while providing a larger stock that is inclusive of a diversity of social and income groups.

<sup>1</sup> A.Y.A.I, (2021-February-13), (Wael Al-Saeed - Interviewer)

<sup>2</sup> G.A.T, (2020-December-12), (Daniel Khadra - Interviewer)



### A1. PROTECT AND EXPAND THE EXISTING STOCK OF AFFORDABLE HOUSING UNITS

Karantina is one of the few areas in Beirut that provides affordable housing units and responds to the critical growing demands in the affordable housing sector. The main objective is to sustain the affordability for the current housing units in Karantina and to increase the supply of affordable housing at the scale of the city.

The housing market in the capital city of Beirut is characterized by rising unaffordability and high vacancy rates. Large high-end urban developments are causing such high vacancy rates, as these developments do not cater to the growing demand of the low- to middle-income residents or respond to the low percentage of affordable housing units.

In Karantina, the increase in rents after the port blast, coupled with job loss and high unemployment rates, have resulted in increased evictions in the sub-neighborhoods and subjected tenants to forced displacement. This issue is pressing since around 73% of the residents are tenants, compared to 22% being owner-occupiers (5% are hosted for free). In addition, most tenants are paying more than 30% of their income in rent; in Al-Saydeh, 56% of the surveyed households paid more than 30% of their income in rent, in Al-Senegal 80%, and in Al-Khodor 92%. Therefore, the existing stock of affordable housing units needs to be protected to safeguard the residents of Karantina from displacement.



**Figure 1.** Residential buildings in Al-Khodor sub-neighborhood  
Source: Batoul Yassine, 2021.



**Figure 2.** Residential buildings in Al-Senegal sub-neighborhood  
Source: Rami Shayya, 2022.

Additionally, a significant number of residents who were displaced during the civil war are unable to return to Karantina. Also, a growing number of Syrian refugees are resorting to Karantina as a place to work and live, mainly in Al-Khodor sub-neighborhood. Since they are mostly low-income groups, they are increasing the demand for more affordable housing units. Thus, the aim is to protect and expand the existing stock of affordable housing units to meet the urgent and growing needs in Karantina and the city. To meet these needs, several strategies were identified. These strategies cannot be considered separately; rather, they should be mutually reinforcing and complementary to each other. The strategies include regulating rent rates in Karantina, releasing frozen, militarized, and unbuildable privately owned lots, promoting the development of new housing units, and facilitating the ownership of the existing stock of affordable housing units.

#### A1.1 Regulate rents in Karantina.

Access to housing units for tenants in Karantina was through formal and informal arrangements. The findings of the diagnosis report showed that 22% are owner-occupiers, 5% are hosted for free, and 14% are on old rental agreements, while 59% are on new rent. 77.5% of those who are on the new rent have informal agreements, while only 22.5% have rental contracts. Therefore, most tenants on the new rent access the housing sector informally. Additionally, Karantina has been facing uncontrolled adjustments in rents beyond that of the residents' economic capacities. In the aftermath of the port blast, as renovations were taking place, it was noted that in Al-Saydeh, 14.1% of the tenants either received a rent increase or were threatened by it, and 11.7% of the residents either received an eviction suit or eviction threats.

This was also evident in Al-Senegal, where 23.5% of the tenants either received a rent increase or were threatened by it, while 7.8% of the residents received an eviction threat. As for Al-Khodor, 9.9% of the tenants either received a rent increase or were threatened by it, and 6.1% of the residents received an eviction suit or eviction threat. These numbers varied considerably in terms of rental tenure with it being more likely to happen to residents under the new rent than the old rent because of the protections the latter arrangement provided and because many new rental arrangements are informal.

Thus, rent regulation can protect vulnerable tenants from sharp increases by setting a cap on rent increases from year to year and can make formal practices in accessing housing units a more viable and secure option for the residents. The rent increase will be limited by a formula, or a set of criteria that are related to the costs of living in relation to the socio-economic conditions of the tenants. Although this strategy needs to be adopted on a national scale, Karantina can be key if treated as a pilot, or if defined as a special zone for applying this rent regulation.

This strategy translates into several action plans. The action plans include the revision of the 2017 rental law and the addition of an addendum to it that elaborates on the rent increase considerations and relevant criteria. It also establishes a housing monitor that is supported by legal counseling services for tenants to protect their rights.

### A1.2/A4.2/D1.1

#### Release frozen, militarized, and unbuildable privately owned lots, and facilitate for the development of new housing units.



**Figure 3.** Unbuildable lots in Al-Khodor sub-neighborhood. Source: Ali Ghaddar, 2021.



**Figure 4.** The walled municipal lot that is adjacent to Charles Helou Highway. Source: Ali Ghaddar, 2021.

Expanding the stock of housing units in Karantina is one of the main objectives that requires facilitation for new developments. The findings of the diagnosis report showed that many factors are impeding the development including spatial and legal considerations. These include the suspended LINORD project, the occupation of the military of private and public lots, the unbuildable lots given the current zoning law that specifies minimum area and dimensions of buildable lots, and the expansion of the shareholders' network on some of the lots due to multi-generation inheritance over time. These factors have limited the stock of housing units from growing and, thus, prevented the return of displaced residents from Karantina during the civil war as well as second and third generation residents, refugees, and other low- to middle-income groups from residing in Karantina. Therefore, land must be released for local development to increase the number of affordable housing units as well as accommodate a diversity of social and income groups within Karantina and the city of Beirut.

This strategy requires a set of action plans that would complementarily release land for the development of new affordable housing units in Karantina. These action plans include assessing the feasibility of the LINORD project and understanding its impact on the lots that fall within its scope, forming a neighborhood committee to negotiate with the army to remove their encroachments over the private properties, and proposing public-private partnerships to develop the group of un-buildable lots in Al-Khodor sub-neighborhood.

Providing tax exemptions for multi-shareholders to ease access to develop their lots in addition to financial incentives for developers to build affordable housing units can be another action plan that can facilitate new developments to expand the housing stock in Karantina.

### A1.3 Facilitate the ownership of the existing stock of affordable housing units.

As was mentioned earlier in the report, 73% of the residents in Karantina are tenants of which 14% are on old rental contracts. Most of these tenants have been living in Karantina for over 30 years. Besides the old tenants, new tenants comprise 59% of the tenants in Karantina, many of whom have been living in the same apartment for over five years, reaching 10 years in some cases. Given the chance, many low-income tenants, whether old or new, have acquired assets and become more financially secure. Therefore, facilitating the ownership of the existing stock of affordable housing units for some of these tenants would respond to the set objective of protecting the stock of affordable housing units in Karantina and protect the social fabric from evictions and displacement. Studies have shown that there are social benefits to promoting homeownership for low-income groups, especially tenants. This would generate more incentives for the tenant to invest in the apartment and the neighborhood, thus, promoting civic engagement and enforcing their attachment to the neighborhood.

This strategy would be viable through proposing a reform to the new public housing loans that are provided by the Housing Bank, to revise the eligibility criteria and include Karantina in its scope, and set a reasonable amount of the housing loan that would allow tenants to buy the houses they live in.



## A2. PROVIDE JOB OPPORTUNITIES FOR THE RESIDENTS OF KARANTINA

Karantina has been facing an economic decline, and its residents have been subjected to massive job losses due to the economic crisis that started in 2019 coupled with the pandemic, and recently the port explosion in 2020, in addition to the closure of the key economic drivers that include the port, the slaughterhouse, and the fish and public markets. This decline has impacted the socio-economic conditions of the residents, increased vulnerabilities, and restricted their access to housing, including the stock of affordable housing units in Karantina itself.

The strategic diagnosis showed that these factors have caused a soaring increase in the rate of unemployment to reach 70% in 2021 even though the residents of Karantina had a wide range of educational backgrounds and skill-based expertise. The working group in Karantina has 1.7% post-graduates, 7% vocationally trained, 20% with university degrees, and the other 67% have received either elementary, secondary, or high school education (6% did not provide an answer).

The analysis also showed that 33% of those who are currently unemployed used to work before. 54% of them lost their jobs in the last 3 years because of the economic crisis and the pandemic, while 27.5% lost their jobs forcibly because of the port blast. 11.5% of the currently unemployed and used to work at the port while 32% worked inside Karantina. It is also noteworthy that only 34% of those who are employed work for businesses in Karantina, most of whom are non-skilled workers.

These numbers signify that there is an urgent need to provide job opportunities for the residents of Karantina to improve their socio-economic conditions by building further capacities in them, matching them with job opportunities in the area, connecting them with the job market, and revitalizing the economic drivers that would generate more job opportunities. This will further empower them to create what they described in the vision as an empowered and interconnected community "مجتمع متمكن ومتربط".

### A2.1/B6.1/C2.1

#### Build the capacities of the residents of Karantina and match them with job opportunities.

Historically, most of the residents of Karantina used to work at the port, the public and fish markets, and the slaughterhouse, especially the residents of Al-Khodor sub-neighborhood. After the closure of these economic drivers, the residents tended to open daily shops (groceries, butcheries, and barbershops among others) or in-house businesses such as crafts (sewing) or food making (mooneh). They also sought jobs in other sectors that required new skills and capacities, such as management and administration, banking and business sectors, healthcare, and education. However, the residents faced challenges in meeting the demands and skills of the job market either because they lacked exposure to the available opportunities or lacked the required skills and expertise. Therefore, there is a need to build the capacities of the residents of Karantina to be matched with available job opportunities.

This strategy would be feasible by establishing a career and guiding center that would invest in workforce training programs that are aimed toward current and future cultural and economic activities and to match them with economic and cultural hubs and businesses in Karantina and elsewhere.

### A2.2/B6.2/C2.2

#### Match the skilled workforce with the businesses in the area and connect them with the job market on a larger scale.

There is diversity within the existing businesses in Karantina by type and size. These businesses range from mechanics, garages, machine repairs, art galleries, showrooms, design offices, retail companies, car sales showrooms, and port-related businesses such as freight, logistics, and shipping services companies. There are very few leisure and recreational spaces that are limited to small gaming and hookah shops while the large spaces closed after they were damaged by the port blast, such as FLYP and BO18. Smaller micro daily businesses are many in Karantina and are concentrated within the residential sub-neighborhoods. Despite this variety, only 34% of the employed residents work for businesses in Karantina, most of whom work for micro-businesses such as retail shops, mini markets, butchery shops, bakeries, and small mechanics workshops. However, the owners of medium business chains tend to employ skilled people who live in the city and Greater Beirut. Therefore, there is a disconnection between the larger micro, small, and medium businesses, and the residents of Karantina although there is a considerable percentage of university degree holders and skilled workforce in Karantina who would meet the demands of these businesses.

Additionally, out of the 30% of employed residents in Karantina, 51% work in Beirut, 34% work in Karantina, and only 13.5% work outside Beirut (2% did not provide an answer). These percentages signify that there is a limited connection between the residents of Karantina and the job market on the city scale. Therefore, linking the skilled workforce in Karantina to the job market whether within Karantina or on the city scale would increase the number of job opportunities for the residents and further increase their financial capacities. This strategy would be applicable through establishing a business and training center that would identify and engage local skilled workers and connect them with job opportunities in Karantina and beyond.

### A2.3/B5.1/C1.1/C2.3

#### Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market.

The three economic drivers - the slaughterhouse, the public market, and the fish market - are key assets for Karantina. These public facilities need to be brought back to life and must operate sustainably to full capacity. Their structures need to be restored and enhanced. Their surroundings need to be activated and made welcoming to users and workers. And their operations need to be resuscitated but managed with effective and durable management practices. Wide-encompassing benefits would be expected including the strengthening of Karantina's spatial and economic connectivity to city-wide and country-wide scales, the regeneration of socio-economic and cultural practices, and the increase in opportunities for the Karantina residents, increasing their income and, thus, their ability to afford housing units.

For instance, the slaughterhouse must be reopened, but this requires the rehabilitation of its structure as well as the remediation of its lot, currently used as a dump for rubble from demolished buildings. Nonetheless, the Municipality of Beirut, which oversees this facility, must adopt reformed, efficient, and ecologically-sound operation and management systems, while abiding by international standards of hygiene and sanitation. This will restore the slaughterhouse's economic and cultural benefits to the Karantina residents, but in a healthy and durable way.

The public markets' structures also require rehabilitation, and so does the ample space surrounding them that is currently left littered and underutilized. Reopening the popular market, enhancing the fish market's performance, expanding them programmatically, and consolidating them into a socio-economic hub will rebuild and intensify economic and social networks around them, locally, regionally, and nationally. Additionally, transforming the abandoned open space around the markets into a lively public space that is easily accessible and well-connected to the natural elements around it, such as the sea, river, and estuary, will elevate the market hub into an urban node. However, the success of these transformations hinges upon an effective management and operation scheme that requires an assessment of the roles and needs of the Public Authority for Consumer Markets in overseeing the markets and coordinating with the other involved public institutions.



## A3. IMPROVE THE PROVISION OF PUBLIC SERVICES IN KARANTINA

Karantina suffers in terms of the provision of public services because of the lack of public spaces that the area offers to its residents, additionally, accessibility to the currently offered services is restricted and threatened. The lack of schools, healthcare, public and shared space, and the level of services contribute to the area's level of unaffordability because the residents must incur additional costs to access these services. Prior to the civil war, the area had one Catholic School, and one UNRWA School which closed by the end of the war. There was also a public school which kept its doors open until 2014. Currently, there is a small school in Al-Saydeh which was built in 2021 and accommodates only 10-12% of Karantina's pupils. The closure of the schools in the area meant that children must face the challenge of transportation and incur extra costs to attend schools in areas outside of Karantina.

Furthermore, there is only one hospital in Karantina that is governmental, and it services patients from across Beirut but is rarely used by Karantina's residents because they feel as reported that it is under-served. In addition, the Karantina Park that was rehabilitated in 2016, was renovated after the port blast but has since been closed due to COVID-19. Instead, common social practices include children playing in the streets and in empty lots that lack basic security and safety measures, while the adults engage in social practices in streets that lack lighting, shading, and basic urban furniture. Thus, the aim is to improve, enhance, and grow these public services. This is possible through the introduction of services that are lacking in the area, such as schools, recreational facilities, and affordable clinics and facilitating access to the already existing amenities.

### A3.1 Introduce services and facilities that are lacking in the area, such as schools, sports facilities, and affordable clinics.

As was mentioned above, there is limited or no access to public services such as schools, public parks, and healthcare facilities within Karantina due to the absence of some of the services such as schools, or the closure of others such as the public park, or due to issues of connectivity. Therefore, these factors decreased the level of unaffordability in Karantina since residents must pay for additional costs to access these services elsewhere.

Firstly, Karantina was home to three schools which provided education to 2,097 students, of whom a great percentage was from Karantina. Two of the schools closed during the war whereas the public school closed in 2014. These closures affected nearly 170 households. After the closure of all three schools in the area, the residents began enrolling their children in schools nearby in Achrafieh and Burj Hammoud, often further away owing to the presence of two public schools in these areas. Recently, a prefabricated school was built in 2021 on the municipal lot in Al-Saydeh sub-neighborhood through Spanish funding. The school currently accommodates only 10-12% of the children in Karantina. Additionally, there are no after-school programs, specialized programs for English education, and libraries, often leaving the children at a disadvantage in their future.

Secondly, although the area hosts the Karantina government hospital which services patients across Beirut, the residents are often unable to benefit from the services due to financial strain. Before the civil war, the hospital used to employ Lebanese residents in the area, but recently, the residents described feeling like second-class citizens who are not prioritized in employment nor in service provision. The answers to the household questionnaire reported that 73% of the residents considered the hospital under-served, 41% said it was very expensive, and 50% mentioned that it is poor in quality and bad for medical treatments. There is one clinic for the Maronite league that provides low consultation prices and services to the residents, but still many residents displayed a preference for other affordable hospitals and clinics in Beirut and the suburbs.

Thirdly, the area lacks sports and recreational spaces. Leisure spaces are mostly limited to a few coffeshops, one gaming shop that closed after the port blast, and the FLYP leisure center that was heavily damaged by the port blast and never restored its operation. Therefore, these missing services need to be re-introduced in Karantina to facilitate access to affordable housing units that are well serviced. This strategy would be feasible through establishing a multi-purpose complex for public services that includes a public school, an affordable family clinic, and a sport or recreational center.

### A3.2 Facilitate access to existing public spaces, including the public park, and increase their number.



**Figure 5.** Children from Karantina asking the guard to let them access the park. Source: Batoul Yassine, 2021.



**Figure 6.** Residents sitting on the sidewalk in front of the public park that is closed. Source: Batoul Yassine, 2021.

Karantina has one only one public park that remains closed most of the time. It is located in the middle of the neighborhood and was first established in 1956. The park was rehabilitated in 2016 and had been used for community engagement workshops. The park includes amenities such as water fountains, a playground, and sand floors. However, the park was renovated after the 2020 port blast and closed to the public due to COVID-19. While speaking with the residents, they reported countless occasions on which the children had to resort to a nearby asphalt parking lot or Malaab El Ramel (ملعب الرمل), which is located on the unbuildable lots, to play and engage in sports activities.

Very rarely do children seek leisure facilities outside of Karantina because they cannot afford the commute costs. It is essential that the Municipality of Beirut facilitates access to the existing public park and introduces new parks in the sub-neighborhoods.

To do this, a new management and operation plan for the existing parks in Karantina must be designed, an integrated urban design plan for an open space network that includes upgrading existing spaces and reforming operation and management systems should be proposed, and finally, a subdivision project of the municipal lot that opens and reprograms it to enhance the connectivity and the services for Karantina through public recreation and play areas must be designed and implemented. The municipal lot has to be opened and reprogrammed to enhance connectivity and services in Karantina. All in all, these plans will improve the provision of public services in Karantina.



## A4. PROVIDE ACCESS TO NEW AND INCLUSIVE HOUSING UNITS ACROSS A DIVERSITY OF SOCIAL AND INCOME GROUPS

Karantina's demographic makeup is diverse in nationality, religion, income, age, and mobility. The data from the answers to the questionnaires demonstrates a high concentration of Lebanese residents that constitute 53.1% and Syrians that constitute 45.3% in Karantina, with a few Ethiopian and Palestinian residents. Generally, the religious distribution across Karantina is 77% Sunni, 13.8% Maronite Christian, and 2.8% Shiite, with small percentages of Armenians, Greek Catholic Christians, and Greek Orthodox Christians. 93.7% of Al-Khodor and 52.3% of Al-Senegal are composed of Sunnis, whereas the majority of Al-Saydeh are Christians (53.7%). Despite the diversity across Karantina, there are evident forms of exclusion where residents tend to aggregate within the enclaved sub-neighborhoods based on their kinship and religious ties, and landlords withhold access to housing units based on these factors as well as nationality in some cases.

Furthermore, these exclusive practices are also demonstrated in the lack of physical accessibility for elderly people and people with physical disabilities across the built fabric. 43 households reported at least one member living with a disability. Additionally, 9% of Karantina's population is over the age of 64. These limitations do not only affect their ability to get in and out of their homes, but it also affects the exclusivity of the existing stock of housing units. Conversely, Karantina lacks diversity in the distribution of income groups given that the average household income is 827,645 Lebanese Lira (this number was derived in February of 2021, the value of the Lebanese Lira has since drastically changed), deeming the majority of Karantina's residents as low-income. All in all, these nuanced forms of exclusion pose a threat to the diversity and inclusivity of the social and housing network as they keep individuals enclaved and promote the isolation and separation of social and cultural practices across the sub-neighborhoods. Additionally, Karantina fails to be inclusive of individuals from different socio-economic backgrounds. For this reason, the aim is to provide access to inclusive housing units across diverse social and income groups by facilitating new developments and diversifying the typologies of housing units that can accommodate a diversity of social and income groups.

### A4.1 Diversify the typologies of housing units from studios to single family and multi-family apartments.

In the assessment of housing units across Karantina, it was apparent that most of the typologies are single apartments that are built on small lots with three- to four-story walk-up apartments, except for one in-fill condo typology that was built in 2006. Furthermore, in the diagnosis report, the unit area that was reported by residents ranged from 12 sq. m to 285 sq. m, with an average area of 80 sq. m and 1-2 bedrooms. Only 7 of the assessed buildings across the area were reported as having an elevator.

Informal rent pooling practices are common among residents across Karantina. The data from the diagnosis report showed that in Al-Saydeh, 35.7% of Syrian households reported sharing a house with at least one family. This figure was higher in Al-Khodor at 41.8% and in Al-Senegal at 57.1%. These figures were significantly different for Lebanese households whereby the number was highest in Al-Khodor at 11.2%. Some residents reported using the common areas to sleep. The number of household members living in one apartment reached 20 people in some cases.

Diversifying the typologies of housing units to range from studios to multi-family apartments will increase inclusivity by providing access to housing across a diversity of social and income groups. This strategy can be reached by developing the unbuildable lots through a public-private partnership and by designing financial incentives and penalty taxation packages that include tax exemptions, low-interest loans, density bonuses, and vacancy penalty taxation to promote development in Karantina.



## A5. ENSURE THAT NEW DEVELOPMENTS MEET INCLUSIVITY STANDARDS.

Inclusivity aims at creating healthy and socially friendly environments for all people regardless of their age group, physical or cognitive abilities, or different body shapes and forms. This includes the built spaces as well as streets and public spaces. In Lebanon, inclusivity is challenged in terms of physical accessibility to the stock of housing units for elderly people and people with physical disabilities (inclusivity to public spaces is addressed in Strategy B8.1). In Karantina, 43 households reported at least one member living with a disability, 27 cases reported in Al-Khodor alone, 11 in Al-Saydeh, and 5 in Al-Senegal. Additionally, 403 households reported at least one family member having a chronic illness, mostly heart diseases and irregular blood pressure were recorded, and 17 cases have serious or life-threatening illnesses. Besides, elderly people constitute around 9% of the population in Karantina. Therefore, Karantina has a considerable percentage of its population living with some form of physical challenge; whether they are elderly people, people with physical disabilities, or people with health problems that can affect their physical performance. In terms of physical accessibility, there are only seven buildings in Karantina with elevators, making the area less inclusive to wheelchair users and to elderly people.



**Figure 7.** A newly constructed building in Al-Khodor sub-neighborhood. Source: Abir Cheaitli, 2021.

There was also a notable absence of wheelchair ramps in the entire area. Additionally, the near-home environment is another factor that affects inclusivity, particularly for the elderly and disabled people. They mostly prefer staying inside their houses or spending some time on the sidewalks in front of their houses that are not adequately equipped to accommodate their needs. Therefore, inclusivity standards need to be met with existing and new developments to allow for the accessibility of this group to the housing units and public and shared spaces. To meet this objective, an inclusive design approach needs to be adopted when rehabilitating existing buildings or designing new housing developments.

### A5.1 Adopt an inclusive design approach when rehabilitating existing buildings or designing new housing units.

As was mentioned above, Karantina has a considerable percentage of elderly people and people with physical disabilities who face challenges in accessing safe, healthy, environmentally, and socially friendly built spaces as well as streets and public spaces. In particular, access to housing units and shared spaces is a major issue of concern to this group. This is due to the lack of inclusive services and facilities within the existing built environment that has evolved into its current conditions because of the building law. The building law does not provide inclusive standards for new constructions, particularly residential constructions.

The 2004 building law that is currently in effect does not specify design guidelines for inclusive constructions. Rather it provided public safety measures that ensure structural stability against the threats of earthquakes and fires. It was until 2005 when decree number 14293 was issued and elaborated on the

mandatory approval of technical audit offices as a condition for the order of Engineers and Architects to issue construction permits. The audit office relies on international standards for large-scale constructions, including standards for public safety and design requirements for the disabled. The latter includes requirements for building access through ramps, walkways, and elevators, and particular services with specific dimensions for the disabled such as toilets. The design standards for the disabled are only applied to non-residential constructions, mainly buildings for public use.

Therefore, the above strategy would be viable by reforming and expanding the scope of the building law to incorporate the inclusive standards and requirements within the law and applying it to all types of constructions, including residential buildings. The law needs also to address, in addition to new constructions, retrofitting existing structures to accommodate people with physical disabilities or are visually impaired.



## A6. LIMIT THE ENCROACHMENT OF THE BUSINESSES INTO THE RESIDENTIAL SUB-NEIGHBORHOODS.



**Figure 8.** A residential house that was transformed into a logistics business in Al-Saydeh Sub-neighborhood. Source: Ali Ghaddar, 2021.



**Figure 9.** A residential house that was transformed into a logistics business in Al-Senegal Sub-neighborhood. Source: Ali Ghaddar, 2021.

As was discussed in section A1, the post-port blast reality and the current economic crisis in Lebanon have led to evictions and rent increases and, as a result, impacted the stock of affordable housing units in Karantina. This condition was further exacerbated by the encroachment of the businesses into the residential sub-neighborhoods and the conversion of some residential units into offices. These businesses consider rent in the residential clusters cheaper than other areas in Karantina. Their encroachment into residential buildings is threatening people with rent hikes and further limiting the stock of housing units. As a result, there is a risk that Karantina, which has historically welcomed low-income populations seeking to live and work in the city, will lose its social diversity, social networks, and housing affordability.

The competition between businesses for rent is also linked to an increase in vacancy rates since some landowners would rather not rent apartments unless it is for businesses. The diagnostic report revealed that the reason for Karantina's high vacancy rate is that landlords are hesitant to rent out their properties given the current state of the economy. One of the interviewees said that he is worried that the landowner will rent out the vacant apartments in his building because he used to "rent out these for 700 thousand before the crisis but now 700 thousand will get you nothing." He added that "people can't afford a higher price so I may just leave it empty or rent it out to an NGO." He put up a 'for-rent' sign on the building stating "for rent, office space available"<sup>3</sup>. This trend is explained by the intention and preference of landlords to attract enterprises and NGOs, which could ultimately result in a shortage of affordable housing units in Karantina. The diagnosis report showed that the trend of converting apartments to office spaces is largely taking place in Al-Saydeh, but also to a lesser degree in Al-Senegal and in Al-Khodor.

The area is in danger of losing its socioeconomic diversity of residents and access to affordable housing units because of the evictions and disruptive behaviors of landlords following the port blast. This is despite efforts by some NGOs that requested from landlords to sign a pledge not to raise rents in exchange for free renovation. Only long-term policy solutions and legal frameworks delivered and implemented by the government can truly alleviate these concerns. Therefore, measures should be taken to protect and increase affordable housing units, while also providing a larger stock of housing units that is inclusive of a diverse range of social and income groups. The aim is to limit the encroachment of the businesses into the residential sub-neighborhoods. This is achieved by regulating the transformations in the use of residential buildings.

### A6.1 Regulate the transformations in the use of residential buildings.

Since the zoning regulation does not address land use, several businesses are buying or renting apartments to use as offices in the absence of any guiding restrictions. Affordability and social networks may be impacted negatively by this trend in residential areas. The rent market is to a great extent based on contractual agreements that can be oral, flexible, and largely unregulated. The practices of landlords renting out apartments to businesses that pay higher rents put current and long-term tenants in a vulnerable position. Businesses take advantage of the relatively low rent within the residential clusters. The goal is not to prohibit the mix of land uses within clearly delineated areas, but rather to regulate these transformations to protect the stock of housing units and the social integrity of the residential clusters. This concern should not be limited to the existing stock, but should be extended to new developments.

The strategy is to regulate the transformation in the use of residential buildings. This strategy is fulfilled by reforming and elaborating the planning law or proposing an addendum to it that guides and regulates existing and future land uses and developments. Stakeholders involved in studying the proposal and its consequences include municipal officials, planners, and architects. To this effect one could consider limiting the use of the ground floor and the first floor units of residential buildings to logistics, service businesses, and offices.



## A7. DECREASE THE VULNERABILITIES THAT ARE ASSOCIATED WITH INFORMAL PRACTICES.

Karantina is characterized by the prevalence of informal rental arrangements, which increases access to housing for vulnerable groups but leaves them with minimal legal protection and bad living conditions. As was previously mentioned in the report, 73% of the residents in Karantina are tenants, among which around 35% have no formal contracts. Such informality is the most pronounced in Al-Khodor sub-neighborhood which recorded the highest percentage of informal rents among its tenants with 89.7%, while Al-Senegal and Al-Saydeh recorded around 10% each.

Informality of this kind is a mode of inclusivity as it allows socio-economically underprivileged groups to acquire accommodations and benefits that are otherwise inaccessible. This is well-illustrated in Karantina with the fact that most Syrian households had to access housing through informal agreements. This arrangement allows for the possibility of rent-pooling and dividing rent among several families. It is noted that this also benefits landlords who opt for renting out to groups of families instead of single families taking advantage of the vulnerability of Syrians and increasing rent prices. This translates to much higher percentages of Syrian families sharing a house with at least one other family, reaching 35.7% in Al-Saydeh, 41.8% in Al-Khodor, 57.1% in Al-Senegal, in contrast to 2.3%, 11.2%, and 6.4%, respectively for Lebanese families. Consequently, high levels of overcrowding are recorded in Karantina; for instance, 20% of the households in Karantina are overcrowded, with Syrian households accounting for 65% of the total 20%. On another note, tenants with no formal contracts will be more vulnerable against the trend of evictions and rent hikes in the area after the port blast and economic crisis, as was evident in strategy A1.1. A clear illustration of this is the fact that 100% of the rent hikes in Al-Khodor sub-neighborhood were received by households with no formal contracts. Hence, to reduce these vulnerabilities and improve the living conditions of the Karantina residents, strategies that aim at advocating for the rights of tenants are of paramount importance.

<sup>3</sup> E.C., (2020-October), (Mohamad El Chamaa- Interviewer).

### A7.1 Advocate for the rights of tenants to reduce vulnerabilities and improve living conditions.

Following the port blast and the ongoing economic crisis, tenants in Karantina, accounting for most of the residents, are facing manifold hardships, poor living conditions, and threats to their housing security. Moreover, many tenants, especially those with informal rents, are unaware of possible legal actions they could take to protect their rights. For example, legal experts revealed to residents during the thematic focus group discussion on 29 April 2021 that there is the possibility of countering evictions in courts if residency can be proven using an electricity receipt, water bill, or proof of residency from a mukhtar. From here, tenants need to be empowered with the tools needed to fend off rent hikes and eviction threats. This requires reinforcing their collective awareness about their shared struggles, providing them with the knowledge about their legal rights and protections, and supplying them with the needed legal counseling and support, be it from governmental or non-governmental actors. Accordingly, the establishment of monitoring and registry systems, covering both formal and informal housing tenure systems and conditions, would aid in securing legal protections and controlling detrimental living conditions.



Figure 10. The indoor quality of a residential house in Al-Khodor sub-neighborhood. Source: Batoul Yassine, 2020.



Figure 11. The outdoor quality of a residential house in Al-Khodor sub-neighborhood. Source: Batoul Yassine, 2020.



## A8. IMPROVE THE LIVABILITY AND BUILDING CONDITIONS WITHIN THE RESIDENTIAL CLUSTERS.

Karantina's built environment has been degraded due to multiple factors, including the multiple traumas that the area went through, the high percentage of old tenancy that renders landlords incapable of maintaining and improving the quality of their properties, and the overcrowding within the residential units that worsened the conditions of buildings. As a result, the dilapidated physical conditions within the residential units have compromised the living conditions of people. The assessment of 252 out of the 364 buildings in Karantina revealed that 22% are in good condition, 34% are in average condition, and 22% are considered degraded. The old rental value coupled with rents being fixed at the pre-hyperinflation rates, rendered landlords with no financial capacity to maintain or improve their buildings. In addition, damages from the port blast left buildings with traces of moisture, water stains, and peeled paint, causing mold growth and humidity and creating a health threat for residents. Though many repair efforts were undergone, many residents reported bad or incomplete repair work. In some cases, the tenants reported that their landlords declined to repair the infrastructure of the building, blocking water irrigation systems, and neglecting the aesthetic of the building to drive them away so they can rent out to other people at higher rates. Additionally, the area faces many issues with overcrowding within the residential units; this is especially prevalent in Al-Khodor which is the densest of the three sub-neighborhoods. Overcrowded households are more likely to suffer from environmental hazards and poor indoor air quality. Thus, it is essential that the living and building conditions are improved by regulating the density per residential unit to counter the overcrowding, and by offering financial packages and incentives to support the landlords in rehabilitating their residential buildings to maintain the stock of affordable housing units without compromising the current tenants.

### A8.1 Regulate the density of people per residential unit to counter overcrowding.

Karantina faces many issues of overcrowding within the residential clusters. Informal rent pooling practices are commonly used by landlords to exploit tenants, hence, subjecting single-family households to unfair accessibility to housing and bad living conditions for the families in multi-family households. These practices disproportionately affect Syrian households. In Al-Saydeh, 37.5% reported sharing a house with at least one other family, and this figure was even higher in the other sub-neighborhoods of Al-Khodor (41.8%) and Al-Senegal (57.1%). As opposed to the Lebanese residents, only 2.3% shared their houses with other families in Al-Saydeh, 6.4% in Al-Senegal, and 11.2% in Al-Khodor. Therefore, density per the residential units needs to be regulated to counter overcrowding. This strategy would be viable through establishing a monitoring and municipal taxation system that is set up for buildings that fail maintenance and upkeep to ensure public safety and security.

### A8.2 Offer financial packages and incentives to support the landlords in rehabilitating their residential buildings and maintain the stock of affordable housing units.

Karantina is one of the neighborhoods in Beirut that offer affordable housing, but the stock of housing units in the area is limited and threatened. As was mentioned earlier in the report, 73% of the residential units are occupied by tenants, of which 14% are on old rental contracts. This factor, along with the limited financial capacities of the landlords, contributed to the degradation of many of these buildings. Besides, years of neglect, compounded by several national crises and the 2020 port blast, damaged Karantina's built fabric and left 78 buildings abandoned. Additionally, the post port blast recovery efforts resulted in poor repair works that were sponsored by NGOs and worsened the living conditions within some apartments. These poorly maintained and unused structures often cause environmental problems, including the release of chemicals and leakages, and they pose additional health threats to the residents. Eventually, the abandoned structures would expand the stock of housing units if renovated and re-used, and the rehabilitation of the occupied units would maintain the affordability of the stock of housing units. Therefore, the aim is to offer financial packages and incentives to support the landlords in rehabilitating their residential buildings and maintain the existing stock of affordable housing units. This strategy translates into two action plans: create a registry platform to match donors, NGOs, and construction companies with landlords for rehabilitation, and activate incentive based financial packages to landlords and developers to rehabilitate and upkeep their buildings.

## 6. OBJECTIVE B

### STRENGTHEN THE SOCIO-CULTURAL, ECONOMIC, AND SPATIAL CONNECTIVITY OF KARANTINA INTERNALLY AND EXTERNALLY WITH ITS SURROUNDINGS

“ I want Karantina to be better developed and open to the neighboring areas, and at its best<sup>4</sup>

أريد ان تكون الكرنطينا بشكل أفضل متطورة ومنفتحة على المناطق المجاورة وبأفضل حال من أحوالها

Karantina's position in Beirut was reduced to that of a backyard area that is contained between several infrastructural breaks. It is evident from the strategic diagnosis report that Karantina suffers from an enclaved socio-spatial condition whereby its urban fabric is detached from the rest of the city. The neighborhood is confined between harsh borders such as the Charles Helou Highway, the port, and the river, which form impermeable edges and limit accessibility. Over time, Karantina lost its connection with Mar Mikhael after the construction of the Charles Helou Highway was completed. It also lost its connection with the sea due to the expansion of the port and the militarization of the northern edge. The shift in the port dynamics upon its expansion and its disconnection from the city further separated Karantina from the Beirut Central District.

This enclaved condition is exacerbated by the absence of a transportation plan that networks Karantina with the rest of the city. The physical and spatial rupture is paralleled by a socio-cultural one between Karantina and the rest of the city, particularly the solid network it had with Mar Mikhael. Furthermore, there is an economic disconnection due to the weakening and closure of the major economic drivers, including the slaughterhouse, the public and fish markets, and more recently the port.

Similarly in the inner fabric, block typologies and heavy military presence contributed to internal spatial fragmentation. This fragmentation is reflected in the socio-economic conditions of the residential clusters. Although there are three residential clusters, they remain isolated from each other and socio-culturally distinct from one another.

Furthermore, fragmentation also occurs with the businesses. Despite the presence of several economic magnets in the area, they remain isolated as separate economic islands with missing spatial and economic connections between them. Considering the vision for an easily accessible urban fabric in Karantina "سهلة الوصول" with its people empowered and interconnected "مجتمعا متمكنا ومتراابطينا", the aim is to strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.

<sup>4</sup> J.A.A, (2020-December-12), (Hassan Ali Aswad - Interviewer)

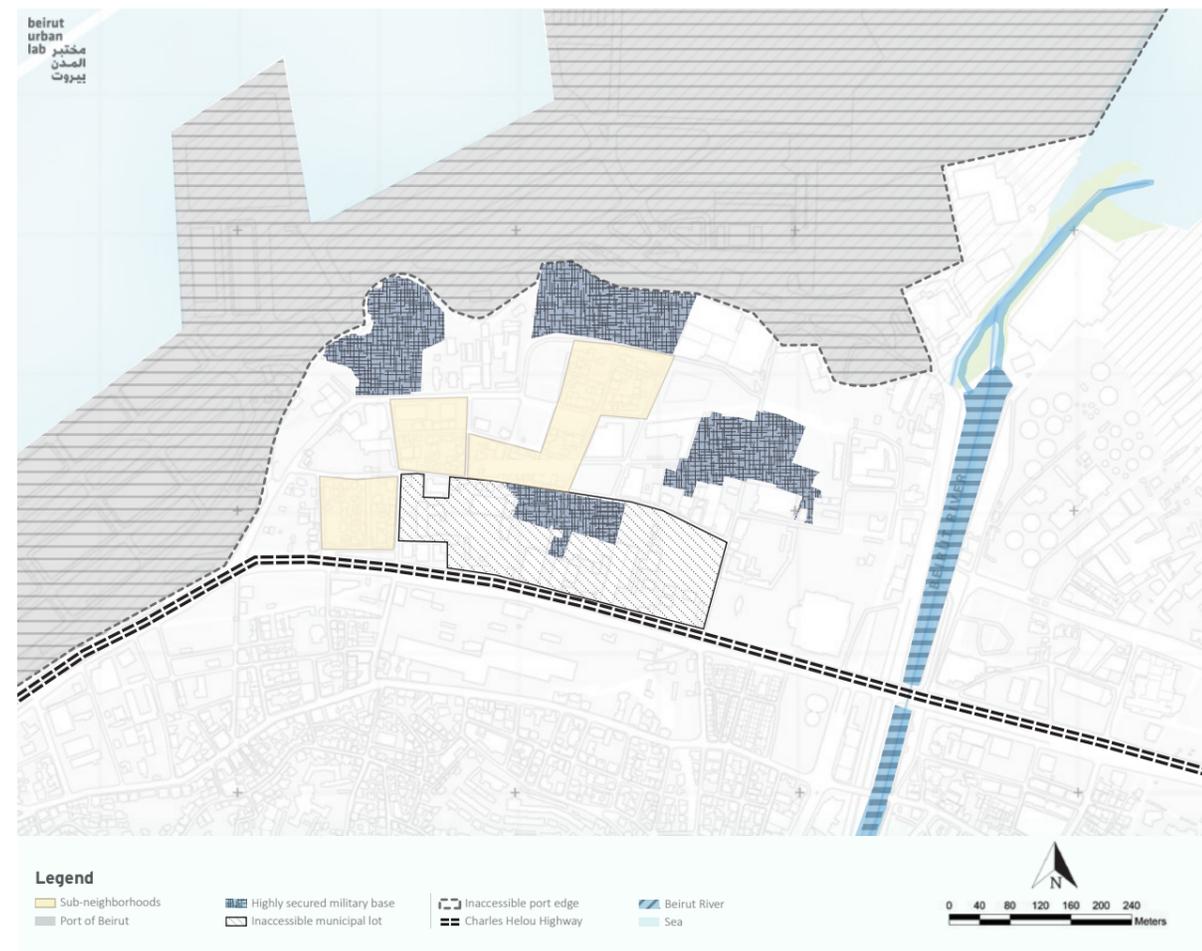


Figure 12: The boundaries of Karantina and the inaccessible areas within it. Source: The Beirut Urban Lab, 2022.



## B1. CONNECT KARANTINA SPATIALLY WITH ITS SURROUNDINGS.

The construction of the Charles Helou Highway in the late 1950s radically compromised accessibility into Karantina and affected its spatial connectivity with its surroundings. Historically, Karantina was strongly connected with Mar Mikhael through the two vertical spines: Ibrahim Pacha Street and Al-Khodor Street. Residents used to commute frequently to Mar Mikhael to run some errands, go about their daily shopping, and engage in leisure activities. A religious network was also at the core of this connection as the Muslim community was linked to Al-Khodor Mosque, and the Christian community was attached to Mar Mikhael Church. When a 2.5 kilometers long highway was constructed, it created a physical rupture between these two neighborhoods, a condition that was strongly emphasized in several town hall meetings. Two pedestrian bridges were added after many incidents of people dying on the highway, a solution that is still perceived as unsafe by the residents. The highway also cuts through a large municipal lot that hosted the train station and a French army base. Currently, the northern part of the lot occupies around 8 hectares, equivalent to 12% of Karantina's total area. The rectangular-shaped lot, demarcated by high walls, extends over 1.25 kilometers in the linear perimeter. The vacuum created by this spacious but inaccessible lot further reduced permeability and affected porosity at the urban edges of Karantina.

The enclaved spatial condition is also impacting the economic drivers of the area. Despite the several economic magnets present at the northern periphery of Karantina, such as the slaughterhouse, the fish market, and the public market, there is a missing spatial connection between them and the inner neighborhoods. A frustration from this spatial condition was sensed among the residents of Karantina as they frequently described the area as an isolated space "منطقة معزولة". Responding to the objective of strengthening Karantina spatially with its surrounding, the following proposed strategies are aimed at re-stitching the area with Mar Mikhael to the south through a pedestrian network, increasing the permeability of the urban edges, and creating socio-spatial hubs around the economic drivers.

### B1.1/D5.1. Re-stitch Mar Mikhael with the southern side of Karantina through a pedestrian network across the highway.

As was stated in the previous section of the report, the Charles Helou Highway caused a physical rupture between Karantina and Mar Mikhael. Reversing the drawbacks of this rupture requires re-stitching the torn neighborhoods together and bringing back the lost connection between them. Spatial connectivity then becomes a key catalyst for reconnecting communities socially and economically. Accordingly, this strategy proposes re-stitching Karantina with Mar Mikhael at its southern edge through a pedestrian-friendly network of roads and open spaces. Achieving this strategy requires redesigning Charles Helou Highway as an urban boulevard with multiple pedestrian crossings into Mar Mikhael. This action plan should be studied through a comprehensive urban design plan for an open space network that includes upgrading existing spaces, introducing new spaces, and reforming operation and management systems.

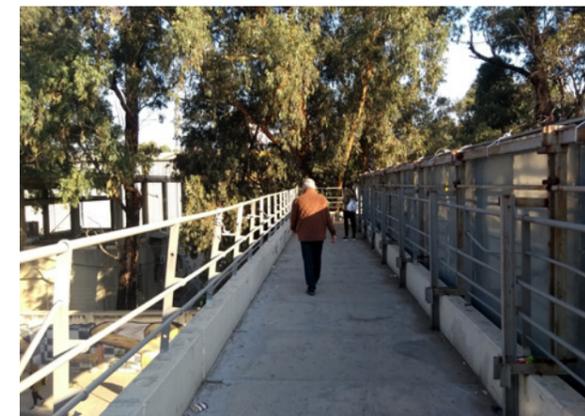


Figure 13. The pedestrian bridge that runs over the Charles Helou Highway. Source: Abir, Cheaitli, 2021.



Figure 14. Traffic on the Charles Helou Highway. Source: Weam Haddad, 2021.

### B1.2/D5.2. Increase the permeability of the edges of Karantina with the city.

Occupying around 12% of Karantina's total area, the municipal lot at the southern edge contributes to Karantina's physical isolation from its surroundings. This lot resulted from the construction of the Charles Helou Highway that cut across a 20-hectare municipal lot in the late 1950s. The lot used to host the train station, presently in Mar Mikhael's side, in addition to a French military base. Currently, the space is utilized for many economic and municipal services such as the fire station, a local department for the Municipality of Beirut, and other municipal services. A military base is also present, occupying 15% of the area. The high walls delineating its borders act as barriers that prevent pedestrian and vehicular accessibility and visual connectivity. This strategy aims to increase the permeability of this edge so that it becomes an integral part of Karantina instead of an isolated and peripheral area. Edge permeability increases when people can move freely with little restrictions and have an ample variety of routes to take. Thus, enhancing permeability will ease vehicular and pedestrian movements and strengthen connectivity between Karantina and its surroundings.

Once it is accessible, there is potential for this lot to host public amenities and new developments that can cater to the people of Karantina and its surrounding neighborhoods. Therefore, this strategy is vital to revive the socio-cultural vitality of Karantina and trigger new developments in the area. This strategy translates into an action plan that will design and implement a subdivision project of the municipal lot. With the Municipality of Beirut as the main stakeholder, the project should open and reprogram the municipal lot into public recreation and play areas.



**Figure 15.** The inaccessible wall of the municipal lot from Charles Helou Highway. Source: Abir Cheaitli, 2021.



**Figure 16.** The inaccessible wall of the municipal lot from Al-Rehban Street. Source: Abir Cheaitli, 2021.

### B1.3. Create socio-spatial hubs around the economic drivers in relation to the sea.

Although there is a diversity of economic activities in Karantina, the findings in the diagnosis report showed that the main economic drivers perform as isolated islands. Particularly, the key active magnets such as the slaughterhouse, the fish market, and the popular market that formed economic ties between Karantina and its surroundings. By establishing connections with a network of services, capital, and human flow, these active magnets contributed to the economic welfare and better livelihoods of low-income residents in Karantina. The fish market, for example, located at the northern periphery of Karantina, provided job opportunities for the residents, particularly those from the Arab tribes. However, a spatial connection remains missing between these active magnets and the inner neighborhoods of Karantina.

This strategy aims to create socio-spatial hubs around the economic drivers where related activities and cultural practices can be centralized. This will amplify the exposure of these drivers at the local and city scales. Given their proximity to the sea, the hub can be designed to benefit from the waterfront area and create a more attractive space for the users. However, restoring the functions of these economic drivers is a prerequisite for this step. Therefore, when translated into an action plan, the following steps should be considered: rehabilitating the public and fish markets, revising their operation and management standards, and reconfiguring their programs to act as active socio-economic hubs that are part of the green and blue networks.



## B2. RECONNECT KARANTINA WITH THE SEA AND THE BEIRUT CENTRAL DISTRICT.

The seaside edge, the coastline, and the natural setting that shaped the landscape of Karantina have contributed to the local uniqueness of this coastal area. This unique setting and the proximity to the port provided Karantina with a strategic location on the Mediterranean Sea. The socio-spatial practices that are tied to the sea, such as fishing, swimming, and promenades along the seashore, used to add to the distinctiveness of the place. Many of these practices are still present in the collective memory of the residents of Karantina. However, this strong socio-spatial connection with the sea was lost as the port started expanding gradually during the late 1950s and completely took over the seashore by the turn of this century.

Ever since this expansion took place, the port started performing as a separate entrepreneurial entity that pushes public life away from the sea. Therefore, not only did this expansion physically isolate Karantina from the sea, but it also deprived the residents of much-needed public space in a context that has a scarce number of public spaces. In addition, Karantina lost a prominent landscape heritage feature as the coastline became incorporated into the built fabric. Currently, the coastline is abandoned, not easily accessible, and not connected to the sea promenade that is linked to the Beirut Central District. Responding to the objective of reconnecting Karantina with the sea and the Beirut Central District, the following strategies were proposed: reclaim Karantina's old coastal line as a green promenade and revive it as landscape natural heritage, extend the sea promenade from the Beirut Central District to Karantina, and advocate for public access to the sea through the port.



**Figure 17.** The estuary of the Beirut River. Source: Mariam Bazzi, 2022.



**Figure 18.** The seaside view from the Beirut River estuary. Source: Mariam Bazzi, 2022.

### B2.1. Reclaim Karantina's old coastal line as a green promenade and revive it as a natural landscape heritage.

Karantina's old coastal line has unique topographic and geomorphological features. Situated on a coastal cliff that protrudes into the Mediterranean Sea, the wavy edge is elevated from the seashore. Scattered vegetation covers the bedrock embodying a distinctive Mediterranean character. Stairs and informal pathways were used to connect people to the sea, adding a socio-cultural layer to the distinctiveness of the site. Therefore, the coastal line represents an important natural landscape heritage site that can become a vital asset for Karantina. The importance of reclaiming Karantina's old coastline as a green corridor is twofold. Firstly, the promenade will bring back the visual connection with the sea that was lost with time, thus, rekindling the strong relationship between the people in Karantina and the sea. Secondly, utilizing these landscape components will reinforce the uniqueness and importance of the landscape heritage site, thus, paving the way for its protection and valorization. This strategy could be applicable through an urban design intervention that reclaims the coastline to serve as an amenity landscape with multifunctional public spaces. Furthermore, this urban design intervention should be developed as part of a larger open space network that connects, upgrades, and expands on the existing public spaces.

### B2.2/B4.3/D5.3. Extend the sea promenade from the Beirut Central District to Karantina.

As a consequent of the civil war, the reconstruction project of the Beirut Central District focused on the downtown area with little importance given to its connection with the surrounding neighborhoods. Exacerbated by the gradual expansion of the port, the physical continuity between the Beirut Central District and Karantina was disrupted. Therefore, extending the coastline corridor, as was proposed in B2.1, can have an additional impact. Not only would the coastline corridor highlight the natural heritage and provide a visual connection to the sea, but it can accentuate the link to the Beirut Central District and provide an extension to the corniche. Thus, the corridor can revive the connection between Karantina and the downtown area and re-stitch the two areas together. The promenade can offer an extension to the Beirut Central District while being accessible from adjacent neighborhoods. Besides connectivity, this corridor can include multifunctional spaces for public recreation. This strategy translates into an action plan that incorporates an urban design intervention that reclaims the coastline as a green corridor.

### B2.3/D5.4. Relink Karantina to the sea through the port.

Although the port currently acts as a vital economic magnet for Karantina, an adequate spatial connection between them is still missing. Before the first expansion of the port, a strong relationship between the port and the city was evident, and physical permeability was maintained. The port was strongly anchored in the city, with networks of alleyways that connect people to its roads and docks. At that time, the port was a strong asset to urban public spaces, and the port activities were part of the social identity of the city and a source of living for a wide range of community groups, including the people of Karantina. Socio-spatial activities that are tied to the sea like fishing, swimming, and promenades along the seashore are still present in the collective memory of the residents of Karantina. Nonetheless, after its gradual expansion in the late 1950s, the city and port dynamics changed. Public life was pushed away as the port became a purely economic zone and an entrepreneurial entity that functions independently from the city's dynamics. Being close to the port, Karantina was affected by the physical rupture that was caused by the expansion.

Therefore, as the sea makes up an integral part of the place identity of Karantina and the collective memory of its residents, access to the sea should be available to everyone. This access can only be achieved if the relationship between the port and Karantina is reconfigured, where a defined space for the public is curated. This strategy will reinforce the Karantina-port interaction by infusing pedestrian mobility into the port and activating part of its waterfront for public to induce new opportunities such as leisure activities, recreation, and new job creation. Advocating for public access to the sea through the port is timely and urgent, especially since many port reconstruction proposals are under development after the August 2020 blast. Given the currently restricted access to the port and the complex political circumstances that may further obstruct this access, advocacy is a key to its success. Therefore, this strategy requires establishing a coordinating body that includes the Ministry of Public Works and Transport and donor agencies that are working on the port reconstruction.

### B3. INTEGRATE KARANTINA INTO THE CITY-WIDE TRANSPORTATION NETWORK.

Before the civil war, Karantina used to have a bus stop that was part of an old transportation network that linked several areas in Beirut. However, the public transport system was gradually discontinued after the war and replaced by an informal one. These informal modes of transportation, such as taxis and informal buses, do not pass through Karantina but operate along its edges. As the findings of the diagnosis report showed, only 11% of the people commuting to work outside Karantina use informal buses, while 30% use private cars. This low dependence on informal transportation is partly due to the difficulty of walking to the bus routes or the lack of trust in these buses. Many residents complained about Karantina's exclusion from the transportation network and described their challenges while commuting to work. "نحننا منعاني للوصول إلى" "أشغالنا". Therefore, integrating Karantina into the city-wide transportation network is pivotal to overcoming the enclaved spatial condition of the area. Accordingly, the following strategy was proposed: establish points of connection with city-scale and wider mobility modes, such as buses and taxis.

#### B3.1/D5.5. Establish points of connection with city-scale and wider mobility modes (buses, taxis, etc.).

The absence of transportation nodes inside Karantina contributes to its isolation from the rest of the city. Transportation is vital for improving living standards, especially for marginalized communities. By enhancing their mobility, the residents in Karantina can access better jobs and services, commute to a wider buffer area around Karantina, and engage in public and social life. As a result, people in Karantina can become more included in the city. Hence, it is essential to ensure that people in Karantina have access to transportation networks that are linked to several areas within Beirut. For this reason, this strategy intends to establish points of connection inside Karantina that are linked to city-scale and wider mobility modes (buses, taxis, etc.). A transportation study can inform this strategy.

The study should determine and propose the best points of connection in Karantina to the existing modes of transportation and road networks within Karantina, and advocate for the inclusion of stations in Karantina to connect it with new modes of transportation including train and sea taxis. Additionally, it should expand the existing truck parking at the port to accommodate the existing number of trucks and design a traffic scheme for Karantina that addresses density, timing, and rerouting of trucks away from the residential areas.



### B4. IMPROVE ACCESSIBILITY TO THE DIFFERENT AREAS WITHIN KARANTINA AND BETWEEN THEM.

As was discussed in the strategic diagnosis report, heavy militarization and some of the block typologies are restricting internal accessibility inside Karantina and further aggravating spatial fragmentation. The history of the militarization of Karantina dates to the beginning of the Lebanese civil war in 1975. The neighborhood witnessed intense fighting and was heavily bulldozed to eradicate undesirable populations by powerful militias at the time. The Lebanese Army replaced these militias in Karantina after their withdrawal at the end of the civil war. This militarization was further reinforced after 2001 when a post-9/11 global militarization of port sites trend prevailed. Currently, four military bases occupy huge pieces of land at the edges of Karantina. The military occupation of these pieces of land is a source of frustration among the residents, while some of them claim ownership of some of these lands. As was observed during the fieldwork, many sidewalks and streets have been encroached on by physical security elements, such as cement barriers, metal meshes, signs, and speed bumps. In many places, sidewalks and streets are blocked, and the flow of public circulation is interrupted. In addition to the heavy military presence, the block typology of lots inside Karantina causes spatial fragmentation. The impermeable physical edges of blocks are limiting connectivity and restricting accessibility, thus, increasing isolation between the sub-neighborhoods. The most glaring example is the municipal lot at the southern edge of Karantina that was discussed in B1.2. The Maronite Waqf also has a significant share of large lands, especially in the industrial area. Responding to the objective of improving accessibility to the different areas within Karantina, the following strategies were proposed: remove all restricted access to the public domain, subdivide, and integrate the municipal lot into the development of Karantina, and extend the sea promenade from the Beirut Central District to Karantina.



Figure 19. Military concrete fenced walls in Al-Khodor sub-neighborhood. Source: Abir Cheaitli, 2021.



Figure 20. Other military concrete fenced walls in the industrial area. Source: Abir Cheaitli, 2021.

#### B4.1/D5.6/E5.2. Remove all access restrictions to the public domain.

To boost spatial, economic, and social connectivity in Karantina, this strategy proposes removing all restricted access to the public domain. For this purpose, physical obstacles that hinder pedestrian mobility in streets and sidewalks should be removed. More importantly, public pieces of land should be freed from military occupation. These pieces of land can be repurposed for public use like social housing, public schools, or a public destination. This strategy calls for negotiations with concerned stakeholders, especially the military body and the Municipality of Beirut, to facilitate this process. For this strategy to become feasible, a neighborhood committee should be formed between these entities to negotiate removing encroachments on public pieces of land.



**Figure 21.** Concrete blocks on the public domain in Al-Khodor sub-neighborhood. Source: Abir Cheaitli, 2021.



**Figure 22.** Inaccessible concrete walls on the sidewalks in the industrial area. Source: Abir Cheaitli, 2021.

#### **B4.2/D1.2. Subdivide the municipal lot and integrate it into plans for the development of Karantina.**

Not only does the municipal lot at the southern edge contribute to the external isolation of Karantina from its surroundings, but it also causes a spatial fragmentation in the inner fabric. The lot which occupies around 12% of Karantina's total area, currently hosts a combination of economic and municipal services such as the fire station, a local department for the Municipality of Beirut, the center for the internal security forces, parking space of the municipality, private institutions, and a military base. Thus, the inner edge of the lot has restricted accessibility from Al-Rehban Street and is marked by several checkpoints and security elements on the sidewalks, such as cement blocks and metal obstacles. In addition, the lot includes other municipal facilities such as several warehouses. In line with strategy B1.2, this lot should be subdivided and integrated into the development of Karantina. This strategy translates into an action plan that will design and implement a subdivision project of the municipal lot. With the Municipality of Beirut as the main stakeholder, the subdivision should open and reprogram the municipal lot into public recreation and play areas.

#### **B4.3/B2.2/D5.3. Extend the sea promenade from the Beirut Central District to Karantina.**

Refer to strategy B2.2.



### **B5. STRENGTHEN THE ROLE OF ECONOMIC DRIVERS TO CONNECT KARANTINA TO THE CITY-SCALE ECONOMY.**

Many of the economic activities in Karantina that contribute to its connectivity with the rest of Beirut are deteriorating due to the crisis-ridden context. The port, a major transport infrastructure and economic catalyst near Karantina, prompts the formation of businesses that are associated with its operations. While some of the businesses like shipping and warehouse facilities act largely as isolated economic islands, employing non-local professionals and barely attracting visitors to the neighborhood, other port-related businesses like mechanic shops and garages intensify external economic connections to the area. They are the most prevalent business types in Karantina. They bring in a wide range of customers from different locations—Karantina, Greater Beirut, Lebanon, and beyond—and from different socio-economic backgrounds. For example, some of them offer repairs for luxurious cars as well as high-quality services that require high-end technologies and technical skills. Also, some light industries and crafts like carpentry and steel lathing attract customers from within Karantina and beyond. However, as will be discussed in strategic objectives C4 and C5, such craft businesses, as well as the mechanic shops and garages, are highly vulnerable and suffer from a decline in their activities.

As for government facilities like the slaughterhouse and the fish market, these are key economic drivers and important connectors of Karantina to the wider-scale economy. The slaughterhouse was the largest in Beirut, and its integration into the city economy could be best illustrated by how its workers boast for being renowned as “the best butchers in Beirut who provided good quality, service, and price”. As for the fish market, it is a central wholesale and retail market that attracts visitors from outside the neighborhood and provides fresh and frozen fish to restaurants throughout the city. However, these facilities, especially if not abiding by adequate environmental standards, could contribute to increasing pollution levels and, thus, increasing stigmatization. Consequently, such stigma could repel visitors and decrease their connections with Karantina. Besides, the fact that these key economic drivers are either closed or under-functioning—their situation is detailed in strategic objective C1—leads to the impairment of their potential as inducers of connectivity.

Accordingly, to establish strong connections between Karantina and the wider-scale economy, the port-related businesses, alongside other industrial uses, need to be strengthened, and the government facilities, being key economic drivers, need to be revitalized in a sustainable manner.

#### **B5.1/A2.3/C1.1/C2.3.**

#### **Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market.**

Refer to strategy A2.3

#### **B5.2/B7.1/C5.1.**

#### **Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses.**

It is imperative to support the businesses in Karantina and encourage their cooperation, particularly in the current context of rising vulnerabilities. And given the convergence in the functions of many businesses in the neighborhood, networking and coordination becomes vital. They can integrate one another in their production processes, or they can alternatively support each other by sharing resources, information, innovation, and knowledge.

For instance, port-related businesses can be more synergetic by creating arrangements among each other that are mutually beneficial, timely, and cost effective, especially considering their proximity. Additionally, these businesses could benefit from networking with mechanic shops and garages that can maintain their constructed capital like vehicles and appliances, while themselves benefitting from such transactions. In this sense, these port-related businesses would increase their economic spillovers into Karantina. On a similar note, grocery shops, bakeries, and other retail shops from the smaller micro business category can create cooperatives, share capital, and exchange knowledge about profitable supply chains. Local artisans can benefit from similar forms of exchange and support each other by sharing expertise and economic knowledge. They can also collaborate with art galleries and showrooms to promote their crafts and products.

Thus, this strategy must be translated into the development of plans for cooperation, innovation, and transfer of knowledge, alongside the creation of a business and career training center as a space for connection and collective learning.



## B6. PROVIDE ACCESS TO JOB OPPORTUNITIES IN MICRO, SMALL, AND MEDIUM BUSINESSES.

Although there is diversity of businesses in Karantina by type and size, only 34% of the employed residents work for businesses in Karantina, most of whom work for micro businesses such as retail shops, mini markets, butchery shops, bakeries, and small mechanic shops. Micro, small, and medium sized businesses such as retail companies, car sales and showrooms, and logistics and shipping services tend to employ skilled people who live in the city and Greater Beirut, with almost a negligible percentage of the residents of Karantina. This reveals a disconnection between these businesses and the residents of Karantina of whom a considerable percentage hold university degrees and mastered diverse skills that can cater for the demands of these businesses. Therefore, the residents of Karantina need to be connected to the job opportunities provided by these businesses by matching them with the businesses in the area and further building the capacities of the residents of Karantina to be matched with available job opportunities.

### B6.1/A2.1/C2.1

**Build the capacities of the residents of Karantina and match them with job opportunities.**

Refer to strategy A2.1

### B6.2/A2.2/C2.2

**Match the skilled workforce with the businesses in the area and connect them with the job market at a larger scale.**

Refer to strategy A2.2



## B7. CONNECT THE DIFFERENT BUSINESSES WITHIN KARANTINA.

The relationship among various businesses in Karantina is fragmented since they operate as isolated islands with little interaction with one another. The analysis of the answers to the questionnaires conducted during the diagnosis phase showed that in addition to the disconnection between the types of businesses and the community groups in the neighborhood, there is poor communication and networking among the businesses themselves. This is despite the fact that many of the economic activities of these businesses coincide, overlap, or complement each other. For instance, grocery shops and mini markets account for 12% of the Karantina businesses and belong to the smaller micro business category, employing 0-2 workers each.

Their size points to their high vulnerability<sup>5</sup> in the face of the ensuing hardships, suggesting a dire need for solidarity. Additionally, the old manufacturers and artisans<sup>6</sup> along with the newer art and design businesses account for 18% of the Karantina businesses. While they vary considerably in size, scope, and resources, their functions can be complementary, and their customer groups can possibly overlap. Likewise, port-related businesses<sup>7</sup> share great similarities and complementarities but are still disconnected. These account for around 28% of the Karantina businesses, and this high percentage highlights the untapped mutual benefits and upscaling potentials of their coordination. From here, it is evident that strategies aimed at enhancing networks among businesses are vital for their protection and improvement.

<sup>5</sup> The state of micro businesses is further discussed in strategic objective C3.

<sup>6</sup> The state of old manufacturers and local artisans is further discussed in strategic objective C4.

<sup>7</sup> The state of port-related businesses is further discussed in strategic objective C5.

### B7.1/B5.2/C5.1.

**Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses.**

Refer to strategy C5.1



## B8. ENHANCE THE PUBLIC REALM AND PROVIDE SHARED FACILITIES AND SPACES TO PROMOTE SOCIAL CONNECTION ACROSS THE THREE SUB-NEIGHBORHOODS.

As was mentioned in the strategic diagnosis report, the analysis of the spatial connectivity revealed that Karantina is also socially fragmented. Three sub-neighborhoods in Karantina were identified: Al-Khodor, Al-Saydeh, and Al-Senegal. Although they share strong ties, there is still social segregation across the sub-neighborhoods. The residents' perception of their sub-neighborhoods shows a connection between conceived spatial boundaries and the social makeup of the sub-neighborhoods. The analysis of the household questionnaire showed strong social connectivity at the scale of each sub-neighborhood but not at the scale of Karantina as a whole. Most residents referred to their sub-neighborhood as the boundary that hosts their social group or the community where they belong. A reading of the sub-neighborhoods showed that they are segregated according to religious and familial ties. The analysis of the answers to the questionnaires also showed that the sense of belonging to the neighborhood is at its highest in Al-Khodor sub-neighborhood (71%). Al-Saydeh and Al-Senegal sub-neighborhoods shared similar percentages at 58% and 52% respectively.



**Figure 23.** An alleyway in Al-Khodor sub-neighborhood. Source: Batoul Yassine, 2020.

The lack of shared and open spaces between the three sub-neighborhoods contributed to this social disintegration. Karantina has a gated public park that is inaccessible on most days due to restricted access by the Municipality of Beirut. Children and adults engage in socio-spatial practices in the streets of Karantina without adequate lighting, urban furniture, landscape, and safety measures. Building on the notion that open and shared spaces are catalysts for social recovery, this proposal intends to enhance the public realm and provide shared facilities and spaces. Accordingly, the following strategies were proposed: adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introduce shared facilities, facilitate access to existing public spaces (the public park), and increase their number.

### B8.1/D3.3/E5.1.

**Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.**

Social ties and a keen sense of belonging in the sub-neighborhoods are vital social assets for Karantina. It is important to capitalize on these assets by enhancing the residents' use and experiences in public and shared spaces and boosting social cohesion between the sub-neighborhoods. In a post-port blast context, the rehabilitation of the shared spaces in the public realm is also crucial for a holistic recovery.

Toward this end, this strategy intends to adopt an inclusive and integrated design approach to upgrade and rehabilitate existing public spaces and introduce shared facilities. An inclusive design approach aims at improving mobility for all pedestrians from different age groups, gender categories, and with any disabilities. The residents from the three sub-neighborhoods should be able to participate in designing their public spaces, express their desires and needs in the public domain, and locate their preferred sites for design intervention. To make the streets and open spaces more inclusive, a holistic approach must be adopted. This approach should improve the whole journey people take from one destination to another and enhance the overall access and the means of transportation people use to get to their work, schools, medical health centers, shops, and cultural and entertainment destinations. To implement this strategy, the following set of action plans was further proposed:

1. Design and build a community center in a strategic location that is accessible to the residents of the three sub-neighborhoods.
2. Propose an urban design plan for an open space network that includes upgrading existing spaces and reforming operation and management systems.
3. Develop a multi-purpose complex for public services including a public school, an affordable family clinic, and a recreational sports center that can share the same structure and be located on municipal land.

#### B8.2/A3.2.

**Facilitate access to existing public spaces, including the public park, and increase their number.**

Refer to strategy A3.2

## 7. OBJECTIVE C

### SUPPORT, INCREASE, AND SUSTAIN CULTURAL AND ECONOMIC VITALITY IN KARANTINA

“ I see Karantina as the Shanghai of Lebanon because it is in the heart of the capital and close to the port. The area should include commercial companies, services, and warehouses. However, it should keep the residential sub-neighborhoods. It also must have a train station that connects the port to the south and north of Lebanon.<sup>8</sup>

بشوف الكرنطينا شنغهاي لبنان لأن هي قلب العاصمة و قريبة للمرفأ. لازم كلها تكون شركات تجارية و خدمات و مستودعات كبيرة بس ما بيمنع يكون فيها أحياء سكنية. و لازم يكون في قطار من المرفأ للجنوب و الشمال.

“ I would like to see a strong labor market in the Karantina, and a heavy customer flow into the area<sup>9</sup>

بحب شوف سوق العمل قوي بالكرنتينا والزباين إلها إجر أكثر عالمنطقة.

“ I hope that Karantina will be a developed area and full of talents, where its inhabitants are well educated and have all the necessities of life<sup>10</sup>

آمل أن تكون الكرنطينا منطقة متطورة ومليئة بالمواهب وسكانها مثقفة متعلمة ويتواجد فيها كل مقومات الحياة.

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<sup>8</sup> Z.C., (2021-February-10), (Ali Ghaddar- Interviewer)

<sup>9</sup> H.M., (2021-January-05), (Yahya Al Sayed - Interviewer)

<sup>10</sup> A.S.S., (2020- December-29), (Mohamed Amsha - Interviewer)

Karantina's cultural and economic potentials are ample, but they have been compromised throughout the years and were profoundly set back by the recent crises. Being a low-rent area in strategic proximity to the port and the Beirut Central District, Karantina was able to foster diverse and multiscale economic activities. Within it, industrial functions, storage facilities, and freight services thrived. Key economic drivers such as the slaughterhouse and the public markets used to bring in people and supply products to areas beyond the neighborhood and city scales. Besides, Karantina witnessed a recent trend of new cultural land uses springing up and drawing in new user groups, potentially expanding Karantina's cultural vitality beyond the locally bound socio-economic and socio-spatial practices. However, this trend, along with the long-established economic activities—many of which were already suffering from closure, neglect, or mismanagement—were severely impacted by the port blast, the financial and economic crisis in Lebanon, and the COVID-19 pandemic.

In this context, many micro enterprises closed their facilities or have been struggling with threats of closure. And while the port blast had a heavy toll on all businesses in Karantina, port-related businesses suffered particularly a sharper impact following the disruption in the port's operation and output. Similarly, the fish market underwent a drastic decline in activity, while the other key economic drivers, like the slaughterhouse and popular market, were inactive even before the start of the crisis. All this translates to a growing unemployment rate that was already high due to the discrepancy and incoordination between the local businesses and workforce skills.

On another note, the phase-out of the socio-economic practices that were previously blossoming around these economic activities weakened the already feeble cultural vitality in Karantina. Add to this that the cultural and creative businesses inflow trend was thwarted, while it could have been increasing cultural magnets in the area. As for the local socio-spatial practices, mostly anchored around the residential fabric, they are being threatened by the high-end businesses that were able to take hold in the neighborhood's residential clusters. Accordingly, and in line with the vision of an economically prosperous Karantina “*منطقة مجتمعا متمكن*” with an empowered population “*مزهرة اقتصاديا*” the aim is to revitalize, strengthen, and sustain the businesses, economic drivers, and cultural functions in the area, while supporting the neighborhood's citizens and integrating them actively into the local and city-wide economy.



## C1. RESTORE AND STRENGTHEN THE ROLE OF THE KEY ECONOMIC DRIVERS IN KARANTINA.

The slaughterhouse, public market, and fish market were government facilities in Karantina that acted as key economic drivers, inducing chains of economic activities across multiple scales and developing cultural vitality within the neighborhood. The Karantina slaughterhouse was the largest in Lebanon and attracted trade and commerce activities from all over the country (Ecocentra, 2015). Established in the first decade of the last century to the north of Al-Khodor sub-neighborhood, the slaughterhouse developed incrementally until its closure during the civil war. Later, in 1992, it reopened in its current location on the periphery of Karantina but closed again in 2014 since it did not meet minimum health and hygiene standards and requirements. Following pressure from some of the residents of Karantina, it was planned to reopen in 2020; however, these plans were suspended following the destruction from the port blast and the debris dumping activities next to the slaughterhouse. The slaughterhouse used to employ many Karantina residents, especially from the Al-Khodor Arab Tribes that were historically tightly linked to activities like animal husbandry and slaughter<sup>11</sup>. Accordingly, not only did shutting down the slaughterhouse leave these residents unemployed and stripped of their primary source of income, but it cut off ingrained cultural practices. Furthermore, the economic web of customers, workers, businesses, and professionals that was generated around the slaughterhouse—and included local traders, sub-traders, monopolists, suppliers (butcheries), anchored businesses (food dyeing industry) among others was broken with the closure of the slaughterhouse, further eroding the cultural and economic vitality in Karantina.

<sup>11</sup> This is where they get what is considered a pejorative designation, “Arab al-maslakh” [Arabs of the slaughterhouse].

The public and fish markets are currently located on the northeastern edge of Karantina. The public market was initially opened in 1996 and operated for four years before shutting down. And in 2014, it reopened again but closed shortly after. On the one hand, the market had the capacity to welcome 350 traders or investors (Chbaro, 2019), while also employing administrators, cleaners, security guards, and other kinds of workers. According to Fakir al-din Shihadeh, it employed several residents from Karantina, including women who used to sell their own products or were hired to run the shops of other people<sup>12</sup>. On the other hand, the central wholesale and retail fish market, which opened in Karantina in 1995, is still operating. However, given the devaluation of the local currency, the fall in people's purchasing power, and the increase in transportation costs, in parallel to strong competition from large supermarkets, the sustainability of the fish market is intensely threatened. It is already suffering from more than 80% decline in activity: daily fish sales dropped from 20-30 tons to 5-6 tons, opening hours decreased by 5 hours, and the number of active retail stations and wholesale booths fell from 65 to 20. This illustrates how the deteriorating situation of the fish market and the continued closure of the popular market deprive the residents of Karantina of potential jobs, income, and commercial and social activities. Thus, it is necessary to revitalize these economic drivers to benefit from their full potential in ensuring cultural and economic vitality.



Figure 24. The fish market in Karantina.  
Source: Rami Shayya, 2022.



Figure 25. The public market in Karantina.  
Source: Rami Shayya, 2022.

### C1.1/A2.3/B5.1/C2.3.

Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market.

Refer to strategy A2.3



## C2. PROVIDE JOB OPPORTUNITIES FOR THE RESIDENTS OF KARANTINA.

Refer to strategic objective A2.

### C2.1/A2.1/B6.1

Build the capacities of the residents of Karantina and match them with job opportunities.

Refer to strategy A2.1

<sup>14</sup> Refer to Report 02

**C2.2/A2.2/B6.2****Match the skilled workforce with the businesses in the area and connect them to the job market at a larger scale.**

Refer to strategy A2.2

**C2.3/A2.3/B5.1/C1.1****Revitalize three of the economic drivers (the slaughterhouse, the public market, and the fish market).**

Refer to strategy C1.1



### C3. SUPPORT THE EXISTING MICRO BUSINESSES AND SUSTAIN THEIR OPERATIONS IN KARANTINA.

Enterprises with 0-2 employees and those with 3-10 employees, which the report designates respectively as smaller or larger micro businesses, play a critical role in Karantina's economy but are suffering heavily with the unfolding crisis in the country. These enterprises are the most prevalent in Karantina, accounting for 82% of the total number of businesses. Such businesses like retail shops, mini markets, butcheries, bakeries, mechanics shops, hookah stores, and others are essential for Karantina's economic and cultural vitality for several reasons. These types of businesses are mostly owned by long-standing residents in the neighborhood and 91% of the business owners in Karantina consider their businesses to be their only source of income. Besides, micro businesses are responsible for employing most of the people who work and live in Karantina. This shows that micro businesses are pivotal in sustaining the livelihoods of the Karantina residents including business owners, workers, and their families. Alongside providing them with income, it anchors them in the neighborhood and upholds their socio-spatial and socio-economic practices.

However, with the hyperinflation and economic crisis in Lebanon, these businesses are barely surviving. Many are threatened with potential displacement due to the increases in rent prices and eviction claims. With the fuel shortages, businesses are putting up with more frequent power cuts that are mostly felt by micro businesses that do not own private generators and cannot afford to pay subscription fees to local providers. Furthermore, with the waning demand, the economic activities of these businesses shrink, and their resiliency is undermined by the inability to use non-conventional tools for managing and sustaining their businesses, like computers and internet. On another note, while many of these businesses received aid after the port blast, most micro businesses in the industrial area did not receive any support and encountered difficulties in accessing money.

Accordingly, to provide micro businesses with the direly needed support, several strategies are suggested like providing businesses with financial incentives and enhancing their operations by connecting them to online platforms.

**C3.1/C4.1. Offer financial incentives to micro enterprises and specialized businesses.**

Micro-scale enterprises and the craft businesses in Karantina must be supported financially to overcome the critical conditions in the country. Firstly, regarding the port blast, notwithstanding the aid received by many businesses, most businesses had to mainly rely on their savings and loans from their social networks: around 27% of the businesses reported utilizing their savings, and 31% relied on money from family, friends, or neighbors. Some businesses even received no aid, such as the mechanic shops in the industrial area. Also, most businesses were not able to access governmental support funds that were channeled through the Chamber of Commerce (CCIA-BML) since more than 66% of the Karantina businesses are not registered in it; let alone that the CCIA-BML issued a time-limited announcement that went unnoticed by many eligible businesses.

Additionally, the fact that 19 of the micro businesses that were surveyed were partially operating, and 5 had already closed, suggests considerable difficulties for the micro businesses to replenish their stocks and cover production costs. And given the combination of the lack of access to information and knowledge about funding opportunities on one hand, and the high barriers to borrowing from financial institutions, especially with the absence of collateral on the other hand, these micro-businesses can barely secure credit. So, to protect these vulnerable businesses, financial support and incentive packages must be designed and made easily available for them. This would help support them in covering pending repairs, compensate them for other costs that are related to the port blast, rebuild stocks, and better withstand the inflation in the prices of key services. Hence, micro businesses would be able to sustain and even upscale their operations, and maintain the business diversity in Karantina, as well as their essential role in generating income, jobs, and cultural productions.



**Figure 26.** Dukkan in Al-Khodor sub-neighborhood. Source: Batoul Yassine, 2020.



**Figure 27.** Another small dukkan in Al-Khodor sub-neighborhood. Source: Weam Haddad, 2022.

**C3.2. Connect micro and specialized businesses with online platforms and services to enhance their operations.**

Many of the owners of micro businesses, especially those who do not have higher academic degrees, rely on conventional tools and methods for managing their businesses. They do not use computers or the internet and, as a result, they cannot benefit from access to e-commerce and online services to buy and sell products. Thus, it is vital to support these businesses and provide them with the skills that are needed to benefit from these technologies, thus, facilitating their commercial transactions, and expanding their outreach to a wider consumer base. This requires capacity building workshops that are tailored for increasing digital literacy, and can be supplemented with the provision of tech support services when needed. Hence, establishing a center that provides guidance, advice, and training for these micro enterprises and specialized businesses would be highly advantageous for their viability and the economic vitality of the area.



**Figure 28.** A car repair shop that has been opening in Karantina for over 10 years. Source: Batoul Yassine, 2020.



**Figure 29.** Another car garage being renovated after the port explosion. Source: Batoul Yassine, 2020.



#### C4. INCREASE THE DIVERSITY AND VITALITY OF THE TRADITIONAL CRAFTS AND MANUFACTURERS IN KARANTINA.

There is a wide variety of economic activities in Karantina that range from industrial manufacturing of steel to micro-scale shops that sell arts and crafts; however, this diversity is threatened as are many culturally vital businesses. This economic diversity in Karantina allows it to attract and cater for different types of consumers and users with different needs. However, manufacturers in Karantina, who work in carpentry, furniture, and tailor-made fabrics bring in additional layers of value. Not only are they income generators, but also their products and particular fabrication processes can be regarded as cultural assets. They spread across Karantina's three sub-neighborhoods, and some of them go back as far as the pre-civil war period, proving their vitality and entrenchment in Karantina. These businesses are mostly micro-scale, which leaves them vulnerable in the face of the more competitive and larger businesses coming into the neighborhood, and their impact is current compounded by the fact that larger businesses adapt better to situations of crisis. Accordingly, the necessity to support these businesses and augment their capacity to withstand these challenges becomes evident. Given that the closure of some of these businesses has already been observed, it is crucial to set strategies that prevent their further decline and, thus, protect the cultural value they produce and economic diversity they foment. These strategies must include providing existing artisans with financial support and forming new generations of craftsmen.

##### C4.1/C3.1

#### Offer financial incentives for micro and specialized businesses.

Refer to section C3.1

#### C4.2 Train a new generation of craftsmen to sustain their crafts.

As per UNESCO, the knowledge and skills of crafts production are part of the intangible cultural heritage (UNESCO, 2003). In Karantina, handicrafts and micro-scale manufacturers working in carpentry, furniture, and tailor-made fabrics incarnate such heritage in their products, methods, and techniques. On another note, the less alienating production process of craft-making relative to mass production adds further value to these practices. Also, the products themselves can reflect certain local qualities that can generate more significance to the consumer. Around these dynamics of value production, a community that is anchored in a local crafts culture is more likely to prosper.

To protect such cultural assets, artisanship and the associated expertise need to be spread and passed onto future generations of craftsmen. This will allow for the sustenance of crafts in Karantina and their longevity across generations. New craft businesses can also grow, reproduce, and enrich this craft culture. And, simultaneously, this strategy can promote these crafts as more people get exposed to them. Therefore, this strategy can be viable through the establishment of a facility that provides space for learning, sharing, and the transfer of knowledge of craft making.



#### C5. SUPPORT THE GROWTH OF PORT-RELATED BUSINESSES.

Port-related businesses used to thrive in Karantina, yet their contributions to its economic vitality, as well as their agility and resilience, vary considerably. The port accommodates around 60% of Lebanon's imports and is a vital economic artery with huge transportation and logistics services for Lebanon and the Gulf region. It naturally resulted in a growth in the number of nearby businesses that are closely tied to its operations, such as freight, logistics, and storage facilities. These would in turn propel a growth in other related businesses like mechanic shops and garages.

For the first category of businesses that are related to shipping and logistics, Karantina is a highly attractive area, since these businesses benefit from its close location to the port and the Charles Helou Highway. Moreover, these businesses took advantage of the typology of the large lots in the industrial area to set up their warehouses and other large structures; for instance, more than 60% of these businesses occupy an area that exceeds 500 sq. m. Five of these businesses are present in the industrial area of Karantina, while the remaining two are in Al-Senegal sub-neighborhood. The port blast and the economic crisis caused severe devastation and disruption to the port's operations, and the repercussions on the port-related businesses were aggravated by the delay in the port reconstruction and the temporary partial operation. While the small to medium size businesses were able to overcome these challenges, repair their structures with savings from their bank accounts abroad, and recover their operations, many of the micro businesses were more negatively impacted by the costs of the repairs, incurred major losses in the number of clients, and even faced partial or total closure. It is also important to note that several businesses, namely the small to medium-sized ones, barely attract clients and visitors to Karantina. Instead, they rely on online communication and dedicate their Karantina branch to store products for customers from the port or to redistribute them to their sub-branches. They also do not employ workers from Karantina but rely mostly on skilled professionals from outside of the area.

In contrast, the other types of businesses that are more rooted in Karantina and secondarily associated with the port are the mechanic shops and garages. These are spread throughout the area and account for 18% of the total number of businesses. They are mostly micro in scale and employ non-skilled workers from the neighborhood. They are strongly connected to the functioning of the above-discussed freight, logistics, and shipping facilities. However, they are more vulnerable to the crises that are taking place in the country. Similarly, several mechanic shops and garages lost their vehicles or other tangible assets from the post blast and were hardly operating; they were not compensated by the Lebanese government or from insurance companies. And more generally, even though these port-related businesses have a similar scope of work, they mostly operate in isolation with no adequate coordination or networking. Therefore, to sustain the agility and capacity of these port-related businesses—and in turn the economic vitality they create they need to be supported, strengthened, and incentivized to network among each other.



Figure 30. A small logistics service that is opening in Al-Senegal sub-neighborhood. Source: Batoul Yassine, 2020.



Figure 31. Key Freight services in the industrial area. Source: Batoul Yassine, 2021.

**C5.1/B5.2/B7.1.****Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses.**

Refer to strategy B5.2

**C6. IMPROVE CULTURAL VITALITY AND LEISURE ACTIVITIES IN KARANTINA.**

Prior to the port blast and the economic crisis in Lebanon, Karantina experienced an influx of new cultural functions with immense potential, albeit with several shortcomings. These functions included cultural, creative, and leisure activities like nightclubs, entertainment venues, art galleries, ateliers, and showrooms. From the survey of businesses in Karantina around 70% mentioned low rent prices as a reason for settling in the neighborhood, and 85% stated that the strategic accessible location was the reason. These two reasons largely explain the increasing number of new cultural functions that constitute around 10% of the businesses in the area. These businesses acted as cultural magnets and attracted people with various interests and from different age groups. Leisure and entertainment venues like BO18 and KED engendered the engagement of younger generations in the area. Similarly, Forum de Beyrouth and the art galleries attracted artists, exhibitors, and visitors from Lebanon and abroad. Such a trend can improve Karantina's connection with the rest of the city and make it attractive to a wider and more diverse set of users. However, this trend was severely disrupted following the port blast. Some of these businesses closed and others are awaiting for compensations for repairs like Forum de Beyrouth and FLYP, while the currently open businesses are facing prospects of closure due to the ongoing economic crisis.

Although these businesses increased the pedestrian flow into the area, enhanced Karantina's connectivity with the outside, and had great potential in invigorating cultural vitality, their direct positive effects on the residents were very underwhelming. Many of these businesses were spatially fragmented and isolated from the local community groups. Most of them do not even cater to the needs of these community groups, be it for their relative expensiveness or incompatibility with the prevalent local lifestyles, nor do they provide residents with employment opportunities. Thus, the residents are left with minimal cultural and recreational venues. They are scarce and limited to 3 coffee shops, 1 computer gaming shop, 1 hookah store, and 1 Karting training track. Additionally, public spaces are either inaccessible or compromised due to their militarization, the encroachment of trucks, pollution, and mismanagement. Hence, most of the local cultural practices are confined within residential spaces or workplaces and limited to everyday socio-spatial practices. Given these problems, it is necessary to enact strategies that activate open spaces in Karantina culturally and economically and attract designers to work in the and engage with the local community groups.

**C6.1. Activate the open spaces in Karantina to host occasional, weekly, monthly, and annual cultural and economic festivals.**

The weakened state of cultural practices that are currently available for the Karantina residents suggests a need for activating and culturally animating open spaces in the area. There is no shortage of open spaces in Karantina, especially with the large number of public lands that are owned by the Municipality of Beirut or the government. However, as was explained in the strategic objective D1, most of these lands are inaccessible, undeveloped, underserved, or militarized.<sup>13</sup> Furthermore, the degraded physical and environmental qualities of the public domain discourage the usage of open public spaces. For example, strategy E3.1 discusses how trucks occupy and damage streets, sidewalks, and other public spaces. Consequently, as was mentioned in strategic objective D3, most of the residents of Karantina avoid using these spaces in their free time.

<sup>13</sup> Other restrictions on the public domain are further elaborated in strategies B4.1 and B4.8.

Thus, in addition to improving the conditions of these spaces, the public authorities must be actively animating them with cultural events in Karantina. The events can include festivals, fairs, souks, artistic installations, and others. They can also be hosted occasionally, weekly, monthly, seasonally, or annually. While these kinds of events appeal to people from outside Karantina, they can also be popular and accessible to the Karantina residents and be conceivably inclusive of their cultural practices and lifestyles. This strategy translates to the following action plan: establish a unit in the Municipality of Beirut in partnership with the cultural sector to organize and promote cultural events in Karantina.



**Figure 32.** The military playing courts in the municipal lot on the Charles Helou Highway. Source: Batoul Yassine, 2021.



**Figure 33.** The interior of the Karantina public park. Source: Abir Cheaitli, 2021.

**C6.2. Engage artists and designers to work, network, and complement the existing crafts and the activities of industries in Karantina.**

The trend of artists and designers seeking Karantina as a destination prior to the port blast and the economic crisis was recorded in the research. Such a trend was reversed upon the port blast and needs to be revitalized as a catalyst of an inclusive form of cultural development. Currently, most artistic practices in Karantina are commercial or limited to private homemade crafts; thus, it is rare for them to act as a collective shared practice that brings people together through communal gatherings and exhibitions. While artists from outside the area were able to come together within the Karantina art galleries—two of which were still active in 2021, Sfeir Gallery and KED—as well as the Forum de Beyrouth, their exchanges could have been more intense and fruitful since Karantina was able to provide a space to incubate artistic practices.

Hence, this strategy aims to nurture cultural production and create networks between designers that can transform their practices to become more communal and sustainable on the long term. At the same time, local artists and artisans from Karantina, must be integrated into this potential community of artists, to teach, learn, share, and promote their artistry and craftsmanship. To this end, a creative design lab or hub can be established in Karantina.

## 8. OBJECTIVE D

PROMOTE A SUSTAINABLE DEVELOPMENT STRATEGY THAT IS PARTICIPATORY AND PHASED OVER A PERIOD OF TIME.

“ I would love to see Karantina much better than this, in terms of buildings, streets, infrastructure, and public places<sup>14</sup>

بحب شوف الكرنطينا أحسن من هيك بكثير من ناحية الابنية والشوارع، وبنى تحتية، والأماكن العامة.

“ I see Karantina a well-developed area socially and culturally, and its streets are beautiful and complete streets with health and educational services<sup>15</sup>

أرى الكرنطينا منطقة متطورة حضارياً وإجتماعياً وثقافياً، وشوارعها أجمل ومتكاملة في الخدمات الصحية والتعليمية.

Historically many impediments stood in the way of the development of Karantina. After the First World War, Karantina sheltered refugees and migrant workers in informal settlements that covered a significant percentage of the area. Infrastructural facilities in Karantina (the quarantine station, the train station, the port, and gas works) preceded residential growth. Considering this reality, all urban plans that were proposed at the time envisioned Karantina as an industrial area. During the 20th century, although the residential sub-neighborhoods were developed, Karantina mostly remained an area of informal settlements and industrial facilities. During the civil war, in 1976, Karantina became the site of a massacre after which many of the area's residents were displaced, all informal settlements were cleared up, and several buildings were demolished. From that time onwards, and due to its geographical location, Karantina became a permanent base for military operations. The militias' occupation of private lots during the war was partially transferred to the Lebanese Army. The army still occupies private and public land in Karantina and uses them as bases. After the civil war, the industrial sector showed steady improvement, especially in the last decade. While growth in the commercial sector fluctuated with national trends, residential development remained relatively stagnant, and even showed signs of decline. Currently, the zoning regulations allow for mid-density developments in comparison with other areas in Beirut. Yet, these regulations do not specify development by use.

Until today, Karantina has not shed the stigma of a marginalized, neglected, and under-serviced area weighed down by a traumatic past. Though this stigma had a negative impact on development, which still prevails until today, it spared Karantina from the large-scale of uncontrolled developments that other parts of Beirut had witnessed. Although this protected Karantina from such developments, the local community groups were sidelined from sharing their views on the area's future. During the last decade, several galleries and leisure venues opened in Karantina. This emerging trend contributed to the cultural diversity of the area. Because of the port blast, this trend came to a halt, and in some cases, its impacts were reversed. Other factors also impacted the development potential in Karantina including accessibility, environmental conditions, and poor infrastructure. In sum, the overall quality of life in Karantina was negatively impacted because the area lacked equitable and inclusive development opportunities. Considering the vision of Karantina as a developed area "منطقة متطورة" with adequate services "خدمات ملائمة" and whose residents are empowered "مجتمع متمكن", the aim is to promote sustainable and participatory developments that are phased over time.

<sup>14</sup> M.J.K. (2020- December-12), (Yahya Al-Saeed - Interviewer)

<sup>15</sup> M.M.I. (2020- December-29), (Hassan Ali Aswad - Interviewer)

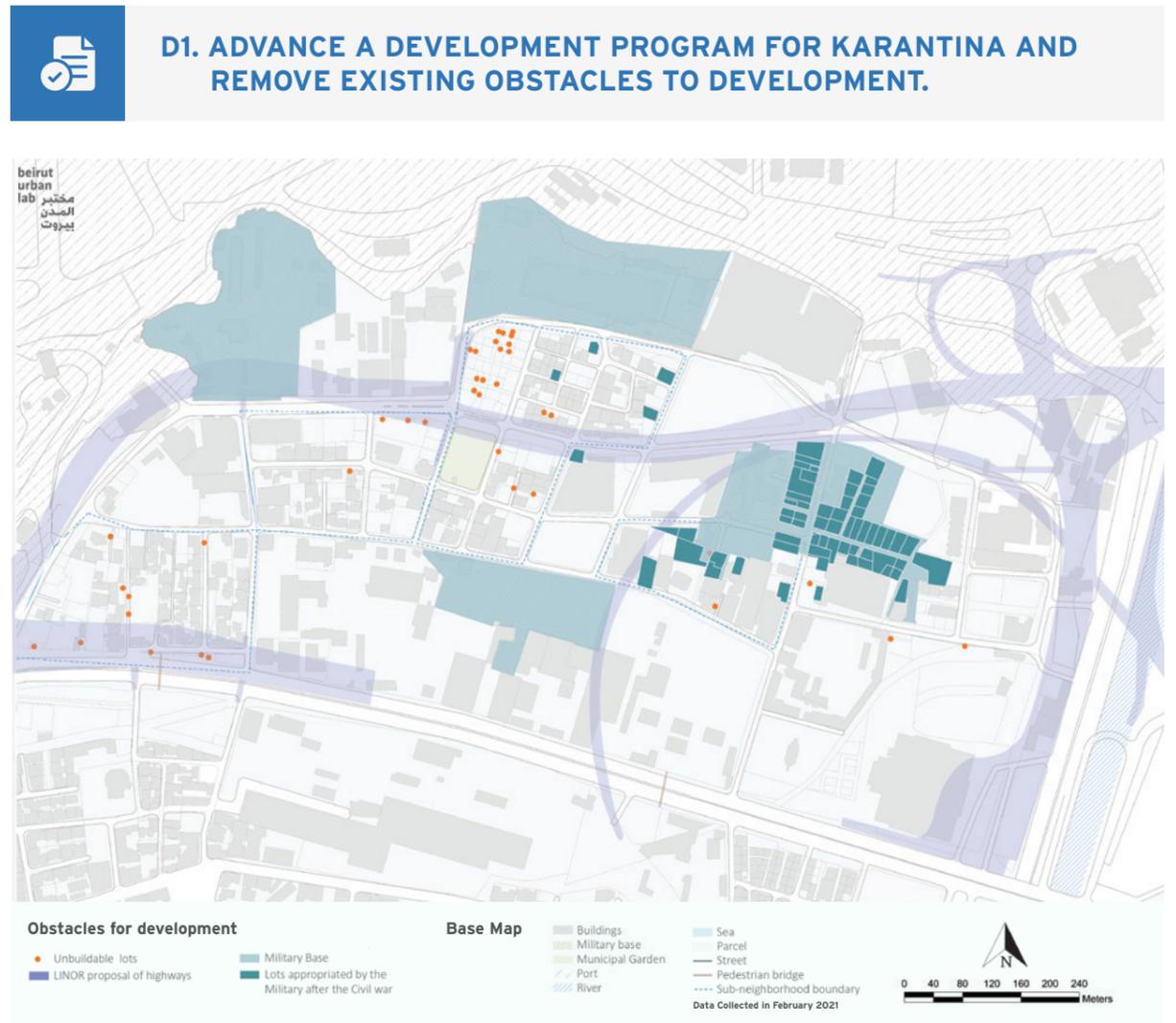


Figure 34: Restrictions on development in Karantina. Source: The Beirut Urban Lab, 2022.

Despite the availability of land in Karantina, the unbuilt pieces of land are made up of large and inaccessible sections of public properties and small lots that are not constructible according to the zoning law. The obstacles to development in Karantina can be divided into those affecting public properties or private lots. The diagnosis report showed that large lots are owned by the Municipality of Beirut (the northern section of the old train station ~ 9 ha, slaughterhouse ~ 3 ha) or the government (old quarantine station 3.4 ha) and are underserved or occupied by the military. These lots have a potential for redevelopment to improve the public domain and serve the residents of Karantina. The Maronite Waqf also has significant ownership rights, especially in the industrial area. Given these rights, the Waqf has the potential to play a more active role in inducing local development. Currently, the largest Waqf owned lots are being developed by car dealerships.

The diagnosis report showed that the residents of Karantina did not benefit from law number 322/1994 which gave the displaced people during the civil war exemptions to rebuild and repair their houses. Many small unbuilt lots still have multiple shareholders, a condition that complicates their pooling or development processes. In Karantina, there are 42 lots that are classified as unbuildable since they do not meet the minimum required dimensions and areas as per the zoning law. The data from the answers to the questionnaires showed that the highest concentration of unbuildable lots was in Al-Khodor sub-neighborhood where many old buildings were destroyed during the civil war. The Lebanese army occupies several private lots in the eastern part of Al-Khodor (along Al-Khodor Street) whose buildings were demolished during the civil war.

The military bases prevented landlords and residents from returning to their buildings or developing their lots since the civil war. Additionally, there are other private lots that cannot be developed because of the suspended LINORD project. Of the three sub-neighborhoods, Al-Khodor is the most affected by these conditions. Thus, it is essential to remove the impediments and unleash development to the benefit of the landowners and the residents in general. To meet this objective, a number of strategies were identified to remove current obstacles and facilitate development. The strategies are to release frozen, militarized, and unbuildable privately owned lots, facilitate the development of new housing units, and subdivide and integrate the municipal lot to be redeveloped in Karantina.

### D1.1/A1.2/A4.2

#### Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.

Refer to strategy A1.2

### D1.2/B4.2

#### Subdivide the municipal lot and integrate it into plans for the development of Karantina.

Refer to strategy B4.2



## D2. SAFEGUARD KARANTINA AGAINST THE THREATS OF GENTRIFICATION AND DISPLACEMENT.

After the port blast, Karantina was placed 'under study' for two years by law number 194/2020, thus, temporarily freezing any demolition or development activities. Placing an area under study, however, does not result in a process of long-term urban recovery and increases the vulnerability of tenants for the benefit of land and building owners. Before the port blast, Karantina witnessed the arrival of different galleries for arts and crafts and leisure venues such as pubs, restaurants, and urban parks. The zoning law in Beirut does not specify development by use and leaves the potential of businesses taking over residential areas an open and unregulated issue.

After the duration of the law ends, a potential wave of gentrification may occur in Karantina. Its vulnerable state may attract real estate developers to replace old buildings with gated ones and, as a result, displace residents and alter the socio-spatial fabric of Karantina. Thus, the aim is to safeguard Karantina against gentrification and displacement. This is achieved by regulating new developments in the residential and industrial areas of Karantina.

### D2.1. Regulate development in the residential and industrial areas of Karantina.

Karantina has a complex land use pattern, with distinct yet overlapping zones that vary in density. This pattern and the transformation trends within it have a major influence on development. The descriptive memory report showed that development or re-development is not possible in some of the vacant lots and buildings. As was presented in the diagnosis report, the landowners of the unbuildable lots who attended the thematic focus group discussions mentioned that, unless the zoning law is amended, they prefer to sell their lots to a developer who can afford the administrative costs of lot pooling. Although this position may be widespread, the pace of pooling small lots in Karantina is still slower in comparison to other areas in Beirut. Developers in Beirut have not been active in acquiring vacant, small, or unbuildable lots in Karantina. Yet, because the zoning law does not deal with land use regulations, there are several businesses that are acquiring residential apartments for office use. This trend inside residential areas is undesirable and impacts the affordability of housing units and the integrity of the social networks.

Alterations to use of residential units is mostly occurring in Al-Saydeh sub neighborhood in which 9 buildings had their ground floor re-purposed from residential to office space. 6 buildings in Al-Senegal had their ground floor uses altered, and 2 of the buildings witnessed the same change in its upper floors. This pattern was also observed to a lesser extent in Al-Khodor sub-neighborhood. Additionally, a 17.4% vacancy rate was recorded in Karantina that increased because of changes in land uses from residential to offices. This is due to the preferences of landlords to rent out to businesses instead of residential use to collect higher rents. Therefore, some apartments end up vacant for long periods of time.

Furthermore, from an environmental perspective, there are industrial businesses that cause noise and air pollution, thus, have multiple impacts on residents and making the area less appealing for development. Therefore, it is important to revisit the planning law to regulate land uses and development and protect the integrity of the residential sub-neighborhoods. This strategy can be possible by reforming and elaborating the planning law or proposing an addendum to it that guides and regulates existing and future land uses and developments.



## D3. IMPROVE THE OVERALL QUALITY OF THE BUILT ENVIRONMENT.

Karantina is characterized by a dilapidated urban environment. Historically, Karantina witnessed several traumas that damaged its built fabric, specifically its buildings. Two of the major incidents include the 1976 massacre and the 2020 port blast, not to forget the many years of deterioration due to neglect and the lack of rehabilitation and development plans. Many buildings were abandoned, demolished, or highly damaged during the civil war, especially in Al-Khodor sub-neighborhood. Limited compensation was offered to the residents of Al-Khodor upon their return in 1993. Although the municipality has the responsibility of monitoring building conditions as prescribed by law, this requirement is seldom enforced. This meant that most buildings in Karantina, many of which are rented or owned by low-income families, were left to decay. However, some businesses were able to keep up with building maintenance, including Sleep Comfort and various storage hangars that service the port activities.

After the port blast, the conditions of many buildings became worse, and a few buildings were in danger of collapsing. Since a limited amount of compensations were distributed by the army to the affected households, many NGOs (Non-governmental Organizations) mobilized to help in the renovation of the damaged buildings. While Al-Saydeh sub-neighborhood largely benefited from these efforts, less investment was put into the other sub-neighborhoods. Some buildings were properly rehabilitated and other repair works only masked the deteriorated condition of some buildings. As was mentioned in the interviews, many residents in Al-Khodor sub-neighborhood voiced their complaints about the substandard quality and incomplete repair works.

The recovery efforts were not limited to repairing buildings but also dealt with the public realm. Public spaces are a vital part of everyday urban life. The diagnosis report showed that 50% of the households in Karantina were not satisfied with the quality of the existing public and shared spaces and 72% avoided using these spaces in their free time. Open spaces - including sidewalks and streets - are either deteriorated or inaccessible because of the military encroachment on public space. The limited number of streetlights, the poor condition of roads, and their blockage make the open public realm uninviting the user. To promote sustainable development, it is necessary to make sure that the physical conditions of buildings and public spaces are up to the standards. Thus, the aim is to improve the overall quality of the built environment. This is achieved by providing a legal enforcement measure for building rehabilitation, channeling funds through donors to vulnerable landlords for building renovation, and adopting an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.



**Figure 35.** The degraded quality of the sidewalks in Karantina.  
Source: Abir Cheaitli, 2021.



**Figure 36.** Vacant lots and dead ends in Karantina.  
Source: Abir Cheaitli, 2021.

### D3.1/E1.3 Provide a legal enforcement measure for building rehabilitation.



**Figure 37.** Poor quality of a residential building in Karantina.  
Source: Batoul Yassine, 2021.



**Figure 38.** A structurally damaged residential apartment in AL-Khodor sub-neighborhood by the port blast.  
Source: Batoul Yassine, 2021.

The diagnosis report counted 364 buildings in Karantina. Many of these buildings require extensive internal and external renovation due to deteriorating facades, ceilings, walls, and columns, leaking pipes, old structures, and broken windows and roofs. The condition of some of these buildings was further exacerbated by the port blast. Damage to the structure created dangerous and hazardous living conditions. Numerous apartments suffered from high humidity levels, which had an impact on the health and overall well-being of the residents. Article number 74 of legislative decree number 118 /1977 (the municipal law) states that in Beirut the governor is responsible to “demolish dilapidated buildings and [or] repair them at the expense of their owners in accordance with the provisions of the Building Law” - هدم المباني المتداعية . وإصلاحها على نفقة أصحابها وفقاً لأحكام قانون البناء. However, the requirements of this article are seldom applied, and the procedure, standards, and assessment process should be revised.

A considerable number of buildings in the areas that were affected by the port blast, including Karantina, have heritage value. The impacted areas received a thorough damage assessment and heritage building classification by the Directorate General of Antiquities (the DGA) following the port blast. In Al-Saydeh sub-neighborhood, the lead actor (Offre Joie) had to coordinate with the DGA on the restoration specifications, such as building materials and finishes. The DGA also played a role in the repair of some of the destroyed heritage buildings. Article number 3 of law number 194/2020 requires the Ministry of Culture to submit a restoration plan for buildings with heritage value. The law did not explicitly address the need for heritage protection in the areas that were affected by the port blast, especially with the absence of a clear heritage designation and definition criteria, including what should be preserved or renovated. The absence of an effective heritage protection policy led to the demolition of some heritage buildings in Karantina.

Thus, providing legal enforcement measures for building rehabilitation should help improve the quality of the built environment. This is possible through a monitoring and municipal taxation system on buildings that fail regular maintenance and upkeep to ensure public safety, security, and limit overcrowding.

### D3.2/E1.2

#### Channel funds through donors to vulnerable landlords for building renovation.

Real estate speculation in Karantina is still limited compared to other areas of Beirut. However, a wave of real estate developers may seek to purchase a substantial number of deteriorated and demolished buildings due to the port blast. The descriptive memory report showed that many residents in Karantina welcomed the collapse of their buildings that will enable them to sell their properties, especially that renovations are costly and beyond their financial capacities.

In most cases, renovating buildings has far proven to be a challenge. The savings of the owners were limited, and the help provided by NGOs and INGOs (International Non-governmental Organizations) were in many cases uneven and badly implemented. To address these inconsistencies, it is necessary to channel funds through donors to vulnerable landlords for building renovations. Thus, to achieve this strategy it is paramount to follow the action plan of creating a registry platform to match donors, NGOs, and construction companies with building units that need additional rehabilitation through a clear system of application, prioritization, and awards.

### D3.3/B8.1/E5.1

#### Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.

Refer to strategy B8.1



## D4. IMPROVE THE LOCAL INFRASTRUCTURAL SERVICES AND AMENITIES.

The diagnosis report showed that Karantina suffers from dilapidated infrastructural networks and lacks public amenities and services. This has made the area less appealing to new developments and limited its capacity to host new constructions. 89% of the answers to the household questionnaire stated that for people to stay in Karantina, it is a priority to have a proper and functioning infrastructure (sidewalks, streets, and sewage networks). On average, almost all households in Karantina have access to basic sanitary facilities. The area does not suffer from a shortage in the supply of daily water, yet the sewage network requires significant maintenance. During the winter, the neighborhood is commonly flooded with wastewater.

Karantina hosts a diverse range of vegetation and trees, of which most cover public spaces. However, the existing greenery is not sufficient to purify the air quality given the presence of industrial activities, truck traffic, and private generators. Private diesel generators, as well as the generators of commercial facilities, are placed on sidewalks, streets, and in residual spaces.

Many of the generators are not only encroaching on the public domain, but are also close to residential units, exposing the residents to elevated levels of air pollution and risks of fires. After the port blast, Electricité du Liban provided electricity for 24 hours a day. This was for a couple of months to support repair works. Since then, daily power cuts are as common as in other areas in Lebanon, making private generators the only available source of electricity. As a result, elevated levels of pollution and congestion have rendered Karantina an unhealthy place to live.

The diagnosis report showed that Karantina lacks key services such as transport networks, schools, teaching centers, sports and recreational facilities, and public spaces. Although a public school was constructed through a Spanish funding on the municipal lot in Al-Saydeh sub-neighborhood, most of the students are from Karantina. Furthermore, some NGOs created children programs such as Borderless which provides an activity program for children; however, this program remains limited in its scope and user groups. Karantina also hosts a governmental hospital, but it lacks affordable medical clinics. Many residents are not able to benefit from the hospital's services due to their financial circumstances. The area also lacks sports and recreational facilities. The urban park FLYP, which was destroyed by the port blast, used to welcome people for a fee. The only standing facility is the public park, which remains closed.

To lay the groundwork for sustainable development, one must make sure that the infrastructural networks and basic services are in place and running. Tackling the infrastructural problems in Karantina should consider the existing infrastructural networks and find ways to upgrade their performance. Thus, the aim is to improve the infrastructure and services in Karantina. The strategies proposed to attain this objective are to upgrade the performance and management of the existing infrastructural network to match new technologies and density demands, and to introduce services that are lacking in the area like schools, sports, and affordable clinics.



**Figure 39.** Informal electrical hook-ups on an electrical pole. Source: Batoul Yassine, 2021.



**Figure 40.** Waste water on streets in AL-Khodor sub-neighborhood. Source: Batoul Yassine, 2021.

#### D4.1/E4.1. Upgrade and improve the performance and management of the existing infrastructural networks to respond to density demands and adopt emerging technologies.

The existing infrastructure of Karantina requires upgrading in order to protect the environmental assets of the area, improve the overall quality of life of the residents, and increase the equity in the distribution of services. All sub-neighborhoods meet a basic level of needs: residents have food, water, shelter, and electricity. Albeit in the case of the latter, the provision of these services relies on a dual system between the government and backup generators. The answers to the household questionnaire show that almost all residents have EDL subscriptions across all sub-neighborhoods. When it comes to private electricity subscriptions it differs from one neighborhood to the other: 93% of the households in Al-Saydeh have electrical subscriptions to private generators, 73% in Al-Senegal, and 42% in Al-Khodor. These subscriptions are usually for the 19 generators that are found across the area. Additionally, most households reported that they have water subscriptions; 99% in Al-Senegal, 98% in Al-Saydeh, and 91% in Al-Khodor. However, some of the interviews showed that some households benefit from the subscription of their neighbors. It was also mentioned during the interviews that the main concerns of the residents were the old sewage system and the poor condition of the public spaces in Karantina.

Hence, to improve the infrastructure and public services in Karantina, the performance and management of the existing infrastructural network needs to be upgraded to match new technologies and density demands. To do this, a development plan for Karantina that incorporates the Municipality of Beirut should be designed to provide, upgrade, and maintain the municipal infrastructure. This can be done by directing public investments to a point where the municipal infrastructure is capable of meeting present and future demands with new technologies, evaluating the effectiveness of the current network, and creating an appropriate monitoring and evaluation process for infrastructure. Accordingly, the above strategy is translated into the following action plans: design and implement an integrated sewage and water management plan and design and implement alternative energy and greening solutions.

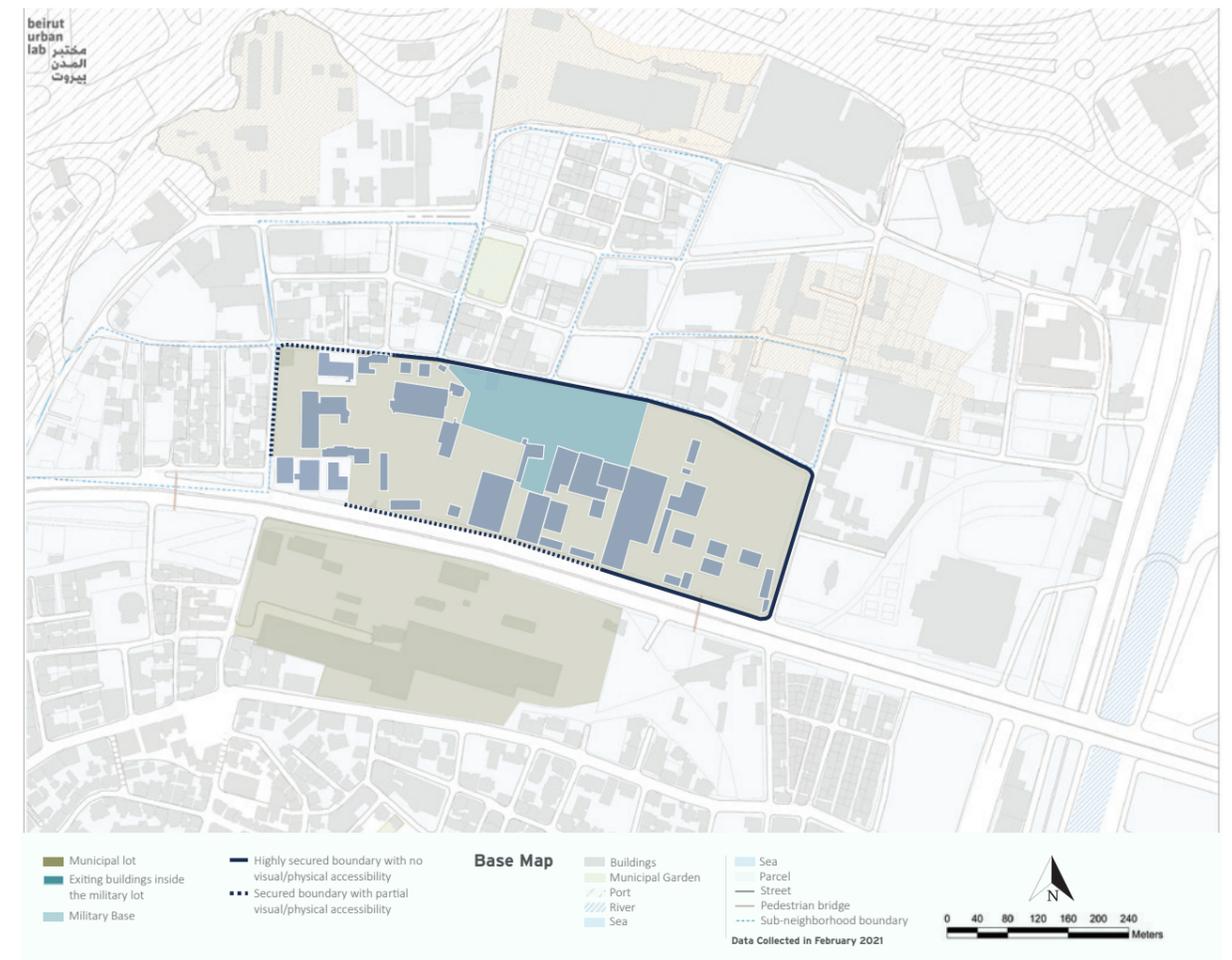
#### D4.2/A3.1

#### Introduce services and facilities that are lacking in the area, such as schools, sports, and affordable clinics.

Refer to strategy A3.1



### D5. IMPROVE CONNECTIVITY AND ACCESSIBILITY TO KARANTINA.



**Figure 41:** A map showing the impact of the Charles Helou Highway on the large municipal lot that in turn is acting as a buffer area separating Karantina from the surrounding. Source: The Beirut Urban Lab, 2022.

As was elaborated in strategic objective B1, due to several factors and historic events, Karantina stands today as an isolated island in relation to its immediate surroundings and the rest of Beirut. The historic link with Mar Mikhael Church and Al-Khodor Mosque, two landmarks for the residents of Karantina, is now limited to two pedestrian bridges over Charles Helou Highway. The walled off municipal lot greatly restricts any link to the south, while the sea and port are practically inaccessible. Internally, Karantina suffers from an enclaved condition socially and spatially. It is also heavily impacted by the presence of four military bases that restrict accessibility to sidewalks and streets.

Additionally, transportation networks in Beirut bypass Karantina altogether. The area is not connected to the rest of Beirut, and this includes a public transportation system and the informal transportation networks. To commute outside Karantina, residents must walk to the highway to take a bus or a taxi. The existence of port gates in and around Karantina and, subsequently, the traffic on Charles Helou Highway, render entering this area undesirable.

The area's economic vitality is also impacted by the enclaved spatial condition. This is despite the fact that several economic magnets, including the fish market, the slaughterhouse, and the public market are located at the northern edge of Karantina. The downside is that these magnets are located well beyond the residential areas, and the latter two are currently closed. Thus, the aim is to improve connectivity and accessibility to Karantina. This is achieved by re-stitching Karantina with Mar Mikhael to the south through a pedestrian network across the existing highway and increasing the permeability of the edge with the city through the highway and the large inaccessible municipal lot. This can also be achieved by extending the sea promenade from the Beirut Central District to Karantina, advocating for public access to the sea through the port, establishing points of connection with city-scale and wider mobility modes (buses, taxis, etc.), and removing the restricted access to the public domain.

### D5.1/B1.1 Re-stitch Mar Mikhael with the southern side of Karantina through a pedestrian network across the highway.

Refer to strategy B1.1

### D5.2/B1.2 Increase the permeability of the edges of Karantina with the city.

Refer to strategy B1.2

### D5.3/B2.2/B4.3 Extend the sea promenade from the Beirut Central District to Karantina.

Refer to strategy B2.2

### D5.4/B2.3 Relink Karantina to the sea through the port.

Refer to strategy B2.3

### D5.5/B3.1 Establish points of connection with city-scale and wider mobility modes (buses, taxis, etc.).

Refer to strategy B3.1

### D5.6/B4.1/E5.2 Remove the access restrictions to the public domain.

Refer to strategy B4.1



## D6. ENGAGE THE RESIDENTS OF KARANTINA IN LOCAL DEVELOPMENT PROGRAMS AND LONG-TERM SHARED VISIONS.

In Lebanon, most plans for development are characterized by a top-down approach, and this also applies to Karantina. Karantina was and still is home to marginalized and vulnerable groups including low-income Lebanese families, refugees, and migrant workers. Excluding the residents from planning decisions results in plans that do not consider some of the more serious issues on the ground and the major demands of the different community groups. Following the port blast, the marginalization of people was made worse by the lack of a strategy for recovery and reconstruction. Households and businesses in Karantina mostly relied on their social networks and savings for repairs. Aid from NGOs and INGOs was limited and unevenly distributed among the residents. Due to their limited resources, the residents became trapped in an imposed process for the reconstruction of their homes and businesses that increased their vulnerability.

A strategy for urban recovery was absent from law number 194/2020. The law only addressed the rehabilitation of areas and buildings that were damaged by the port blast. The residents were not consulted or included in the drafting process of the law nor were they represented in the Coordinating Committee for the Survey of Damage, Relief and Compensation. However, some assessments gave room for the residents to express their concerns and explain their vision for the area. Many answers to the household questionnaire mentioned that residents have shared concerns for housing affordability, career possibilities, and access to health care facilities and public spaces. Most of the answers emphasized the significance of maintaining the affordability of Karantina and improving the infrastructural and public services. They also emphasized the importance of having access to job opportunities over financial aid. One of the residents stated: "We don't need money, we have dignity, we are not beggars, we urge for job opportunities so we can recover." This shared vision is compromised in the absence of a clear strategic development plan for Karantina. Any inclusive and sustainable strategy will be fundamentally challenged by the current regulatory framework, the security measures, and the suspended infrastructure projects.

It was evident in the research that the current measures do not ensure a long-term inclusive urban recovery. The latter can be achieved through engaging the different community groups in the planning and decision making process. The aim is, therefore, to engage the residents of Karantina in local development programs and in crafting long-term shared visions. Thus, to achieve this objective, it is necessary to adopt a strategy that empowers and strengthens the representation of the community groups in the decision making processes.



**Figure 42.** A co-design workshop held by the Beirut Urban Lab in AL-Khodor sub-neighborhood towards designing a community space. Source: Batoul Yassine, 2021.



**Figure 43.** A town hall meeting held by the Beirut Urban Lab in the public park to craft a vision for Karantina with the community groups. Source: Batoul Yassine, 2021.

### D6.1 Empower and strengthen the representation of different community groups in decision-making.

It is crucial to understand that each sub-neighborhood in Karantina has its social, economic, and cultural layers that correspond to the residents' daily practices. The key here is to build strategic and social networks that can empower people in Karantina and promote an environment of equal participation. The establishment of community facilities and landmarks can mitigate social fragmentation, enhance a sense of belonging, and promote cultural diversity across the area. The sub-neighborhoods need to be better integrated as a whole and provided with equal access to the resources they require to engage in the decisions that impact their lives.

The goal is to create a people-centered, socially just, and place-specific urban recovery and development. The involvement of local community groups to advocate for their local needs and interests is an important incentive to take collective action on local issues with investors and government departments. This goes hand in hand with building communal networks and building local capacities. This network is central to an urban recovery that goes beyond physical repair to sustain the development of the area and the wellbeing of the community. Therefore, the representation of the community in the decision-making process needs to be empowered and strengthened. This strategy can be implemented through a neighborhood committee that participates with the different stakeholders in development plans.

## 9. OBJECTIVE E

### IMPROVE THE OVERALL QUALITY OF THE URBAN ENVIRONMENT IN KARANTINA

“ I wish for a future that has a clean environment, without bad smells and wastes<sup>16</sup>  
أتمنى مستقبل بيئية نظيفة، من دون رائحة كريهة ونفايات

“ I hope that Karantina has a space for elderly people like me, and a space of entertainment for children so they do not play on the streets anymore<sup>17</sup>

بتمنى إنه يصير في الكرتينا مكان للكبار بالسن يلي متلي ويروحوا يرفهوا عن نفسهم في، وإنه يصير في مكان ترفيهي للأولاد لما يضلوا بالشارع

The preliminary findings in the descriptive memory report noted that Karantina suffers from a dilapidated and polluted urban environment. The findings were further verified by the in-depth data collection and analysis of the strategic diagnosis report. The report showed that this was caused by multiple existing conditions and practices, including the operations and management processes.

The existing natural and infrastructural elements that border Karantina at its peripheries such as the Beirut River, the Charles Helou Highway, and Port of Beirut contribute to high emissions and pollution levels from the noise and air quality that directly impact the quality of the urban environment in Karantina. Internally, some uses and practices, such as the old slaughterhouse and the solid waste management facilities, have contributed to the spread of malodorous smells. This is in addition to the ongoing waste landfill that was supposed to be a temporary solution to the waste crisis in 2015 and has exceeded its capacity after the port blast and the temporary closure of the waste management facility in Karantina. Therefore, piles of waste are accumulating without any sorting process and are being openly burned.

At the level of municipal services, the area suffers from an outdated infrastructure and poor municipal services like electricity, water, sewage, and waste management that are not enough to meet the increasing needs of people in Karantina. The status of the public spaces (vacant, residual, and leftover spaces) has deteriorated because of the practices by cargo trucks, military vehicles, the lack of maintenance, and street littering. The streets and sidewalks are deteriorated and unsafe because of the unregulated activities of the trucks that circulate the streets in Karantina and the transportation of cargo and goods to and from the port.

Public spaces are also affected by military occupation and the use of military trucks, encroachments, and restrictions on accessibility. In terms of the physical conditions of the built environment in relation to structural forms of the buildings, there was a notable level of abandonment and decay of buildings because of the restrictions on developments and the local regulations. Responding to the vision for an 'environmentally conscious "نظيفة بيئياً" urban setting and better environmental management, the aim is to improve the overall quality of the urban environment in Karantina.

<sup>16</sup> A.S., (2020- December-24), (Mohamed Amsha - Interviewer)

<sup>17</sup> D.A., (2020- December-23), (Yahya Al-Saeed - Interviewer)



## E1. IMPROVE THE PHYSICAL QUALITY OF THE DAMAGED AND DEGRADED BUILDINGS.

The physical conditions of buildings greatly impact the quality of the urban environment. It was evident from the strategic diagnosis that there is a concerning number of degraded and abandoned buildings in Karantina. The data showed that out of the 252 buildings that were surveyed, 5% were fully demolished due to the port blast, 22% were in a degraded physical condition, 34% were in an average condition, only 22% were in a good condition, and 17% were being renovated. The answers to the questionnaires also showed that 30% of the buildings were fully abandoned. The degradation of the quality of buildings resulted from the aftermath of the civil war, the neglect of owners and their inability to perform maintenance work, and the port blast that exacerbated their deteriorating physical condition.

Poorly maintained and unused buildings are characterized by concrete cracks, decaying roofs, clogged sewer pipes, and broken sprinklers. They are, therefore, sources of contamination that produce mold growth and toxic fumes. They can cause leaks from heating systems, pipes, and appliances, as well as any chemicals or lubricants that are stored on site, therefore, contaminating the air, the groundwater, and the soil at the level of the building itself as well as the surrounding buildings. In addition, the poor physical condition of the buildings contributes to the decline in property values and disincentivizes development.

With the aim of enhancing the physical conditions of the buildings and mitigating environmental risks to create a safe environment for the users, the following strategies are proposed: offer financial packages and incentives to support the landlords to rehabilitate their residential buildings and maintain the affordability of the stock of housing units, channel funds through donors to vulnerable landlords for building renovations, provide a legal enforcement measure for the rehabilitation of buildings, and regulate the density per residential unit to counter overcrowding.



Figure 44. Abandoned buildings in Karantina. Source: Abir Cheaitli, 2021.

### E1.1/A8.2

**Offer financial packages and incentives to support the landlords in rehabilitating their residential buildings and maintain the stock of affordable housing units.**

Refer to strategy A8.2

### E1.2/D3.2

**Channel funds through donors to vulnerable landlords for building renovations.**

Refer to strategy D3.2

### E1.3/D3.1

**Provide a legal enforcement measure for building rehabilitation.**

Refer to strategy D3.1

### E1.4/A8.1

**Regulate the density per residential unit to counter overcrowding.**

Refer to strategy A8.1



## E2. REDUCE AND CONTAIN HAZARDOUS WASTES AND HARMFUL EMISSIONS.

Lebanon lack of a comprehensive solid waste management strategy, and this puts at risk many of the country's environmental assets and natural resources, causing significant environmental and public health problems. Since 1994, 'Lebanon's waste management policy has consisted of implementing a series of emergency plans, each partially and poorly executed, and extended until a new crisis emerged. Devoid of any measures to move to long-term, sustainable planning, these local emergency fixes to the lingering waste crisis have incurred high financial costs for citizens as well as negative environmental, health, and safety impacts' (Khalil, 2022).

In addition to the solid waste landfill in Bourj Hammoud, another temporary solid waste landfill is found in Karantina. In 2015, after public officials closed Lebanon's primary landfill in Naameh, the governor of Beirut contracted the company SUKLEEN to store garbage in Karantina on a site across the Bakalian Flour Mill. The solid waste landfill in Karantina was supposed to be a temporary solution for the 2015 trash crisis. The governor of Beirut vowed that the trash will be removed once an alternative location was found, but until now, the landfill is still open. After the port blast, the waste management facility in Karantina was heavily damaged and temporarily closed; therefore, unsorted waste was accumulated without any proper treatment in the landfill. Furthermore, the lack of a comprehensive waste management plan for Greater Beirut and beyond has affected the Beirut River that is an infrastructural element that borders Karantina to the south. Throughout the years, the degradation of the Beirut River was the result of polluting activities; many local companies used the stretch of the river and its immediate surroundings as dumping sites for industrial and slaughter waste. Therefore, to reduce and prevent emissions and hazardous waste, the following strategies are proposed: regulate the management of the existing waste and clean and green the Beirut River corridor.

### E2.1 Regulate the management of solid waste.

The answers to the questionnaires showed that around 165 households complained about repugnant smells from the closed waste management facility and the existing landfill, and they described it as unbearable. They were increasingly worried about the smoke from the open burning of garbage and its impact on their health and well-being. However, the accumulated waste in the area includes construction and demolition waste (C&DW) from the port blast and the reconstruction efforts after the blast. Piles of rubber were being dumped on the municipal lot number 1343 but also on the municipal lot that was reserved for the new slaughterhouse. According to the UNDP's assessment report (2020), the volume of the C&DW from the port blast itself and the potential demolition activities in Beirut (excluding the clearance of the Port of Beirut Port) was estimated at 657,386 sq. m. The report also mentioned that asbestos, known to have a carcinogen risk, was found in damaged structures and rubble piles that were not disposed securely (UNDP Lebanon, 2020).

Immediately after the port blast, UN-Habitat launched a project called 'Rubble to Mountains' to "Support the proper management of Beirut Port explosion generated waste by reusing construction and demolition (C&D) and glass waste in quarry restoration and the production of useful city-scape items for Beirut and coordinating the recycling of all recyclable waste" (UN-Habitat, 2021). The governor of Beirut provided the project with a permit to limit the sorting, storing, and crushing operations to a lot next to the Bakalian Mills from the port site, plot number 1343, for 2 years. However, the project has been delayed due to the pandemic lockdowns, the absence of a government since August 2020, and the discovery of asbestos in the ruins. This delay is putting at risk the quality of the urban environment and the public health. Hence, the strategy aims to regulate the management of the existing waste through the following action plan: design and implement a solid waste management plan.



**Figure 45.** Piles of wastes dumped at the waste management landfill. Source: Abir Cheaitli, 2021.



**Figure 46.** Demolition debris piled in front of a building after the port explosion. Source: Batoul Yassine, 2020.

## E2.2 Clean and green the Beirut River corridor.

The Lebanese law provides a clear legal framework for the protection of river domains to prevent pollution of aquifers and marine resources. Law number 221/2000 states that "water resources need to be protected from waste and pollution by setting up texts and taking the necessary measures and procedures to prevent pollution and return them to their natural quality." Additionally, decision number 130/1998 by the Ministry of Environment classifies the corridor of Beirut River as a natural site and states that "the precincts of these areas are defined from the source to the estuary in length and within a distance of five hundred meters from the middle of the river course and towards the two banks in width for the various works and constructions". The decision further specifies permitting considerations for any new construction within the required buffer zone, stating "the Ministry of Environment, in coordination with the Directorate of Urban Planning, determines the permitting conditions for any construction or projects in the aforementioned site within the framework of the protection measures that the Ministry deems necessary." However, as riverbanks are public property, there has been several encroachments from buildings and the dumping of solid waste into the fluvial domain of the river. The problem lies in the absence of legal enforcement and the various uncontrolled practices that negatively impact the river. Problems also include the unclear decision making process and overlapping responsibilities among the several institutions that are involved in the water sector. The key, therefore, is to enforce the application of the existing legal framework to protect this urban asset from pollution and infringements.

The river was transformed into a concrete block in 1968 to manage its flooding and its banks were later used for road infrastructure. This led to the alteration of the river's natural morphology, the removal of green spaces, and the disruption of ecosystems and natural habitats. Furthermore, the path of the river runs through several municipalities and public institutions have not taken any actions to protect the river domain from urban development, deforestation, and water pollution (Dada, A. 2020). Once the water reaches the city limits of Greater Beirut, it brings sources of pollution and is a foul-smelling reservoir of filth and contamination. Contamination is caused by factories dumping their industrial waste along the river, saline groundwater, and domestic solid waste.

During the summer season, due to low water levels and high temperatures, certain organic wastes break down more quickly. As a result, the foul odor becomes worse and significantly compromises the air quality that affects not just Karantina but also the surrounding neighborhoods.

Therefore, government regulation is a sound foundation for not only protecting rivers and streams but also to re-conceptualize them as green amenity corridors. A legal framework for the Beirut River, the revising and implementation of existing greening and rehabilitation studies, and awareness campaigns are key to reducing the amount of waste that is dumped into the river. Accordingly, this strategy translates into the following action plan: revitalize the Beirut River.



**Figure 47.** The Beirut River. Source: Weam Haddad, 2022.



## E3. REDUCE SOUND AND AIR POLLUTION.

In general, Karantina and other neighborhoods around face severe environmental pollution related to air, noise, and odor. According to 2004 Greenpeace International research, the former slaughterhouse, the port, and the solid waste management facility were the main contributors to Karantina's ranking as one of Beirut's most polluted areas (Chahine, 2004). However, after 18 years from the date of the Greenpeace International study, the strategic diagnosis report revealed that Karantina remains one of Beirut's most polluted areas because of the port-related businesses and activities, land-use activities, and the infrastructural systems that border Karantina such as the Beirut River, the Charles Helou Highway, and the Port of Beirut.

Due to its location near the port and the presence of numerous warehouses and industrial enterprises that directly service the port, Karantina experiences a high load of incoming traffic from truck drivers. Even though the trucks serve the business activities in the area, their constant presence and unregulated circulation inside Karantina negatively impacted the physical and environmental quality.

As was mentioned in strategic objective E2, land-uses in Karantina include waste management and the temporary solid waste landfill. The port blast severely damaged the waste management facility that was forced to close. As a result, unsorted waste was piled in the landfill without being properly managed and was even burned, therefore, emitting pollutants into the environment. Another land-use practice is the unregulated installation of diesel generators to make up for daily power outages, contributing to the decline of environmental quality through rising levels of noise and air pollution.

Furthermore, in addition to the contaminated Beirut River to the east of Karantina, the heavily congested Charles Helou Highway borders Karantina to its south. This highway has both contributed to its isolation and alienation from the rest of Beirut, and its environmental state became worse since traffic congestion increases vehicle emissions and degrades the ambient air quality.

To meet this objective, several strategies were identified. These strategies cannot be considered separately; rather they should align with strategic objective E2 to effectively reduce air and sound pollutants and other emissions. The strategies that are proposed are: manage the traffic of trucks, their access, and parking in the area, regulate private generators, particularly the ones that are placed in proximity to residential buildings, empower the role of the Municipality of Beirut as a monitoring and coordinating agency for the environmental qualities in Karantina, and reduce the negative impact of the highway as a source of noise and air pollution.

### E3.1 Manage the traffic of trucks, their access, and parking in the area.

Trucks circulate within Karantina with no set schedule nor dedicated routes. They use inner streets within the residential sub-neighborhoods to park during their non-working hours. The cargo truck activity damages the asphalt of the streets, causes potholes, harms public places like roads and vacant lots as well as private property like vehicles and front gates, creates congestion and noise, and endangers pedestrians, especially young children and elderly people. It also contributes to the air pollution in the area with the heavy smell of diesel and smoke and repugnant odors from livestock transport, and their effects are made worse by the fact that many of the apartments in the Karantina are not designed to effectively seal out pollutants or odors from the outside.

To control the numerous negative impacts on the physical and atmospheric qualities of the urban environment, a traffic plan must be developed to manage the accessibility and circulation of cargo trucks in Karantina. A carefully drafted timing schedule should consider the port's operational requirements, the turnover of trucks, and nearby port-related activities. To decrease congestion and maintain efficiency, the strategy should contain methods (automation and technology) to control the schedule and traffic flow of deliveries that are required by cargo vehicles. Parking areas for cargo trucks waiting for their operation processes should be included in the plan. In addition, to prevent the cargo trucks from damaging Karantina's residential clusters, the strategy should also incorporate traffic control measures. Therefore, the above strategy translates into the following action plan: conduct a thorough transportation study.



Figure 48. The encroachment of parking trucks on sidewalks and streets. Source: Abir Cheaitli, 2021.

### E3.2 Regulate private generators, particularly the ones that are placed close to residential buildings.

Since Lebanon's biggest financial crisis hit in late 2019, the public provision of electricity has been on the verge of collapse, which increased the length of the power outages and raised the demand for private generators. This is mostly due to Lebanon's reliance on fossil fuel for operating the power plants and the government's inability to afford importing or subsidizing fuel because of the currency devaluation and the economic crisis. According to the answers to the household questionnaire in Karantina, 91% of the households have access to private diesel generators. Additionally, out of the 83 businesses that were surveyed, 18 mentioned that they have electricity from private generators. Electricity generators were noted on sidewalks, roadways, buildings, vacant lots, and building entrances, exposing the locals to high concentrations of air pollutants and airborne carcinogens.

There is a need to regulate the proximity of private generators to residential buildings. All the generators should include air filters to filter the emissions of toxic air pollutants such as Particulate Matter (PM) and Oxides of Nitrogen (NOx) which are harmful to humans and the environment. Additionally, soundproofing measures must be included to lessen noise pollution. Efforts should also aim at diversifying the energy supply and reducing dependence on imported fuels by harnessing solar energy through photovoltaic technologies. Therefore, the strategy results in the following action plan: design and implement alternative energy and greening solutions.



Figure 49. Private generators placed near residential buildings. Source: Abir Cheaitli, 2021.

### E3.3 Empower the Municipality of Beirut to monitor and coordinate efforts to protect the environment in Karantina.

Municipalities play a key role in the management and protection of a city's urban environment. This is done through the regulation and planning of land uses. However, it can also be done through direct local changes that reduce the trajectory of greenhouse gas emissions, thus, enhancing the quality of the urban environment. Therefore, an environmental monitoring coordination council for Beirut that operates under the Municipality of Beirut must be established for it to become a leader and advocator for a better management, protection, and monitoring of the city's environment and well-being. For this purpose, the council should:

- Empower the Municipality of Beirut to operate as a coordinating agency that monitors the local environmental quality.
- Expand the enforcement of laws for the purposes of environmental protection and management.
- Advocate for the implementation of local low-emission solutions that are focused on buildings.
- Enable the use of creative financing tools (such as loans that are repaid in property taxes or utility bills) to encourage the adoption of energy-efficient or renewable energy technologies.
- Explore ways to collaborate and leverage monitoring efforts, locate environmental data, and provide assistance with environmental monitoring equipment and methods.
- Monitor the progress towards achieving environmental targets and publish statements about the progress.

This strategy is possible through the establishment of a technical office in the municipality that can oversee the alternative energy systems.

### E3.4 Reduce the negative impact of the highway as a source of noise and air pollution.

The Charles Helou Highway is a major transportation artery in Beirut that remains heavily congested during the day with vehicles commuting to and from Beirut. The highway was first built to speed up travel time, cut transportation costs, and enable economic growth. However, it resulted in severe physical, social, and economic disruptions as well as excessive levels of noise, air, and visual pollution. Reducing the negative impact of the highway as a source of pollution is linked to strategy B1 'Connect Karantina spatially with its surroundings' which proposes redesigning and activating the Charles Helou Highway as an urban boulevard with multiple pedestrian crossings into Mar Mikhael. The proposal calls for redesigning the highway with multiple pedestrian crossings into Mar Mikhael, wide sidewalks, and slow travel lanes. A three-lane roadway that is heavily car-oriented and has high speeds will become a pedestrian-friendly corridor by narrowing it down to two lanes. The removed lanes will be transformed into lush parklands and urban areas that can accommodate bikes and pedestrians. The boulevard will become a green space that enhances urban cohesion and re-stitches Karantina and Mar Mikhael and improves the environmental urban quality of areas surrounding the highway.

The above strategy translates into the following action plan: propose an urban design plan for an open space network that requires upgrading existing spaces and reforming operation and management systems.



### E4. IMPROVE THE DILAPIDATED WATER, SEWAGE, AND OTHER INFRASTRUCTURAL NETWORKS.

Municipal infrastructural services significantly affect how well a city functions. In Karantina, the drainage, sewage, and street lighting systems require significant renovations and upgrading in some locations and they are missing in other locations. Additionally, there is no adequate drainage infrastructure to collect and direct rainfall. Therefore, the rainwater flows through natural pathways that head towards the sea (Lebanese University, 2016). According to the residents, the roads flood during the winter and become inaccessible. This is due to the clogging of the sewage inlets because of the lack of proper maintenance. As for wastewater, Karantina is connected to an old and degraded sewage system that channels the wastewater into the Beirut River without any treatment (Lebanese University, 2016). Furthermore, many streets, especially inside the sub-neighborhoods, lack lighting, while in other locations they are insufficient and need maintenance. As a result, at night, public spaces become inactive and unsafe.

Therefore, to improve the dilapidated water, sewage, and light infrastructural networks, the following strategy is proposed: upgrade the performance and management of the existing infrastructural networks to incorporate new technologies and match the current density demands.

#### E4.1/D4.1

**Upgrade and improve the performance and management of the existing infrastructural networks to respond to density demands and adopt emerging technologies.**

Refer to strategy D4.1



### E5. IMPROVE THE QUALITY AND SAFETY OF THE PUBLIC DOMAIN WHICH SUPPORTS THE EXISTING SOCIO-SPATIAL PRACTICES ACROSS THE THREE SUB-NEIGHBORHOODS.

The findings from the strategic diagnosis report showed that 77% of the residents feel safe during the day and 71% feel safe at night. However, the feeling of safety and security in public and shared spaces in Karantina is not attributed to the limited service provision, but rather to the social ties and connections between the residents.

The spatial mapping showed that Al-Khodor, Al-Saydeh, and Al-Senegal sub-neighborhoods grew into three detached residential "village-like" clusters where people live, grow up, interact, and spend quality time with each other. The word "ضيعة" village was frequently used by the residents to describe their residential clusters, as well as their everyday practices and experiences. However, due to the few designated and inaccessible public parks and the lack of community facilities in Karantina, the residents often engage in their everyday socio-spatial activities on unsafe and underserved streets, sidewalks, and vacant lots. Among the three residential clusters, Al-Khodor sub-neighborhood has the highest population count and, consequently, hosts the majority of play, recreational, and domestic practices. However, due to the closure of the Karantina public garden, kids play on the nearby streets, sidewalks, and vacant lots. The poor quality of the urban environment compromises the safety and security of the residents. This includes the unregulated land-use practices from the port-related activities and the circulation of trucks, the dilapidated streets and sidewalks, and the lack of traffic calming measures and urban furniture.

Therefore, to improve the quality and safety of the public domain, which supports the existing socio-spatial practices across the three sub-neighborhoods, the following strategies are proposed: adopt an inclusive and integrated design approach, while upgrading and rehabilitating the existing public spaces and introducing shared facilities, and remove all the restricted access to the public domain.



Figure 50. Daily socio-spatial practices in Al-Khodor sub-neighborhood. Source: Batoul Yassine, 2021.

#### E5.1/B8.1/D3.3

**Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.**

Refer to strategy B8.1

#### E5.2/B4.1/D5.6

**Remove the access restrictions to the public domain.**

Refer to strategy B4.1



## E6. PROTECT AND MAINTAIN THE LANDSCAPE HERITAGE LAYER.

Landscape heritage sites are significant assets in Karantina. They include institutional green and open spaces like the garden of Al-Saydeh Church or spaces that are associated with a profound collective memory like the site of the old slaughterhouse. Natural elements are also integral to landscape heritage, as their topographic and geomorphological features shape the unique character of the natural setting. The most prominent feature is the old coastline. Being elevated on a high bedrock with scattered vegetation, it represents a unique Mediterranean setting. This landscape is an example that has been taken over by the built fabric, with little of it remaining. Currently, this landscape is inaccessible as military bases block the accessibility towards the coastal edge. The dense vegetative cover that is rich in monumental eucalyptus and ficus trees, presumably planted by the French during the mandate period, is also of great value. These trees, sometimes exceeding 15 meters in height, are distributed around Karantina as clusters or as single-standing trees. Their canopies provide adequate shading, which makes them attractive for social gatherings and public interactions. They are public property, hence, under the custody of the Municipality of Beirut. Although this vegetative layer is a vital environmental resource that provides myriad ecosystem services, it is subject to neglect and abuse. It was noted during the fieldwork that incidents of tree cutting took place on private properties without any previous notice or permission from the relevant authorities. Another case took place in a public area, where the Municipality of Beirut cut a huge eucalyptus tree on a sidewalk due to the infrastructural damage it was causing. Other landscapes, such as the coastline, are abandoned, with little awareness of their importance. Towards this end, the following strategy was adopted: develop a legal framework for the identification and protection of landscape heritage elements.

### E6.1 Develop a legal framework for the identification and the protection of landscape heritage.

Although they are a vital asset for Karantina, heritage landscapes are abandoned and neglected. Therefore, a legal framework for their valorization and protection is necessary. However, this should be preceded by a phase that identifies these landscapes according to a set of criteria that considers their spatial, urban, cultural, and environmental value. Natural landscape heritage is well recognized in Lebanon, where protected areas are identified, and their ecological, patrimonial, and cultural legacy is protected. However, there are no precedents for a legal setup that protects landscapes and the vegetative cover in urban settings. In the case of urban trees, they are considered part of the public realm, where their protection and maintenance are under the custody of the municipality. However, the law is rarely enforced to protect the public realm from vandalism or abuse. Therefore, the proposed law should protect the identified heritage landscapes and prohibit the removal of designated monumental trees on public or private properties. Unless it is proven that irreversible damage is caused to infrastructure or public safety, a penalty should be applied for cutting down these trees without an official permit from the municipality. This strategy translates into the following action plan: apply the UNESCO study guidelines to identify landscape heritage in Karantina and propose a law to enforce the protection of landscape heritage elements.



Figure 51. Heritage trees inside the sub-neighborhoods. Source: Abir Cheaitli, 2021.

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Report 04

# ACTION PLANS

The Action Plans constitute the fourth component of the urban recovery strategy of Karantina. They respond to the requirements of the strategic framework and are aligned with its vision and mission. The action plans targeted the proposed strategies in the Strategic Framework to serve the strategic and general objectives. The report presented 30 action plans with a detailed profiling of each project. The proposed action plans were diverse in nature and included execution projects, regulations and policies, detailed studies, lobbying and advocacy, institutional and committee set-ups, management and operation plans, and capacity building.

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# 1. INTRODUCTION

This report details the action plans that together constitute the fourth component of the urban recovery strategy for Karantina. There are thirty action plans that respond to the requirements of the strategic framework for urban recovery and are aligned with its vision and mission statements. The action plans targeted the five objectives of the strategic framework:



**A.** Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.



**B.** Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.



**C.** Support, increase, and sustain cultural and economic vitality in Karantina.



**D.** Promote a sustainable development strategy that is participatory and phased over a period of time.



**E.** Improve the overall quality of the urban environment in Karantina.

The process of devising the action plans was iterative. The action plans were intended to respond to the different challenges and opportunities that were identified in the strategic framework report. The research team at the Beirut Urban Lab started their work by proposing one or two action plans for each strategy. The first draft of the action plans went through several reviews to cross-reference each other and ensure a level of coherence. In line with the transversal multi-sectoral approach, and their adaptation to the scale of the neighborhood of Karantina, similar action plans were grouped together and re-phrased to correspond to the suggested strategies. Therefore, some action plans targeted multiple strategies to serve multiple general and strategic objectives. The research team then prepared elaborate project profiles, including a project brief, a list of the relevant actors in the design and execution phases, cost estimates, potential sources of funding support, and a time schedule for the execution. Subsequently, internal consultation sessions inside the Beirut Urban Lab were conducted on the housing issues, and external consultations with economic and environmental specialists were held to verify the components of the different project profiles.

The research team organized another round of consultations during a town hall meeting at the Karantina Public Park on 19 September 2022. The different community groups provided their feedback on the proposed action plans, and they prioritized these action plans according to their needs.

The project profiles of the proposed action plans were envisioned to be adopted by different operational and funding agencies, to be phased over a period of time, and translated into a common vision of Karantina that can achieve the strategic goals set in the previous phase of the research. Once they are matched with the right donors and funding agencies, the project profiles will be elaborated into fully detailed project proposals that are ready for implementation. An indicator system will be set as the fifth and final phase of the urban recovery strategy to assess, adjust, and monitor the progress of implementation and the operation of the different projects. The proposed action plans were diverse in nature and included execution projects (14), regulations and policies (9), detailed studies (3), lobbying and advocacy (1), institutional and committee set-ups (5), management and operation plans (5), and capacity building (2). They also ranged from soft to hard and short to long-term interventions.

# 2. PROPOSED ACTION PLANS

01.	Revise the different rent-related laws in Lebanon to introduce price caps, price adjustments, and mitigating measures that can protect vulnerable tenants who currently pay rent prices below the market rates.
02.	Establish a housing monitor for formal and informal tenancy agreements with legal counseling support to protect the rights of the tenants.
03.	Conduct a feasibility study of the LINORD Project by a group of local landlords, academics, and professionals to assess its physical and social impact on the residential sub-neighborhoods in Karantina and advocate for the necessary amendments.
04.	Form a neighborhood committee.
05.	Pool the block of unbuildable lots and develop it through a public-private partnership into an affordable and inclusive housing project that incorporates multiple typologies of residential units and accommodates different family sizes and income groups.
06.	Revoke the policies that exempt the owners of vacant apartments from paying taxes, introduce a vacancy tax, and encourage or mandate the development of mixed-income housing units through building or tax incentives and Inclusionary Housing Ordinance.
07.	Propose a strategy to reform the new system of housing bank loans to enable vulnerable groups of people to own their houses in Karantina.
08.	Establish a Business and Career Training Center in Karantina.
09.	Rehabilitate the slaughterhouse following international environmental standards and construction codes and reform its management and operation systems before it reopens.
10.	Rehabilitate the public and fish markets and reform their operations and management systems before they reopen.
11.	Develop a multi-purpose complex for public services on the municipal lot, which includes a public school, an affordable family clinic, and a sports and recreational facility.
12.	Devise a management plan for reopening and maintaining the public park and open spaces in Karantina.
13.	Design and Implement an open space network that connects, upgrades, and expands on the existing spaces in Karantina.
14.	Devise and implement a parcelization plan that subdivides and reprograms the municipal lot to enhance connectivity and public services in Karantina.

15.	Amend the Building Law to introduce international standards for inclusive design, particularly for people with physical challenges and disabilities.
16.	Propose an addendum to the Planning Law that further guides and regulates existing and future land uses and developments.
17.	Set up a monitoring and municipal taxation system for buildings that are not regularly maintained to ensure public safety and limit overcrowding.
18.	Create a registry platform that matches donors with property owners for building rehabilitation.
19.	Form a local advocacy group that supports donor agencies working on the reconstruction projects of the port to reconnect Karantina with the sea.
20.	Conduct a transportation study in Karantina.
21.	Develop protocols for cooperation, networking, and the transfer of expertise and knowledge between the different businesses in Karantina.
22.	Design and build a community center in a strategic location that is equally accessible to the residents of the three sub-neighborhoods.
23.	Expand financial support opportunities and institute mechanisms to link these opportunities with micro businesses in Karantina.
24.	Set up offices in the Municipality of Beirut to organize and promote cultural events in Karantina, in partnership with the private sector.
25.	Establish a design hub in Karantina with shared resources and facilities for rising young designers to launch their careers and serve as a catalyst for further cultural development.
26.	Design and implement an integrated sewage and wastewater management plan for Karantina.
27.	Design and implement alternative energy and greening solutions.
28.	Design and implement a solid waste management plan.
29.	Conduct a study to revitalize the Beirut River and activate its edges.
30.	Identify elements of landscape heritage in Karantina and propose a law for their protection.

## ACTION PLAN 01

### Project Title

Revise the different rent-related laws in Lebanon to introduce price caps, price adjustments, and mitigating measures that can protect vulnerable tenants who currently pay rent prices below the market rates.

### General Objective(s)

A. Protect the existing affordable housing units and provide a larger stock that is inclusive of a diversity of social and income groups.

### Type of Project

- |   |   |
|---|---|
| <input type="checkbox"/> Execution Project                | <input checked="" type="checkbox"/> Regulation - Policy |
| <input type="checkbox"/> Detailed Study                   | <input type="checkbox"/> Lobbying - Advocacy            |
| <input type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building              |
| <input type="checkbox"/> Management - Operations plan     |   |

### Strategic Objective(s)

A1. Protect and expand the existing stock of affordable housing units.

### Project Objective(s)

The project contributes to the following strategy:

A1.1 Regulate rents in Karantina.

- Protect the old tenants from displacement and forced eviction.
- Regulate the hikes in rent prices according to the socio-economic conditions of the tenants.
- Increase opportunities for vulnerable groups to access affordable housing units, especially the vulnerable groups that are on new rent contracts.

### Project Description (concept note)

Lebanon does not have a legal framework to control residential rent prices; rent is regulated by the Law of Contracts and Obligations and its relevant amendments across the years. This means that two different conditions govern two different types of tenants. The first type includes tenants with rent contracts that were signed before 1992, known as the 'old rent' tenants. They benefit from very low rent prices and protection against eviction. Between 1932 and 1992, successive Lebanese governments extended the duration of the rental contracts and, as a result, the existing conditions of the contracts applied for longer periods. This included the rent prices that remained constant in the face of hyperinflation.

The conditions of the rent contract were extended due to the many crises that impacted the country, including the devaluation of the French pound in the 1930s that was pegged to the Lebanese Lira, the events of the Second World War, the 1958 crisis in Lebanon, and the Lebanese Civil War (1975-1990). Slight adjustments were made to the rent prices, but these adjustments did not account for the major hyperinflation that Lebanon witnessed over a prolonged period.<sup>1</sup>

A new amendment to the Law of Contract and Obligation was issued in 1992. It liberalized all rent contracts, except for the ones that predated 1992. This law created a new set of tenants: those who signed contracts after 1992, also known as the 'new rent' tenants. They were no longer protected from the increases in rent prices and the duration of their contract was limited between one to three years.

A separate extension was added to the series of extensions in the same year. It stated that rent contracts before 1992 should be adjusted to the market rate within a period of 5 years. However, their tenure and low rent conditions were extended several times over 20 years. Accordingly, the only way to evict old tenants

<sup>1</sup> Multiple prolonged crises prevented any meaningful adjustments.

was through a demolition order and after a compensation payment. The tenants who did not have legal representation were paid at lower compensation rates in comparison to the tenants who filed court cases. The Law of Contract and Obligation does not set the maximum amount compensation, especially in dense areas. Landlords can also evict tenants if one of their adult children needs to move into the house. These conditions resulted in two types of landlords: landlords who were legally obligated to house the existing tenants and others who had the power to set new terms of agreement with the new tenants. In both cases, the government effectively abdicates its responsibility to provide affordable housing units and safeguard the rights of both, the landlords and the tenants. It also treats any disagreement between both parties as a private matter that is delegated to the judicial system to arbitrate, rather than recognizing it as a housing policy concern.

#### Vulnerabilities that are associated with rent contracts:

The current rent law does not include a mechanism that can determine how much rent can be increased, subject to market dynamics and the ad-hoc decisions of landlords. In 2014 and 2017, the parliament passed laws that stipulated that the old rent price should be stabilized according to market rates in 9 years. This applied to all the rent contracts that were signed before 1992. Under Article number 3 in the 2017 law, a committee should be established to assess if tenants need financial support to adjust to the rent increases and set the compensation rates. However, the government did not provide any funds to finance these adjustments and establish the committees.

Additionally, the law did not offer any protection against the sharp hikes in rent prices or the threats of eviction for new rent tenants once their contract expires. Because of the sharp devaluation in the value of the Lebanese lira against the American dollar, landlords either started demanding to be paid in cash dollars, currently known in Lebanon as the 'fresh dollar', or negotiated conditions for new rent contracts that were adjusted to the current market value of the dollar. This is unusual in most countries since the rent price is paid in the local currency, however, it is regarded in Lebanon as a mode of protection against the volatile currency market. From a legal perspective, a landlord cannot refuse payments in the local currency. This is illegal under Article 319 of the Penal Code. Moreover, as per Article 192 of the Law of Money and Credit, tenants, if charged in dollars, can pay at the official rate of the 1,500 LL<sup>2</sup>, if the payment is deposited at a notary public. This has proved to be a legal gray zone, as some judges have upheld this while others have ruled against it.

The results of the surveys that the Beirut Urban Lab conducted in Karantina showed that most of the rents were still paid in the Lebanese lira, with some in American dollars. However, with the ongoing devaluation of the Lebanese lira, there is a need to protect the rights of the old and new tenants through the law and other meaningful legal frameworks.

This proposal involves empowering the Municipality of Beirut to impose a rent cap to protect vulnerable tenants from sharp increases in the rent prices. The municipality can formalize access to housing units in a more viable and secure manner. The proposal also aims to establish a rent cap that can limit sharp annual increases, as well as properly regulate these increases. There is precedent for this proposal. Successive Lebanese governments implemented rent caps between 1948 and 1954 under three different exceptional laws. The three laws stipulated that the increases in rent prices should be less than 5 to 10% and in some cases decreased rent prices between 20 and 25% depending on the age of the building.

There is also a good example of an equitable rent cap law in 2020 in Berlin. Due to uncontrolled rent increases, a rent cap was introduced. It established an upper ceiling for the increases at 1.3% per year until 2025. The law also set guidelines for how much a landlord can charge per square meter for an apartment, ranging between 3 to 10 euros. The guideline took into consideration the typology of the building, as well as its age and amenities. The law applied retrospectively to existing rent contracts, as well as to new rent contracts that were signed after the passing of the law. This resulted in the deflation of existing rent prices, leading to an average rent reduction by 10%, and it prevented unrealistic rent hikes. However, it decreased the supply of apartments since most landlords were unwilling to accept low prices. This can be fixed in the proposal if a vacancy tax is introduced. Karantina can pilot this proposal since a large percentage of its residents (around 73%) are tenants and there is an even distribution between old rent (n=78) and new

formal rent (n=71), with a large percentage of informal rental agreements (n=396)<sup>3</sup>.

The Municipality of Berlin has significant executive and legal powers, unlike the Municipality of Beirut. Therefore, the Lebanese parliament needs to issue a law that gives certain municipalities in Lebanon the right to regulate trends in certain neighborhoods. This can also empower the residents of the neighborhoods to coordinate their needs with the municipality. The municipality can stipulate the percentage of the annual rent increase and how much the landlord can charge the tenant per square meter based on the typology of the building, its condition, and its age. This can be relatively easy to introduce in Karantina since the research team at the Beirut Urban Lab conducted an extensive survey of the building conditions in the area.

Proposing safeguarding measures in the rent law can also protect the tenants against the sharp increases in rent prices. They can ultimately formalize access to housing units in Karantina due to the additional layer of security. This proposal can help control rent hikes and help the tenants on old rent contracts adapt to the end date of rent control in 2026 through clear guidelines and safeguarding measures.

#### The Relevant Actors

These actors can include academics and experts such as Bruno Marot and Hisham Achkar, local research and design studios such as Public Works, and local non-profit advocacy organizations such as the Legal Agenda, in collaboration with members of the Lebanese parliament, the Ministry of Social Affairs, the Beirut Bar Association (the Order of Lawyers), and the Municipality of Beirut, and with consultation with landlords and tenants.

#### Proposed Source of Funding

Authorities involved with possible support from relevant local or international agencies.

#### Approximate Financial Magnitude

Not applicable.

#### Period and Timing of Execution

Short-term  Long-term  Phased

#### Expected Results

- Secure the conditions of old rent contracts to avoid the displacement of people.
- Help the landlords restore the value of their properties.
- Prevent increases in rent prices that are beyond the means of people in Karantina.
- Control the rent increases and prices through clear guidelines.
- Enable access to affordable housing units to a diversity of household types across income groups.

<sup>2</sup> 15,000 LL starting November, 2022.

<sup>3</sup> See page 74 of the report

## ACTION PLAN 02

### Project Title

Establish a housing monitor for formal and informal tenancy agreements with legal counseling support to protect the rights of the tenants.

### General Objective(s)

A. Protect the existing affordable housing units and provide a larger stock that is inclusive of a diversity of social and income groups.

### Type of Project

- |  |  |
|--|--|
| <input type="checkbox"/> Execution Project                           | <input type="checkbox"/> Regulation - Policy |
| <input type="checkbox"/> Detailed Study                              | <input type="checkbox"/> Lobbying - Advocacy |
| <input checked="" type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building   |
| <input type="checkbox"/> Management - Operations plan                |  |

### Strategic Objective(s)

A1. Protect and expand the existing stock of affordable housing units.

A4: Provide access to new and inclusive housing units across a diversity of social and income groups.

A7: Decrease the vulnerabilities that are associated with informal practices.

### Project Objective(s)

The project contributes to the following strategies:

A1.1: Regulate rents in Karantina.

A7.1: Advocate for the rights of tenants to reduce vulnerabilities and improve living conditions.

This requires:

- A housing monitor that can arbitrate between landlords and tenants.
- An informal registry that tracks informal rent agreements.
- Protecting tenants who do not have a formal rent contract from the threats of eviction and displacement.
- Managing an informal registry that records all rent payments to create transparency in the rates of rents and allow potential tenants to compare proposed rent prices with existing ones.

### Project Description (concept note)

The rent prices in Karantina are low in comparison to other neighborhoods in Beirut. However, the current increases in rent prices in Karantina, along with high rates of unemployment and limited public services, can lead to the displacement of many of the residents. Out of the 545 households that the Beirut Urban Lab surveyed in Karantina, 73% are tenants. The breakdown of the 73% is as follows: 78 households are on old rent agreements that were not adjusted to the hyperinflation in the country, 71 are on new formal rent contracts, and the remaining 248 are new tenants with informal rent agreements<sup>4</sup>.

All the tenants are susceptible to certain vulnerabilities. The duration of the formal rent contracts for new tenants is one to three years. Their rent increases are not determined by a specific formula. The government does not mediate between the landlords and tenants or protect the existing tenants from eviction. Given the ongoing devaluation of the Lebanese Lira against the US dollar, many tenants face rent hikes beyond their financial means and have little protection against predatory increases.

The other group of tenants who are under formal contracts are old rent tenants. Although they may not be affected by the devaluation yet, under the 2017 rent law, this group's rent is set to be adjusted to market prices by 2026. Many of the tenants who cannot afford this increase may become homeless.

The remaining tenants do not have a formal rent contract. Landlords prefer not to issue a contract because it gives them more maneuver to increase the rent prices or terminate the agreement. Additionally, they are not obligated to pay property or municipal taxes since vacant apartments are exempt from these taxes. Moreover, there are some tenants who prefer not to have a contract due to the precarity of their own legal status.

Although this informality has allowed vulnerable people to access housing units in Karantina, a lack of proper oversight and accountability has left room for abuse. After the port blast, for example, incidents of evictions were more prevalent among the residents and households without contracts. Furthermore, this informality encouraged rent pooling, which has led to overcrowding<sup>5</sup>. Out of the 113 apartments that have more than one household, 88% of them are considered overcrowded. This overcrowding increased further since most landlords prefer rent pooling; they can charge more than they can for a single-family apartment. There are instances of single-family households being threatened with eviction to free apartments for rent poolers. This is increasing the tension between the community groups.

It was also evident from the research in Karantina that tenants with informal agreements were more likely to face rent hikes or evictions, especially after the port blast. And many tenants are unaware that they have legal rights against eviction. They are allowed to provide proof of occupancy through utility bills that give them legal rights against eviction. Unfortunately, there is no system to keep track of all the informal rental agreements in Karantina. In the case of formal (notarized) rent contracts, where a landlord has decided to evict a tenant, a complaint must be filed at the Municipality of Beirut. The municipality would then inform the police to take the appropriate actions.

Overall, neither formal nor informal tenants are aware of their legal rights for protection against eviction; they cannot be evicted without a court order. This lack of knowledge shows that there is a need for an advocacy effort (or a housing monitor) to raise awareness levels around housing rights in Lebanon and to provide legal counseling to vulnerable residents.

### Housing Monitor:

The proposed project aims to safeguard the rights of the most vulnerable tenants. It proposes the creation of a housing monitor, similar to the one by the local design and research studio, Public Works. The housing monitor by Public Works keeps track of incidents of evictions and rent hikes. It provides some legal advice but is unable to enforce informal agreements. The proposed housing monitor in this project will operate as an institutional tool that keeps track of formal and informal agreements between tenants and landlords. The responsible team will be equipped with legal knowledge. It will also document cases of overcrowding, evictions, and rent hikes, and the team will attempt to mitigate the impacts of these cases.

In order to establish a housing monitor, legal experts are needed to adjudicate and keep track of the relevant paperwork. Although it is costly to hire a lawyer, the Beirut Bar Association had in past cases offered volunteering services to support complicated court cases, such as the families of the victims of the Beirut blast. Involving the BBA would give the housing monitor legal cover. The proposed neighborhood committee in Action Plan 04 will have a key role, and the Municipality of Beirut will have an institutional role to formalize the housing monitor. The aim is to improve the relationship between the residents and public authorities and rebuild trust in the municipality.

### Create an Informal Tenure Registry for the Housing Monitor:

An informal tenure registry can ensure protection for vulnerable residents, those who do not have access to formal support. It is mostly used in Palestinian camps in Lebanon to support and record property practices; Palestinians in Lebanon are not allowed to own property, and buildings inside camps are not listed in the land registry.

<sup>4</sup> See page 74 of the report.

<sup>5</sup> See page 89 of the report.

The informal system is managed by a popular committee that is composed of all the political factions in the camp. The registry keeps track of the ownership of residential units within the camp to ensure the right of the residents and a smooth property transfer when this is needed. Additionally, it tracks purchases and inheritances, as well as the construction of additional residential units. The registry is the cornerstone of the informal property market in the camps and preserves the rights of the residents. It can also be useful in Karantina, where informality is also a major part of recent tenure agreements (Ezzedine, D.M., 2019). Accordingly, this project proposes the creation of an informal registry that is modeled after the Palestinian camp model. It will keep track of rental agreements and rent prices.

However, the registry in Karantina will be used to record informal and formal rental agreements. By recording these agreements, the register will keep track of all the rent transactions and advise the residents on the rent prices they should pay based on this information. In the process, the tenant will have a reference point to help them make informed decisions.

This registry can be created in collaboration with key local community members and in line with the conditions of the proposed housing monitor which will be partly managed by volunteering lawyers. It will also record the utility bills and the receipts of rent payments that can be used to prove informal tenancy rights and resolve any legal disputes.

The objectives of the proposed housing monitor and tenure registry are:

- Arbitrate any disputes between the landlord and tenants.
- Preserve the rights of the informal tenants in the absence of a formal mechanism.
- Preserve the rights of the tenants to occupy their apartments and inform the landlords of the legal implications of evictions and their responsibilities toward the tenants.
- Create more transparency on the rent rates through comparative data so that rent prices are not raised in an ad-hoc manner.
- Provide open data on existing rent prices to inform the tenants of current conditions to leverage comparable units when they negotiate new rent contracts or agreements.

#### The Relevant Actors

The relevant actors include the Municipality of Beirut and non-governmental organizations that are active in Karantina such as Offre Joie and the Norwegian Refugee Council (NRC), community representatives such as the mukhtars and key residents, the Beirut Bar Association, and the Housing Monitor.

#### Proposed Source of Funding

Public authorities involved with possible support from relevant local or international agencies.

#### Approximate Financial Magnitude

To be determined by relevant actors.

#### Period and Timing of Execution

Short-term  Long-term  Phased

#### Expected Results

- Less overcrowding in Karantina.
- Residents and community groups who are more knowledgeable of the legal aspects of housing.
- Less tension between the residents of Karantina because of less overcrowding.
- Secure tenure for the residents of Karantina.
- More transparency in the rent prices in Karantina.
- Empowered residents who are more inclined to stay in Karantina.
- Less threats of eviction.
- Secure informal tenure for the residents of Karantina.
- A decrease in the overall vacancy rate in residential units in Beirut.

## ACTION PLAN 03

#### Project Title

Conduct a feasibility study of the LINORD Project by a group of local landlords, academics, and professionals to assess its physical and social impact on the residential sub-neighborhoods in Karantina and advocate for the necessary amendments.

#### General Objective(s)

- A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.

#### Type of Project

- Execution Project
- Regulation - Policy
- Detailed Study
- Lobbying - Advocacy
- Institutional - Committee set up
- Capacity Building
- Management - Operations plan

#### Strategic Objective(s)

- A1. Protect and expand the existing stock of affordable housing units.
- A4: Provide access to new and inclusive housing units across a diversity of social and income groups.
- D1: Advance a development program for Karantina and remove existing obstacles to development.

#### Project Objective(s)

The project contributes to the following strategy:

A1.2/A4.2/D1.1: Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.

A feasibility study of the LINORD Project is also required. If the LINORD Project is deemed feasible, amendments should be implemented to render it more sustainable and sensitive to the existing built fabric in Beirut, especially in Karantina.

#### Project Description (concept note)

The LINORD Project involves plans for land reclamation and new developments in Beirut's northern suburbs, however, these plans were not fully implemented. The project was presented as a masterplan for the coastal area of the northern side of Beirut between the rivers in Beirut and Antelias. It was first envisioned in 1981 to address the environmental impact of the Bourj Hammoud landfill and the illegal encroachment on the coastal line and provide infrastructural facilities for the surrounding areas.

The Associated Consulting Engineers S.A.L. prepared the masterplan for the LINORD Project to include a transportation network that links the Charles Helou Highway to a new coastal road. Although the project was stopped in 1990, the Directorate General of Urban Planning submitted the masterplan to the Council of Ministers in 1995. The Council of Ministers approved the masterplan in decree number 7309 in 1995 and set up a real estate company in decree number 8937 in 1996 to develop the area. The Council for Development and Reconstruction (CDR) launched the call for tenders in 1997 to initiate the development, but the bidders lost interest since 1999. After the LINORD Project was dormant for some time, the CDR contracted Associated Consulting Engineers S.A.L. to consult on the project titled "Review and Update of the Proposed Concept Masterplan for the Improvement of Beirut Northern Entrance Between Antelias River and Beirut River (LINORD)". This was completed for 38,850 USD between July 2018 and January 2019. The project was proposed again to the Council of Ministers in September 2019. The section of the LINORD Project in municipal Beirut includes a planned highway that has a major impact on the physical fabric of Karantina. It requires a highway extension that cuts across Karantina's residential sub-neighborhoods.

The transportation network also includes a wide interchange to the east which will erase a large section of the Industrial Zone. The execution of the project will inevitably segment Karantina from within and further isolate it from the Port of Beirut, Bourj Hammoud, and Mar Mikhael. As a result, it will cause significant disruptions in the built fabric of Karantina. The LINORD Project will require the Lebanese government to acquire many lots within and around the planned transportation network.



Figure 1. LINORD Project. Source: The Lebanese University, 2016.

Even though the project has been put on hold, future developments are limited to the sections of the lots that are not subject to the acquisition. Developments are also unfavorable due to the uncertainty around the execution of the project, and if this execution will require amendments that will affect these lots.

The objective of this proposal is to hire a professional firm to conduct a feasibility study of the LINORD Project, propose alternatives, and lobby for the necessary changes with the relevant actors. The firm will be required to coordinate efforts with the local and professional stakeholders to consider various options and build consensus on the best course of action. The LINORD Project is currently restricting developments in Karantina, and the proposed large-scale transportation network will have a significant impact on the built fabric. Accordingly, the target of the proposal is to release the impacted lots from the uncertainty around the future of the LINORD Project while reconsidering the necessity of the transportation network or reducing its scope.

Although the Associated Consulting Engineers S.A.L. submitted a revised study of the LINORD Project to the CDR, it is unclear whether the study, which is not public, has addressed issues of sustainability and the social impact of the project. It is important that the study considers the views of local landlords, academics, and professionals to correctly assess the impact of the LINORD Project and propose amendments. It should consider proposals that facilitate private developments on the short term and amend the masterplan. The amendments should focus on Karantina and safeguard the integrity of the physical and social fabrics of the residential sub-neighborhoods. The CDR should also follow up with the relevant agencies to make sure that the necessary changes are implemented.

#### The Relevant Actors

The relevant actors include the Council for Development and Reconstruction, the Directorate General of Urban Planning, the Municipality of Beirut, the Governor of Beirut, the Municipality of Bourj Hammoud, the Municipality of Jdeide-Boushreh-Sad, the Municipality of Jal El-Dib, the Municipality of Zalqa, the Municipality of Antelias, and the Council of Ministers, in coordination with local stakeholders such as local landowners, the property owners of the local industrial facilities, the residents of Karantina, and actors such as the Order of Engineers and Architects in Beirut.

#### Proposed Source of Funding

The Council for Development and Reconstruction with possible support from local and international agencies.

#### Approximate Financial Magnitude

The proposed budget must cover the cost of the study, currently estimated at 40,000 USD.

#### Period and Timing of Execution

Short-term  Long-term  Phased

#### Expected Results

A feasibility study with the relevant stakeholders in Karantina. The study will:

1. Assess the impact of the LINORD Project on the residential and industrial developments.
2. Assess the principles of sustainability in the current masterplan.
3. Advocate for short term solutions that can reduce the current barriers to development.
4. Advocate for the necessary amendments to the masterplan to safeguard the integrity of physical and social fabrics of the residential sub-neighborhoods.

## ACTION PLAN 04

#### Project Title

Form a neighborhood committee.

#### General Objective(s)

- A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.
- B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.
- E. Improve the overall quality of the urban environment in Karantina.

#### Type of Project

- Execution Project
- Detailed Study
- Institutional - Committee set up
- Management - Operations plan
- Regulation - Policy
- Lobbying - Advocacy
- Capacity Building

#### Strategic Objective(s)

- A1: Protect and expand the existing stock of affordable housing units.
- A4: Provide access to new and inclusive housing units across a diversity of social and income groups.
- B4: Improve accessibility to the different areas within Karantina and between them.
- D1: Advance a development program for Karantina and remove existing obstacles to development.
- D5: Improve connectivity and accessibility to Karantina.
- D6: Engage the residents of Karantina in local development programs and long-term shared visions.
- E5: Improve the quality and safety of the public domain which supports the existing socio-spatial practices across the three sub-neighborhoods.

#### Project Objective(s)

The project contributes to the following strategies:

- A1.2/A4.2/D1.1: Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.
  - B4.1/ D5.6/E5.2: Remove all access restrictions to the public domain.
  - D6.1: Empower and strengthen the representation of different community groups in decision-making.
- Accordingly, the proposed neighborhood committee will lobby for the interests of the residents of Karantina. Among its many tasks, it will:

- Negotiate with the army in Karantina, and lobby with the government's parliamentary representatives, to propose legal steps to remove the encroachments on private properties and the public domain, including roads and sidewalks.
- Discuss with the Maronite Waqf and other major stakeholders the relevant development projects and provide capacity building workshops and professional support for the different community groups.
- Organize town hall meetings with the community groups and other relevant stakeholders to discuss future plans and projects in Karantina.

#### Project Description (concept note)

Karantina is home to several marginalized and vulnerable groups in Beirut, including low-income Lebanese families, refugees, and migrant workers. The long history of marginalization within Karantina also limited the capacity of the residents to participate in local decision-making processes and voice their concerns for projects that have a direct impact on their lives. And this is still the case now as Karantina faces several ongoing challenges. The suspended LINORD Project is a top-down and invasive infrastructural intervention that affects Karantina.

It currently restricts development and, if implemented, will have negative impacts on the social and built fabric of the area. Accessibility is also compromised due to the existing transportation infrastructure, encroachments on private properties, and the militarization of many private and public lots. The stock of affordable housing units is also under threat since landlords are more likely to rent out their properties to businesses for higher rates. These challenges are exacerbated by the proximity of Karantina to the port and the industrial activities that negatively impact the safety and quality of the public domain.

Following the port blast, people were further marginalized by the lack of a vision for a people-centered and long-term inclusive urban recovery. Humanitarian aid was distributed without involving the local community groups or through sustainable recovery strategies. The interventions of non-governmental agencies (NGOs) in Karantina after the port blast were limited to sheltering residents and urgent repairs. The Lebanese army was solely responsible for liaising between these NGOs, following up on assessments, and distributing food, supplies, and limited cash compensations. These shortcomings in the post-port blast reconstruction will significantly impact the future of Karantina, thus, necessitating the involvement of the local community groups in the decision-making process.



**Figure 2.** Residents meeting in Karantina.  
Source: Batoul Yassine, 2021.

The involvement of the local community groups is possible through a neighborhood committee that can advocate for their local needs and interests. This is an important incentive to take collective action on local issues with investors and government departments. This goes hand in hand with building communal networks and building local capacities. This committee is central to an urban recovery strategy that goes beyond physical repair to sustain the development of the area and the well-being of the community groups. Neighborhood committees are active associations that are involved in participatory planning initiatives. The neighborhood committee is an intermediate entity that can directly monitor the concerns, capacities, and qualifications of residents, owners, and businesses and employ them in sustainable development projects. A neighborhood committee is a representative group that is elected by the people in Karantina.

The objectives of the committee are:

1. Improve and activate the relationship between the people and the municipal council in Beirut.
2. Strengthen the social relationships between the residents.
3. Utilize the available material resources and local capacities of people for the benefit of Karantina.
4. Activate the civil and private institutions in Karantina to improve living conditions.
5. Support the action plans of the Municipality of Beirut by conveying the needs of the residents, property owners, and businesses.
6. Maintain public properties in Karantina.

The scope of the work of the committee should also include the establishment of community facilities that can decrease social fragmentation, serve as catalysts for communal belonging, and enhance cultural diversity. The sub-neighborhoods need to be better integrated and connected to each other and provided with equal access to resources. The neighborhood committee should collaborate with the Maronite Waqf and other major local stakeholders in the development of projects. It should advocate for land to be released for local development to increase the stock of affordable housing units and accommodate a diversity of social and income groups in Karantina. The committee should also follow up with relevant government agencies on the implementation of the necessary measures to maintain a good quality and safe public domain that can accommodate the existing socio-spatial practices across the three sub-neighborhoods. This includes, but is not limited to, proposing development plans for the sub-neighborhoods (cleanliness, public health, lighting, and sewage) and submitting them to the Municipality of Beirut for their consideration.

The proposal for the committee should be discussed at a general town hall meeting. This town hall meeting can serve as the founding event to create the committee and decide on its role and objectives. The participants in the meeting will be registered at the general assembly which will be responsible for electing the neighborhood committee. Property owners, residents, and long-time business owners have the right to attend the meeting and cast their votes.

An annual town hall meeting will be held to elect a new committee. An existing member of the committee can be re-elected. The neighborhood committee should meet periodically on a monthly basis. The committee can call for town hall meetings whenever necessary to discuss any relevant issues that affect the local community groups. The number of committee members should range between 5 members to a maximum of 9 members. The neighborhood committee should represent the residents, property owners, and businesses across the three sub-neighborhoods, and be inclusive across gender, age, and religious groups. These individuals are involved in community life and can engage in dialogue with all parties.

The committee chooses, by election or by consensus, a chair, and a secretary. A committee meeting is valid if two-thirds of the members are present; these members must include the chair and the secretary. Decisions must be taken unanimously, if possible, and by-election, if necessary, by a simple majority of all members. The members are bound by the decisions of the meetings. Details of the responsibilities of the committee are defined by an internal by-law. The committee should be officially registered as an association at the Ministry of Interior and Municipalities. The committee should represent the interests of the community groups in Karantina to the Municipality of Beirut and other official agencies. It is responsible to coordinate with the municipality and its employees to facilitate their tasks and enable them to perform their duties. The work of the committee should include conducting awareness campaigns for the people on various issues in coordination with public agencies and non-governmental organizations.

The Municipality of Barja, in the Chouf District of the Mount Lebanon Governorate, implemented a similar model of a neighborhood committee (لجنة الحي). This model can serve as a prototype in Karantina.

#### The Relevant Actors

The relevant actors include the residents of Karantina, the current and former mukhtars, the property owners, and the local businesses. They should work in coordination with the Municipality of Beirut and the Governor of Beirut, and in collaboration with local or international agencies such as the UNDP.

#### Proposed Source of Funding

Not required.

#### Approximate Financial Magnitude

Not applicable.

#### Period and Timing of Execution

Short-term     Long-term     Phased

#### Expected Results

The neighborhood committee will lobby for the interests of the community groups in Karantina. Among its many tasks, it will:

- Empower the different community groups in Karantina to voice their concerns and pursue common interests.
- Cultivate engagement with public affairs and issues of public good.
- Promote a participatory model of decision making.

## ACTION PLAN 05

### Project Title

Pool the block of unbuildable lots and develop it through a public-private partnership into an affordable and inclusive housing project that incorporates multiple typologies of residential units and accommodates different family sizes and income groups.

### General Objective(s)

- A. Protect the existing affordable housing units and provide a larger stock that is inclusive of a diversity of social and income groups.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.

### Type of Project

- Execution Project
- Regulation - Policy
- Detailed Study
- Lobbying - Advocacy
- Institutional - Committee set up
- Capacity Building
- Management - Operations plan

### Strategic Objective(s)

- A1: Protect and expand the existing stock of affordable housing units.
- A4: Provide access to new and inclusive housing units across a diversity of social and income groups.
- D1: Advance a development program for Karantina and remove existing obstacles to development.

### Project Objective(s)

The project contributes to the following strategies:

- A1.2/A4.2/D1.1: Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.
- A4.1: Diversify the typologies of housing units from studios to single family and multi-family apartments.

### Project Description (concept note)

In Al-Khodr sub-neighborhood, to the west of the main residential cluster, there is an empty undeveloped block of lots with an area above 5000 m<sup>2</sup>. Part of this block is used as car parking, while the bigger section is covered with sand and is used by local children as a playground. The block was not always unbuilt; most of it was built and occupied before the civil war. However, all the buildings were demolished. Initially, the block was divided into 44 lots; 15 lots had an area under 100 m<sup>2</sup> and were considered unbuildable according to the zoning of Beirut (zone 7). The area of the largest lot is 345 m<sup>2</sup>, while the areas of the other lots range from 100 m<sup>2</sup> to 150 m<sup>2</sup>.

All these lots have multiple owners which makes any development a costly and tedious process. However, in 2016, Mr. Tawfik Dallal bought 12 lots out of the 44 lots in the same block; 10 of these lots were located at the southern edge of the block. The two other lots are small and unbuildable and are located at the northern edge of the block. 5 of the lots that are located at the southern edge of the block, owned by Mr. Dallal, were partially affected by the highway that is planned in the LINORD Project<sup>6</sup>. Accordingly, Mr. Dallal did not pool the lots together.



Figure 3. Unbuildable lot. Source: Ali Ghaddar, 2021.

To complete the required administrative procedures, Mr. Dallal hired a lawyer for five years during the purchasing process. The lawyer managed the negotiations with the shareholders and the process of pooling lots with the relevant public institutions. Many factors, including legal and spatial factors, restrict development. These include the zoning in Beirut that sets the minimum dimensions and areas of buildable lots and the multiple ownership of lots across family generations.

Karantina is one of the few areas in Beirut that provides affordable housing units and responds to the increasing demand in the local affordable housing sector. However, Karantina is becoming less affordable due to the many factors that were mentioned above. These factors limited growth in the stock of housing units and, as a result, prevented former residents who were displaced during the civil war from returning to Karantina. This includes third-generation residents, refugees, and other low-middle-income groups. Unbuilt land must be developed to increase stock of affordable housing units and accommodate a diversity of social and income groups within Karantina and the rest of Beirut. The unbuilt block in Al-Khodr can be a great opportunity to expand the stock of housing units in Karantina. This will require funding and involve an administrative procedure for land acquisition.

Private-public partnerships in Lebanon are regulated by Law number 48/2017. The Higher Council for Privatization and Partnerships (HCPP) is the authority in charge of planning and implementing privatization programs. Proposals can be initiated by the council or the relevant ministry. Proposals that involve the municipality can be put forth to the council by the mayor (as per Article number 4). The council revises the proposal before it approves it with the relevant government agencies and with consultants (as per Articles number 4, 5, and 6). After all the necessary approvals are secured from other government agencies, a bid is open to appoint a partner from the private sector.

The Public Corporation for Housing (PCH), which operates under the Ministry of Social Affairs (MoSA) and the Municipality of Beirut and the Governor of Beirut, can initiate the proposal for the housing project. The main role of the PCH should be to facilitate access to housing units for low-income groups. Its current role involves facilitating housing loans for middle-income groups through partnerships with commercial banks. Yet, its scope of work involves initiating housing projects, processing the necessary paperwork, and ensuring that its success is not tied to uplifts in profit margins in the construction sector.

The housing project will require purchasing and pooling the lots in the block. This can be negotiated with the lot owners by purchasing their ownership shares at an agreed price or substituting their shares in the lots with shares in the project. The project will be led by the private partner agency or corporation that will develop the block into a housing project. The design of the housing project should include a wide variety of apartment typologies that can accommodate a diversity of family sizes and income groups. The timeframe of the design and construction phases, the conditions, rights, and duties of the shareholders, and the profiles of buyers should be specified in the contract; the PCH and the Municipality of Beirut should monitor the content of the contract and its application.

### The Relevant Actors

The relevant actors include the Higher Council for Privatization and Partnerships, the Municipality of Beirut, Governor of Beirut, the Public Corporation for Housing, the Council of Ministers, representatives from the banking sector, and prospective private development agencies, in collaboration with the residents of the three sub-neighborhoods in Karantina, the Directorate General of Urban Planning, and the Order of Engineers and Architects in Beirut.

### Proposed Source of Funding

Landowners in partnership with private investors, Municipality of Beirut, and the housing authorities.

### Approximate Financial Magnitude

The cost of building materials and execution is estimated at 20,000,000 USD<sup>7</sup>.

### Period and Timing of Execution

- Short-term
- Long-term
- Phased

### Expected Results

A housing project that has between 90 and 120 apartment units with a variety of typologies that can accommodate a diversity of family sizes and income groups.

<sup>6</sup> Refer to Action Plan 03.

<sup>7</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 06

### Project Title

Revoke the policies that exempt the owners of vacant apartments from paying taxes, introduce a vacancy tax, and encourage or mandate the development of mixed-income housing units through building or tax incentives and Inclusionary Housing Ordinance<sup>8</sup>.

### General Objective(s)

A. Protect the existing housing units and provide a larger stock that is inclusive of a diversity of social and income groups.

### Type of Project

- |   |   |
|---|---|
| <input type="checkbox"/> Execution Project                | <input checked="" type="checkbox"/> Regulation - Policy |
| <input type="checkbox"/> Detailed Study                   | <input type="checkbox"/> Lobbying - Advocacy            |
| <input type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building              |
| <input type="checkbox"/> Management - Operations plan     |   |

### Strategic Objective(s)

A1. Protect and expand the existing stock of affordable housing units.

A4: Provide access to new and inclusive housing units across a diversity of social and income groups.

A8: Improve the livability and building conditions within the residential clusters.

### Project Objective(s)

The project contributes to the following strategies:

A1.2/A4.2/D1.1: Release frozen, militarized, and unbuildable privately owned lots, and facilitate the development of new housing units.

A4.1: Diversify the typologies of housing units from studios to single family and multi-family apartments.

A8.2/E1.1: Offer financial packages and incentives to support the landlords in rehabilitating their residential buildings and maintain the stock of affordable housing units.

The financial packages should include:

- Implementing a vacancy tax.
- Removing Article number 15 from the 1962 Built Property Tax Law.
- Removing Article number 3 from the Municipal Rental Value Fee.
- Supporting the development and implementation of an Inclusionary Housing Ordinance.

### Project Description (concept note)

The housing market in Beirut is characterized by high vacancy rates, high rental prices, and a lack of affordable housing units. Karantina is one of the few areas in Beirut that offers a limited number of affordable housing units that are currently under threat. The answers to the household questionnaire conducted by the Beirut Urban Lab showed that most of the residents spend more than 30% of their income on rent.<sup>9</sup> Additionally, the renovations after the port blast resulted in rent hikes and evictions. Property owners favor tenants who are willing to pay higher prices for the refurbished units.

Although Karantina's vacancy rate is much lower than many areas in the rest of Beirut, there are buildings that are dilapidated and abandoned. Additionally, property owners are converting housing units that are in a good condition into office space to attract tenants who can afford higher rents. Property owners who are unable to find tenants who can afford higher rents are more inclined to leave their residential and commercial units empty for future opportunities, instead of lowering the asking price.

The current taxation framework allows property owners to benefit from high vacancy rates due to the tax exemptions in the Built Property Tax Law from 1962 (ضريبة الأملاك المبنية) and the law for the municipal rental value fee (رسم القيمة التاجيرية). The former is an annual tax that property owners must pay when they collect rent while the municipal rental value is the one imposed on tenants to cover the costs of municipal public works. Article number 15 from the 1962 law and Article number 3 from the municipal rental value fee exempt the owners of vacant units from paying taxes when they do not have a property income from rent payments. This decreases the number of housing units on the market and also incentivizes residents to report their apartments as empty because they can benefit from these exceptions. This practice has resulted in a vacancy rate of 23% in municipal Beirut, as per the Beirut Urban Lab. While the reported rate of vacancy stands at 50%, as many residents mis-report their homes as vacant to avoid paying taxes. This comes at a cost to the municipality's coffers.<sup>10</sup>

There are very few taxes that the Municipality of Beirut can directly collect to finance public services. The only other source of revenue is from construction permits for high-rise buildings. As a result, the municipality is reluctant to permit the demolition of older buildings. This is the wrong incentive structure for public authorities and residents alike. It will increase rent values and enlarge the gap between the actual housing supply and the demand for affordability, especially in places like Karantina.

Lebanon does not have incentives for developers to build housing units that are sold or rented out below the market rates. According to the 2004 Building Law, property owners can exceptionally build luxury high-rise buildings on pooled lots with a total area that is above 4000 sq. m, as a result, overriding the limitations in the zoning for Beirut. Also, through the Investment Development Authority of Lebanon, major building projects are additionally exempted from permitting fees and taxes. It further encourages property owners to pool adjacent lots and replace low- to mid-rise buildings with high-rise buildings.

Lebanon also lacks policies that facilitate inclusionary practices in the production of housing. Unlike major cities around the world, Beirut does not have an inclusionary zoning ordinance that incentivizes property owners to allow a certain portion of their units to be affordable according to the average local income levels. Affordable housing as a policy agenda and requirement is also absent from Lebanese urban planning.

Accordingly, the proposed project aims to increase the stock of affordable housing units in Karantina and respond to the increasing demand for housing units by facilitating new developments that can cater to a diversity of social and income groups. It proposes financial incentives to landlords and property owners to comply with the requirements of the new vacancy tax and benefit from the incentives in the Inclusionary Housing Ordinance.

This project proposes removing Article number 15 from the 1962 law and Article number 3 from the law for the municipal rental value fee and adding a vacancy tax on empty residential and commercial units. The tax should apply to the units that are vacant for more than one calendar year and should be equivalent to a set percentage of the value of the unit. It will encourage landlords to rent units in their buildings even if at lower prices. It will also reduce the potential for property hoarding that can be put on the market again. However, this is not without challenges. In the country's 2022 budget, the finance and budget committee in the Lebanese parliament rejected a proposal to tax vacant properties at half of what occupied units are taxed.

The project also proposes that the Municipality of Beirut and the Directorate General of Urban Planning introduce incentives such as density bonuses that encourage developers to build affordable residential units that are priced below the market rates. The bonuses allow property owners to increase their total built-up area or surface exploitation depending on the conditions of the lot, or benefit from exemptions in property tax registration. This would allow for the construction of additional units and would offset the cost of adding below-market rate units to the development.

<sup>8</sup> This should be part of a comprehensive land use plan that addresses both the supply and demand of residential and affordable housing units.

<sup>9</sup> See page 76 of the report.

<sup>10</sup> See page 60 of the report.

The Municipality of Beirut should implement an Inclusionary Housing Ordinance, as part of the permitting process, to create developments that can accommodate a diversity of income groups. This will require developers to set aside a percentage of the units in the building for sale or rent at a below-market rate. The percentage varies in cities around the world, in Boston it is set at 13%, for example, whereas in London it is 30%. The value can be calculated according to the average income of people in the area where the building is located. This formula will, to an extent, allow people to feel a sense of belonging to their city. The housing units will be proposed on the brownfields and the pooled lots in Karantina.

#### The Relevant Actors

The relevant actors include the Municipality of Beirut and the Governor of Beirut, in collaboration with the Ministry of Finance, the Public Corporation for Housing through the Ministry of Social Affairs, the Directorate General of Urban Planning, and members of the Lebanese parliament.

#### Proposed Source of Funding

Public authorities involved.

#### Approximate Financial Magnitude

Not applicable.

#### Period and Timing of Execution

Short-term  Long-term  Phased

#### Expected Results

- An increase in the availability of affordable housing units for a diverse range of household sizes and income levels.
- An increase in the availability and diversity of typologies of housing units.
- A decrease in vacancy rate of residential units in Karantina and the rest of Beirut.
- A decrease in the gap between supply and demand for residential units, in the process, mitigating the increase in the market prices of residential units.
- A residential real estate market that includes low to moderate income housing units.
- Ensuring the inclusion of actors from both the private and public sectors in the provision of affordable housing units.

## ACTION PLAN 07

#### Project Title

Propose a strategy to reform the new system of housing bank loans to enable vulnerable groups of people to own their houses in Karantina.

#### General Objective(s)

- A. Protect the existing housing units and provide a larger stock that is inclusive of a diversity of social and income groups.

#### Type of Project

- Execution Project  Regulation - Policy  
 Detailed Study  Lobbying - Advocacy  
 Institutional - Committee set up  Capacity Building  
 Management - Operations plan

#### Strategic Objective(s)

- A1: Protect the existing stock of affordable housing units.  
A4: Provide access to new and inclusive housing units across a diversity of social and income groups.

#### Project Objective(s)

The project contributes to the following strategy:

A1.3: Facilitate the ownership of the existing stock of affordable housing units.

- Utilize the funds from the State of Kuwait to help residents in Karantina who were impacted by the port blast to purchase their houses.
- Expand the loan program to the residents of Beirut, especially the ones who were impacted by the port blast.

#### Project Description (concept note)

The rate of home ownership among the residents of Karantina is low. The answers to the questionnaires by the research team at the Beirut Urban Lab showed that 22.4% of the households own their houses and around 73% are tenants.<sup>11</sup> Many of the residents are old tenants on rent control and face rent stabilization by 2026. One of the aims of this proposed project is to increase the stock of affordable housing units and facilitate home ownership for the existing tenants through funding opportunities. Several subsidized loan programs were implemented after the civil war to increase home ownership for Lebanese people, including the Housing Bank loans and the Public Corporation for Housing loans. They limited the role of the government to a facilitator of housing loans rather than a provider of housing units. And, as the result, the loan programs contributed to the rising inflation in the residential market and were stopped in 2018. Fortunately, despite the ongoing economic crisis in Lebanon, funds became available to the government in 2022 to support Lebanese people in buying houses. Earlier in 2022, Banque de l'Habitat (the Housing Bank) announced that they will relaunch one of their loan programs with a credit line from the State of Kuwait for 163 million USD.<sup>12</sup> The loan opportunity is open to low- to middle-income Lebanese people. The repayment schedule is over a period of 30 years at an interest rate of 4.99% (Gemayel, F., 2022).

The loan amount is in the Lebanese currency and is equivalent to up to 80% of the price of the house. The buyers will need to contribute a down payment that is equivalent to 20% of the price of the house.

<sup>11</sup> See page 74 of the report.

<sup>12</sup> Part of this fund will be used for solar energy loans.

There are some conditions that restrict the eligibility of the residents of Karantina to the loan program, namely that any purchase cannot occur in an urban area. The Housing Bank adopts the definitions of urban and rural areas by the Ministry of Interior; as such, Karantina is considered an urban area inside the city of Beirut despite its low density and village-like character.

The Lebanese government needs to revise the terms, conditions, and eligibility criteria of the loan program and allocate part of it to the residents of Karantina; residents who, in addition to the severe impact of the port blast, faced multiple traumas since the civil war and were not properly compensated. Additionally, like the Public Corporation for Housing loans, the residents of Karantina should be exempted from paying registration fees. Accordingly, this project proposes to amend the conditions of the loan program to accommodate the residents of Karantina. This program should help facilitate the home ownership of the existing stock of affordable housing units to vulnerable and low-income tenants. Facilitating home ownership for this group protects their tenure rights and safeguards the social fabric of the area where they live. Studies showed that home ownership increases the attachment of residents to their neighborhoods and their engagement in its future. It also helps anchor them to the place.

The following steps are required to turn the proposed amendments of the loan program into an action plan:

- Revise the condition of the loan that currently limits the locations of houses to rural areas to benefit the residents of Karantina.
- Prioritize the victims of the port blast who are threatened with displacement.
- Increase the loan amount from 40,000 USD per person to 75,000 USD per person to reflect the property prices in Beirut.
- Establish a hierarchy of needs to determine the eligibility criteria. The eligibility criteria should include income level, overall level of vulnerability, attachment to the neighborhood, and the likelihood of the household to remain in the neighborhood.
- Utilize the database by the Beirut Urban Lab at the American University of Beirut to establish the hierarchy of needs and support local stakeholders in processing the loan applications.
- Add special provisions that prohibit the reselling or leasing of the house for a period to reduce the risk of real estate speculation and the financialization of housing.<sup>13</sup>
- Use the loan program to finance the refurbishment of houses that are dilapidated and abandoned.

### The Relevant Actors

The relevant actors include the Ministry of Finance and Banque du Liban.

### Proposed Source of Funding

Authorities involved.

### Approximate Financial Magnitude

To be determined by authorities involved.

### Period and Timing of Execution

Short-term  Long-term  Phased

### Expected Results

- An increase in the levels of home ownership among the residents in Karantina.
- A decrease in the rate of displacement among the residents.
- A decrease in the number of problems that are associated with old rent contracts for three residents who are at risk of being evicted by 2026.

## ACTION PLAN 08

### Project Title

Establish a Business and Career Training Center in Karantina.

### General Objective(s)

- Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.
- Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- Support, increase, and sustain cultural and economic vitality in Karantina.

### Type of Project

- Execution Project  Regulation - Policy  
 Detailed Study  Lobbying - Advocacy  
 Institutional - Committee set up  Capacity Building  
 Management - Operations plan

### Strategic Objective (s)

A2/C2: Provide job opportunities for the residents of Karantina.

B5: Strengthen the role of economic drivers to connect Karantina to the city scale economy.

B6: Provide access to job opportunities in micro, small, and medium businesses.

B7: Connect the different businesses within Karantina.

C3: Support the existing micro businesses and sustain their operations in Karantina.

C4: Increase the diversity and vitality of the traditional crafts and other manufacturers in Karantina.

C5: Support the growth of port-related businesses.

### Project Objective (s)

The project contributes to the following strategies:

A2.1/B6.1/ C2.1: Build the capacities of the residents of Karantina and match them with job opportunities.

A2.2/ B6.2/ C2.2: Match the skilled workforce with the businesses in the area and connect them with the job market at a larger scale.

B5.2/ B7.1 / C5.1: Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses.

C3.2: Connect the micro and specialized businesses with online platforms and services to enhance their operations.

C4.2: Train a new generation of craftsmen to sustain their crafts by:

- Establishing a facility that offers capacity building workshops.
- Setting up a program that helps businesses improve their operations and management procedures.
- Design a digital platform that links businesses with each other and with people looking for job opportunities.
- Encourage connections between different economic actors.

### Project Description (concept note)

Karantina is home to a wide range of economic activities that serve multiple user groups on the local and national scales of Beirut and Lebanon. It also has potential for significant growth given the relatively low rent prices in Karantina and its strategic location close to the port and the Beirut Central District. It has important light industries and government facilities like the slaughterhouse and the public markets that act as key economic drivers. Also, recently, before the port blast, many entertainment and cultural functions like nightclubs, galleries, and ateliers opened in Karantina to attract new user groups.

<sup>13</sup> For example, in Latin America, some of the squatters were given ownership of the pieces of land where they lived. However, in some cases, they sold their houses on these pieces of land to developers for real estate speculation.

However, in a context of accumulating traumas and crises – the civil war, the ongoing economic crisis, the 2020 port blast, and the Covid-19 pandemic – many businesses closed, and the unemployment rate in Karantina reached a very high 70%. The surviving businesses are suffering, and many are threatened with closure. Some of the major economic drivers, such as the public market and the slaughterhouse, were already closed before 2019, and the others are facing a drastic loss in clients. Moreover, the port blast did not only cause direct physical destruction to the facilities of the businesses but also disrupted the port's operations, which in turn stifled the activities of the port-related businesses in Karantina. Furthermore, micro-enterprises as well as craft businesses are struggling with the increase in rent and production costs, coupled with a decline in demand. And most of the micro business owners who do not have university degrees rely on conventional tools and methods to trade and manage their businesses, which further limits their ability to adapt to the current dire conditions in Lebanon. As for the trend of new cultural activities coming into Karantina, it has been stalled since the port blast and economic crisis, depriving Karantina of possible economic and cultural benefits.

Given this decline in economic activities, the already high unemployment levels in Karantina were aggravated. Around a third of those who are currently unemployed used to have jobs. 54% of them lost their jobs in the last 3 years as a result of the economic crisis and the pandemic, while 27.5% lost their jobs following the port blast. But even before these problems, Karantina was suffering from high unemployment rates. This could be partly attributed to the fact that a large portion of the labor force in Karantina is low-skilled, which adversely affects their employability. More than two-thirds of workers have received neither higher education nor vocational training. Nonetheless, even the highly educated residents in Karantina who completed bachelor's and master's degrees are struggling to find job opportunities, inside or outside the neighborhood. Here, it must be noted that the larger businesses in Karantina, mostly involving logistics companies, entertainment businesses, and galleries, barely hire people from the Karantina, partly due to their lack of knowledge of the local qualifications and skills. For instance, during one of the town hall meetings, the residents pointed out that “there is a lack of communication between us [the Karantina residents] and these companies.”<sup>14</sup>

Accordingly, this proposed project mainly aims to support existing businesses and build their capacities. The intent is to establish in Karantina a business and career training center that invests in workforce training programs, offers guidance for business development, and matches workers with job opportunities. This center, requiring an area between 400 and 600 sq. m<sup>15</sup>, could be hosted in a new construction on vacant municipal property or in an existing building to be renovated. Its operation could be handled by local or international non-governmental agencies or initiatives that tackle development and training for the workforce and businesses.



**Figure 4.** A schematic of the proposed business and career training center. Source: The Beirut Urban Lab, 2022.

Firstly, among the services provided would be a career guidance program that aims at supplying individuals with the knowledge and skills that are needed for job hunting: resume assistance, mock-up interviews, assistance with job applications, and job search coaching.

Secondly, the center would foster capacity-building workshops for a wide range of skills and, thus, respond to the needs of the different economic actors in Karantina. Certain workshops would target workers and unemployed individuals, train them, and increase their qualifications. It is recommended to develop skills that are tailored to the needs of the businesses based on a labor force demand survey. This would provide benefit not only to the workers but also to the businesses, namely cultural facilities in the area such as Forum de Beyrouth and FLYP, as well as the port-related businesses, which would benefit from the proximity of a compatible and skilled workforce.

Also, certain workshops would directly target the businesses. Workshops on online marketing tools and strategies, for example, would be particularly useful for micro-businesses as grocery shops, mechanics shops, bakeries, and others. As for older manufacturers and handicraft businesses such as carpentry and steel lathe businesses, workshops on the promotion and sustenance of these threatened crafts would be beneficial. These workshops would not only spread and pass on the craft knowledge to a new generation of craftsmen but also provide an opportunity for the present-day craftsmen to network, share knowledge about techniques and efficient supply chains, and coordinate efforts and resources. For various types of businesses in Karantina, and especially for businesses that provide logistics and shipping services, workshops for business management and commercialization, covering basic market research design and product labeling and packaging would enhance their level of competitiveness and growth potential.

Thirdly, sustainable business planning services could also be offered within the center and supplement the capacity-building workshops. The businesses would also be provided with counseling services on issues like business planning, management, and budgeting and in the use of digital technologies, business record keeping, and legal registration.

Finally, approaches and programs for job matching are important; the center can arrange connections between the workers and businesses within Karantina and beyond, along two tracks. On the one hand, it can facilitate direct, live contact through job fairs. On the other hand, it can establish virtual contact through setting up a digital platform that displays the profiles of the workers and the local businesses and posts for job openings. Furthermore, this platform can help the different businesses discover one another, identify their similarities and complementarities, and engender communication and networking. As a result, the capacities and connections between both businesses and employees can potentially expand, leading to higher levels of productivity and employment rates.

#### The Relevant Actors in the Design and Execution Phases

The relevant actors include local or international agencies and organizations that engage with similar work such as the Lebanese Training Center within the Chamber of Beirut and Mount Lebanon, trade unions, ESCWA, UNESCO-UNEVOC, Borderless, ACTED, the Center for Social Science Research and Action, Semeurs d'Avenir, and IECD-Maharat Li Loubnan, in collaboration with public actors such as the Ministry of Labor, the Ministry of Economy and Trade, the Ministry of Social Affairs, and the Municipality of Beirut (to provide the lots).

#### Proposed Source of Funding

They can include the Ministry of Labor, the Ministry of Economy and Trade, and the Ministry of Social Affairs in Lebanon with possible support from international agencies with similar scope of work like the ILO, the UNDP, UNESCO, USAID, CFSD, CIDA; ESCWA, AFD, the EU ERASMUS+ program, and TİKA<sup>16</sup>.

#### Approximate Financial Magnitude

The total annual cost of operating and managing the center is estimated at 160,000 USD. This estimate includes the capacity building workshops, the business support services, support services for people looking for job opportunities, the labor force demand survey, the job matching live activities, and setting up the digital platform.

The proposed area of the center is between 400 and 600 sq. m, estimated<sup>17</sup> to cost between 280,000 and 420,000 USD for new construction and between 180,000 and 270,000 USD for the renovation of an existing building<sup>18</sup>.

<sup>14</sup> First town hall meeting in Karantina on 11 April 2022.

<sup>15</sup> Two to four 48 sq. m classrooms for 20 people each; one 60 to 80 sq. m workshop for 10 to 20 individuals; one 60 sq. m computer lab for 20 people; one 80 sq. m administrative area (three offices, a reception area, and an administrative utility spaces); one 40 sq. m lunchroom and meeting room; one 20 to 40 sq. m general utility room; and a circulation space that is equivalent to 20% of the total area.

<sup>16</sup> The Turkish Cooperation and Coordination Agency (TİKA) is a government department that operates under the Turkish Ministry of Culture and Tourism. TİKA provides various types of development assistance, like capacity building programs to developing countries, with a particular focus on Turkic and African countries and communities.

<sup>17</sup> The costs are estimated as follows: 200 USD per 1 sq. m in furnishing costs, 500 USD per 1 sq. m for new constructions, and 250 USD per 1 sq. m for the renovation costs.

<sup>18</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

**Period and Timing of Execution**

Short-term     Long-term     Phased

**Expected Results**

- An increase in the employment rate in Karantina.
- A larger and more active labor force in Karantina, with improved local skills and capacities.
- An increase in the performance of the Karantina businesses in terms of management, administration, capacities, and upscaling potentials.
- A stronger link between local jobseekers and recruiting businesses.
- Better networking opportunities and coordination between the local businesses.
- Local crafts that are preserved through the circulation of knowledge and skills to younger generations.

**ACTION PLAN 09****Project Title**

Rehabilitate the slaughterhouse following international environmental standards and construction codes and reform its management and operation systems before it reopens.

**General Objective(s)**

- B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- C. Support, increase, and sustain cultural and economic vitality in Karantina.

**Type of Project**

- Execution Project
- Regulation - Policy
- Detailed Study
- Lobbying - Advocacy
- Institutional - Committee set up
- Capacity Building
- Management - Operations plan

**Strategic Objective(s)**

A2/C2: Provide job opportunities for the residents of Karantina.

B5: Strengthen the role of economic drivers to connect Karantina to the city-scale economy.

C1: Restore and strengthen the role of the key economic drivers in Karantina.

**Project Objective(s)**

The project contributes to the following strategies:

A2.3/ B5.1/ C1.1/ C2.3: Revitalize three of the economic drivers: the slaughterhouse, the public market, and the fish market, through:

- Increasing the number of commercial activities in Karantina
- Adopting international standards and regulatory framework for the monitoring and management of the facility. This includes hygiene standards, for example, HACCP, SSOPs, FAO, ISO, and CAC/RCP 58-2005.
- Mitigating the exposure of the residents in Karantina to residual waste from the slaughterhouse and the associated health risks.
- Improving the level of awareness of the employees, especially regarding the tools for managing waste in the slaughterhouse.
- Rebranding the slaughterhouse to reestablish its service in the meat trading market.

**Project Description (concept note)**

Karantina's slaughterhouse was a key economic driver in Karantina. Located to the northeast of Karantina next to the Beirut River, the slaughterhouse is around 6,000 sq. m and occupies municipal land with an area of 16,000 sq. m.

The first slaughterhouse was established at the turn of the 20th century on the northern edge of Karantina on the Mediterranean Coast. It was the largest slaughterhouse in Lebanon and took advantage of the transportation network that was established for the port. The transportation network linked the slaughterhouse to trade networks in Lebanon and beyond. It attracted traders and other commercial activities to Karantina and was considered a valuable economic asset for many of its residents; it provided them with job opportunities and was a source of income. However, the slaughterhouse was closed during the civil war years (1975-1990) and was occupied by Lebanese militia forces until the army took over. In 1992, the facility reopened after 15 years of closure in its current location to the northeast of Karantina.

However, the Ministry of Public Health, along with the governor of Beirut, officially shut down the new slaughterhouse in 2014 as it did not meet the minimum health requirements and used contaminated water to clean the meat products. The facility was also a subject of an international campaign that reported on the inhumane treatment of animals. The safety and health of employees working in this facility were also at risk since they were exposed to highly contaminated materials. Due to pressures from the residents of Karantina, there were plans to partially re-open this slaughterhouse by 2020 after its rehabilitation. However, the plans were not implemented. In the aftermath of the port blast, the physical structure of the slaughterhouse was heavily damaged, and the land around it was being used to dump piles of debris, rubble, and demolition waste.

This project proposes to reopen the slaughterhouse in its existing location, as it is a valuable economic asset, and to operate it with high environmental and hygienic standards. It should provide job opportunities to the residents of Karantina and once more attract clients from all over the country. It should have adequate basic amenities like proper flooring, water supply, and ventilation. Its administration should also provide guidelines for operations including humane slaughtering, implant control measures, by-product recovery (blood, rumen, fat, and dissolved air flotation), and waste management systems (effluent water, solid waste, and odors).



Figure 5. The dilapidated condition of the current slaughterhouse in Karantina. Source: Abir Cheaitli, 2021.

Additionally, the layout of the facility should provide an opportunity for inspection and evaluation by clients to allow for a level of transparency and reverse, to an extent, the stigma around the slaughterhouse. The overall objective is to produce healthy meat, maintain good hygiene and sanitation, and minimize environmental risks for the slaughterhouse to become a positive economic magnet and contribute to Karantina's economic vitality.

#### Operation:

The Municipality of Beirut owns the slaughterhouse and manages the operation of its employees. Due to limited financial resources and other complications, the municipality was unable to improve the operation of the slaughterhouse to meet international standards for hygiene. Moreover, an ex-employee mentioned in an interview<sup>19</sup> that the slaughterhouse facility used to house between 50 to 100 cows and 1000 to 1500 sheep and performed about 1000 slaughters per day. However, he claims that the pollution levels in the slaughterhouse were not the result of its management and operations but rather due to its practices, such as improper bone crushing and solid waste disposal in the Beirut River. As a result, he rejects all the allegations made against the slaughterhouse. Hence, it is evident that the slaughterhouse should not only improve its operation towards waste generation but also advocate for the prevention of dumping waste into the Beirut River and finding sustainable methods for bone crushing and the disposal of other solid waste products.

Therefore, it is recommended to create a cooperative or a public-private partnership to manage and operate the slaughterhouse. This proposal requires the evaluation of the institutional set-up in charge of the operation and management of the slaughterhouse and its capacity. This includes roles, responsibilities, functions, regulations, service provisions, monitoring, and financing. The evaluation should also provide capacity building workshops to improve the technical and organizational abilities of the staff and administration. In addition, the collaboration for the implementation of the proposal should include the concerned ministries such as the Ministry of Environment to manage the solid waste generated in a sustainable manner, and the Ministry of Energy and Water which is responsible for the Beirut River and its cleanliness to address the problems of wastewater discharged from the slaughterhouse.

#### The Relevant Actors in the Design and Execution Phases

The relevant actors include the Municipality of Beirut and the Governor of Beirut, in coordination with relevant actors, such as meat processors and processing companies, the Butchers Union and Livestock Traders Syndicate, the Lebanese Meat Traders, the Ministry of Environment, the Ministry of Agriculture, the Ministry of Energy and Water, and the Ministry of Public Health, and in consultation with the neighborhood committee in Karantina.

#### Proposed Source of Funding

Relevant public actors such as the Ministry of Economy and Trade, the Ministry of Agriculture supported by relevant private investors such as Ghanem Frozen Meat Est, Al Taghziah, and Sara Food Group and non-governmental organizations such as KFAED<sup>20</sup>, LFF<sup>21</sup>, and GIZ<sup>22</sup>.

#### Approximate Financial Magnitude

The cost of the rehabilitation of the slaughterhouse is estimated between 4,000,000 and 6,000,000 USD; the cost ranges between 350 USD per 1 sq. m to 600 USD per 1 sq. m.

The cost of the required equipment is estimated between 600,000 and 1,000,000 USD; the cost ranges between 100 USD per 1 sq. m to 150 USD per 1sq. m.

The annual operational cost for the facility, including animal slaughtering and processing, employment services, merchant wholesalers, electricity, water, and maintenance, is estimated between 100,000 to 300,000 USD<sup>23</sup>.

#### Period and Timing of Execution

Short-term     Long-term     Phased

#### Expected Results

- A healthier and more environmentally friendly approach to meat production.
- Improved income for the residents of Karantina and more job opportunities, especially for the residents of Al-Khodor sub-neighborhood.
- Improved infrastructure and waste management in the slaughterhouse.
- Sustainable development and long-term growth in the meat production sector in Lebanon.

<sup>20</sup> The Kuwait Fund for Arab Economic Development (KFAED) is the State of Kuwait's agency for the provision and administration of financial and technical assistance to developing countries like Lebanon. In 2015, the Kuwait Fund provided a loan in the amount of 22 million USD for the financing of the Tripoli slaughterhouse.

<sup>21</sup> Lebanon Financing Facility (LFF) is multilateral donor agency that pooled grant resources and strengthened the coherence and coordination of financial resources for the immediate socio-economic recovery of vulnerable people and businesses that were impacted by the port blast.

<sup>22</sup> Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is a German development agency that provides services in Lebanon in the field of economic development and employment, education and security, reconstruction, and peacebuilding.

<sup>23</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

<sup>19</sup> Fakir al-din Shehadeh, interviewed on 27 May 2021 by Ali Ghaddar and Abir Cheaitli.

## ACTION PLAN 10

### Project Title

Rehabilitate the public and fish markets and reform their operations and management systems before they reopen.

### General Objective(s)

- Protect the existing affordable housing units and provide a larger stock that is inclusive of a diversity of social and income groups.
- Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- Support, increase, and sustain the cultural and economic vitality of Karantina.

### Type of Project

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Execution Project            | <input type="checkbox"/> Regulation - Policy |
| <input type="checkbox"/> Detailed Study                          | <input type="checkbox"/> Lobbying - Advocacy |
| <input type="checkbox"/> Institutional - Committee set up        | <input type="checkbox"/> Capacity Building   |
| <input checked="" type="checkbox"/> Management - Operations plan |  |

### Strategic Objective(s)

A2/C2: Provide job opportunities for the residents of Karantina.

B5: Strengthen the role of economic drivers to connect Karantina to the city-scale economy.

C1: Restore and strengthen the role of the key economic drivers in Karantina

### Project Objective(s)

The project contributes to the following strategies:

A2.3/ B5.1/ C1.1/ C2.3: Revitalize three of the key economic drivers: the slaughterhouse, the public market, and the fish market.

B1.3: Create socio-spatial hubs around the economic drivers in relation to the sea.

This requires:

- Rehabilitating and reopening the public market.
- Rehabilitating and enhancing the performance of the fish market.
- Activating the underutilized urban space around the public and fish markets.
- Expanding the commercial and cultural programs in the markets and introducing recreational spaces.
- Reforming the operations and management systems of the markets and assessing the PACM (owning and managing body) in terms of institutional oversight and responsibilities.

### Project Description (concept note)

The public or popular market (السوق الشعبي) and central fish market (سوق السمك المركزي) are owned and operated by the Public Authority for Consumer Markets (PACM). They have been among Karantina's main economic drivers and connectors with the city-wide economic network. The markets are on the northeastern side of Karantina and occupy a 45,000 sq. m lot that is bordered by the port and the Beirut River. The public market occupies 3,500 sq. m while the fish market occupies 1,200 sq. m

The public market initially opened in 1996 and operated for four years before its closure. It reopened in 2014 for a short period before closing again. It has a history of employing over 300 workers with many skills and from different backgrounds, providing opportunities to shop owners including women, and bringing people from all over Beirut and beyond to Karantina.

The central wholesale and retail fish market opened in 1995 and continues to provide job opportunities and activate the retail market. It also supplies many restaurants in Beirut with both fresh and frozen fish. While it remains in operation, the fish market is suffering from a major decline in its activities following the economic crisis in Lebanon, which was further exacerbated by the port blast that damaged the structure of the facility.

The proposed project aims to revitalize the markets and reactivate them as economic drivers in Karantina. It further aims to transform the markets, along with the large empty space in front of the markets, into urban nodes. This is possible by expanding the existing program and setting up an efficient management scheme to create a socio-economic hub. Accordingly, the success of the project depends on the proper treatment and resolution of its different yet interdependent components.

Structures of the public and fish markets have a similar design that uses hangar structures. However, their haphazard position does not properly define the in-between outdoor space. A large, underutilized space is left over from the 45,000 sq. m lot. It is partly used as parking and partly left abandoned and littered. This is detrimental to the image, activity, and potential of the markets as economic drivers in Karantina. Accordingly, the project intends to consolidate the markets with the surrounding space into a coherent and synergetic urban hub that is connected to and benefits from the adjacent natural elements. This requires programmatic and volumetric expansion, part of which should include the construction of an annex with a fish restaurant.



Figure 6. Fish market. Source: Rami Shayaa, 2021.

The annex should be positioned northeast of the fish market and to the south of the public market, while remaining distant from both to create porosity and maintain a connection with the Beirut River, its estuary, and the sea. Ideally, when the open space network<sup>24</sup> is implemented, it will enhance the connection to the Beirut River, its estuary, and the proposed park in Bourj Hammoud Landfill thus amplifying the experiential and social values of the project. The design of the proposed annex should also contribute to forming a U-shaped configuration that clearly defines a courtyard space in front of the buildings. The courtyard has the potential to become a lively public space, with urban furniture and vegetation, and will be animated with gatherings and events. Play and sports areas should also be integrated into this space, catering to different age groups. The fish restaurant in the annex should be leased to and operated by a private business. The restaurant and fish market can mutually benefit from one another since the restaurant will use the products from the market and, as a result, will not incur any transportation costs. Moreover, it will offer job opportunities for the residents of Karantina, provide space for socialization, and enhance the economy.

### Markets Rehabilitation:

A physical rehabilitation of the structures of the public and fish market is necessary to revive their activities. Both buildings are single floor corrugated metal structures with partial glazing, outdoor canopies, and metal entrance gates. The buildings are both raised, and a few steps provide access to the visitors. Both buildings show signs of damage from the port blast such as missing glazing, holes, and dents in the corrugated metal ceilings, damaged canopies, and rusted lighting fixtures. Rehabilitating the structures requires renovating the damaged glazing and fenestration, upgrading the roofs, cleaning the rust off the structures, applying an anti-corrosive layer of coating, and replacing the canopies. The design should also be inclusive and follow guidelines for disability access.

The public market is more deteriorated than the fish market due to many years of abandonment which was exacerbated by the port blast. In certain areas, the corrugated metal ceiling is falling. The ceilings in the offices collapsed and the insulation is damaged. Additionally, the interior requires reconfiguration, new tiles, new paint finishes, and new lighting.

Although the fish market was partly fixed to maintain its operation, this proposed project must improve the storage in the markets, the presentation of products, and waste by-product management to improve levels of hygiene and sanitation and create a more appealing image for the customers. Marketing and branding improvements are required with interior design works to improve the quality of the stations. It is also important to provide the market with new refrigerators to prolong the shelf life of the fish products, increase the storage capacity, and decrease waste. They will require reliable access to electricity.

<sup>24</sup> Refer to Action Plan 13

Thus, the introduction of solar panels as a sustainable and more reliable source of electricity for the market is an important element of this proposal. This proposal will contribute to increasing the activities and outputs of the market, elevating the customer experience, and improving working conditions.

#### Operations and Management:

The Public Authority for Consumer Markets (PACM) is a public institution that operates directly under the authority of the Presidency of the Council of Ministers. It is responsible, among other things, for managing and investing in consumer markets, including the fish and vegetable and fruit sectors. Since its establishment in 1996, the PACM has overseen the markets in Karantina, their management, and operations. However, given the ongoing, years-long closure of the public market and improper conditions of the fish market, it is evident that the PACM was not able to fulfill its responsibilities. It should be noted that some additional factors play a role in hindering the success of the markets in Karantina, such as the polluted urban environment, the remote location, and difficult accessibility to the facilities. These issues are beyond the PACM's scope of work and are the responsibility of other public authorities, including the Municipality of Beirut and the relevant ministries, which suggests the need for more collaborative efforts. As for the closure of the public market specifically, the PACM was seeking the relocation of the Souk El Ahad (a weekly public market) from Sin El Fil to Karantina, yet the vendors' cooperative rejected the proposal (Ghoussain, 2019). The suboptimal hygienic conditions and the insufficient maintenance of the fish market and due to the PACM's underperformance and limited resources. It argues that it has an insufficient budget<sup>24</sup>, between 871 and 878 million Lebanese Pounds (Gherbal Initiative, n.d), and a shortage in staff (Al-Anbaa News, 2018). The PACM directors assert that the institution's workload requires around 60 employees and cannot be handled adequately with the current number of employees (between 20 and 30). Here, it must be noted that the tasks of the PACM, in addition to setting up public markets, vary in scope and include guiding consumers, protecting them from exploitation and fraud, encouraging them to consume national products, and fighting monopolies and speculative pricing.

Accordingly, the project recommends assessing the institutional set-up of the PACM, the staff size, and its objectives. For example, integrating the PACM into the Ministry of Economy and Trade (MoET) is possible, given that their roles are similar. The MoET is the most suitable ministry to supervise the work of the PACM instead of the Presidency of the Council of Ministers. The scope of the work of the PACM can also be redefined if the assessment shows redundancies and overlaps in functions with other active public agencies. Accordingly, the responsibilities of the PACM can be reduced and its budget and number of employees reworked.

Any proposed model for the operations must be supplemented with capacity building workshops for the employees and management staff at the PACM to enhance their technical and organizational skills. Transparent standards of operations for managing the markets must be adopted, covering issues of on-site management, market rules, budgeting, and marketing. Additionally, guidelines for clear tendering and bidding procedures and the selection of vendors must be set, and priority should be given to vendors that provide local products. These changes can be directly implemented to reopen the public market. As for on-site management, cleaning and waste disposal services must be more frequent throughout the day to guarantee high hygienic standards and positive consumer perceptions. These changes can enhance the collaboration between the relevant public institutions and other market stakeholders, ensure more efficient use of public resources, and create more vibrant and effective markets.

Proper maintenance of the areas around the markets is also important and requires coordination between the Municipality of Beirut, the Governor of Beirut, and the relevant ministries. It requires maintaining the street access to the markets from the Charles Helou Highway and from within Karantina, keeping them clean, providing lighting fixtures, and increasing green areas, while enhancing the walkability of the streets from Karantina.

PACM should receive funding support to provide free bus services to ease the movement to and from the markets. Additionally, trucks must not be allowed to circulate in the streets leading to the markets and should be provided with alternative parking spaces in the port<sup>25</sup>. The improvements to these streets, along with the implementation of the open space network, will potentially strengthen the spatial links into the markets, improve the quality of the surrounding urban environment, and, as a result, allow the markets to properly function as an urban node.

#### The Relevant Actors in the Design and Execution Phases

The relevant actors include the Public Authority for Consumer Markets (PACM) which directly reports to the Presidency of the Council of Ministers, the Ministry of Economy and Trade, and the Municipality of Beirut, in coordination with the Ministry of Public Health, the Ministry of Agriculture, the Governor of Beirut, the Syndicate of Beirut Fish Vendors, and the local fisherman and vendors.

#### Proposed Source of Funding

They include actors on the national level such as the PACM, the Ministry of Economy and Trade, the Ministry of Agriculture, the City Unions of Lebanon, supported by private investors and international actors such as UNOPS, KfW, the UNDP, the EU, and French donors including the AFD.

#### Approximate Financial Magnitude

The overall estimated cost for the rehabilitation of the markets is 5,550,000 USD. The cost of rehabilitating the open space and the landscaping works is estimated at 500,000 USD for an area estimated around 30,000 sq. m area. The cost of renovating the markets is estimated at 4,250,000 USD. The cost of constructing and furnishing the annex restaurant is estimated at 800,000 USD. The annual operation costs for all facilities, including employment services, electricity, water, and maintenance, is estimated at 150,000 USD. The cost of the capacity building for PACM's staff is estimated at 5,000 USD.<sup>26</sup>

#### Period and Timing of Execution

- Short-term       Long-term
- Phased (Consultation phase with the stakeholders: four months.  
Design and planning phase: nine month. The execution phase: fifteen months)

#### Expected Results

- A socio-economic hub with coherent facilities and spatial units.
- Enhanced operation of the fish market and public market.
- Higher standards for operation, hygiene, and upkeep for the markets.
- Improved image and public perception of the markets and, as a result, Karantina.
- Increased social connectivity and interest in Karantina from Beirut.
- Increased job opportunities due to the expansion and reactivation of the markets.
- Expanded opportunities for small businesses within Karantina through the public market.
- Improved the economic activities and create a virtuous cycle of income and spending.
- Maximized access to a wide variety of products for the residents of Karantina.
- Reduced duplication and overlaps in the roles of the involved public agencies and institutions.
- A strengthened relationship between the public institutions that are involved in the operation of the markets.
- Increased investment opportunities for the Lebanese public and private sectors in Karantina.

<sup>24</sup> Phone call with PACM official (2022, July 5).

<sup>25</sup> Refer to Action Plan 20

<sup>26</sup> Is it important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 11

### Project Title

Develop a multi-purpose complex for public services on the municipal lot, which includes a public school, an affordable family clinic, and a sports and recreational facility.

### General Objective(s)

- A. Protect the existing affordable housing units and provide a larger stock that is inclusive of a diversity of social and income groups.
- B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.

### Type of Project

- Execution Project
- Regulation - Policy
- Detailed Study
- Lobbying - Advocacy
- Institutional - Committee set up
- Capacity Building
- Management - Operations plan

### Strategic Objective(s)

A3: Improve the provision of public services in Karantina.

B8: Enhance the public realm and provide shared facilities and spaces to promote social connection across the three sub-neighborhoods.

D4: Improve the local infrastructural services and amenities.

### Project Objective(s)

The project contributes to the following strategies:

A3.1/D4.2: Introduce services and facilities that are lacking in Karantina such as schools, sports facilities, and affordable clinics.

B8.1/ D3.3/ E5.1: Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.

### Project Description (concept note)

Karantina lacks proper public services. Before the civil war, Karantina used to have a Catholic school, an UNRWA school, and a public school. By the end of the war, the Catholic and UNRWA schools shut down, while the public school closed later in 2014. Currently, there is a small school in Al-Saydeh, built in 2021, that accommodates only 10 to 12% of school-aged children in Karantina. Karantina also hosts one governmental hospital which services patients from across Beirut, but the residents avoid it due to financial strain. There is one clinic that is part of the Maronite church that provides low consultation prices and services for the residents, but many residents prefer other affordable hospitals and clinics in Beirut and its suburbs.

In terms of recreational services, there is only one municipal garden that is often closed to the public. Children and younger people use the streets and empty lots to gather and play without security or adequate lighting. Other leisure spaces are mostly limited to a few coffee shops, one gaming shop, and the FLYP leisure center (indoor urban park) which was heavily damaged by the port blast. The gaming shop and the FLYP leisure center closed after the port blast. Accordingly, this proposed project aims to improve the provision of public services in Karantina, enhance the infrastructure and the public realm, and provide shared facilities and spaces for the residents of Karantina.

To do so, a multi-purpose complex for public services should be established in Karantina. The complex should include the following facilities:

- An elementary public school that caters to around 200 students from Karantina who are between the ages of 10 to 15.
- An affordable family clinic that provides healthcare services for the residents of Karantina.
- A sports center with multi-purpose playgrounds that provide recreational activities for children and younger people.

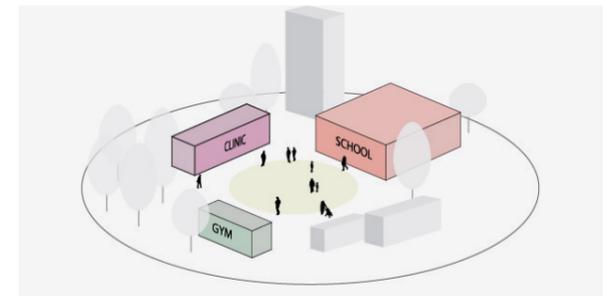


Figure 7. Schematic of the multipurpose complex.  
Source: The Beirut Urban Lab, 2022.

This proposal suggests utilizing municipal land since the complex will provide public amenities. Lot number 358 in Medawar is a potential lot that can accommodate this center for three reasons. Firstly, the lot currently hosts an army base which includes play courts that can be reclaimed for public use. Secondly, by occupying a large space at the southern edge of Karantina, this lot is compromising accessibility to the area. Therefore, if accompanied by a subdivision and opening plan of the lot (refer to Action Plan 14), this proposal can enhance accessibility to Karantina. Thirdly, the location of the lot is equidistant from all three sub-neighborhoods, which amplifies its potential to act as a social hinge between them. For this purpose, the design layout should include a connecting public space between three structures that is permeable to the street edge to create cohesion between the residents of the three sub-neighborhoods. The Municipality of Beirut should oversee the governance and maintenance of the complex. A potential non-governmental organization with a scope of work like the program listed above can take the lead in designing and implementing the project. With the establishment of this complex, the residents of Karantina will have access to local affordable services without the need to commute to other areas in Beirut. Additionally, children and younger people will have a destination inside Karantina for education and leisure activities.

### The Relevant Actors in the Design and Execution Phases

The relevant actors include the Municipality of Beirut and the Governor of Beirut, in coordination with local actors and non-governmental organizations such as the Beirut Urban Lab at the American University of Beirut, Catalytic Action, D4C, ACTED, Medair, Save the Children, UNDP, UN-Habitat, ESCWA, and the Norwegian Refugee Council and public actors such as the Ministry of Social Affairs, the Ministry of Public Health, the Ministry of Education and Higher Education, the Ministry of Youth and Sports, and the Lebanese Army, and with consultation with the neighborhood committee in Karantina.

### Proposed Source of Funding

The Municipality of Beirut supported by international actors such as ESCWA, the World Bank, and KfW Development Bank<sup>27</sup>.

### Approximate Financial Magnitude

The overall estimated cost for the construction of the complex is 1,130,000 USD. The total cost of designing the complex is estimated at 50,000 USD. The cost of the construction of the elementary school is estimated at 300,000 USD. The cost of constructing the family clinic is estimated at 200,000 USD. The cost of constructing the sport facility is estimated at 400,000 USD and cost of renovating the multi-purpose playground is estimated at 50,000 USD. The cost of landscaping and constructing the public spaces is estimated at 30,000 USD. The furniture cost is estimated at 100,000 USD.<sup>28</sup>

### Period and Timing of Execution

- Short-term
- Long-term
- Phased

### Expected Results

- Increased access to leisure activities.
- Access to elementary education for around 200 school-aged children in Karantina.
- Access to affordable healthcare.
- Increased social cohesion between the residents of Karantina.

<sup>27</sup> A German government-owned investment and development bank.

<sup>28</sup> It is important to note that these estimates do not account for the fluctuating market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 12

### Project Title

Devise a management plan for reopening and maintaining the public park and open spaces in Karantina.

### General Objective(s)

- A. Protect the existing affordable housing units and provide a larger stock that is inclusive of a diversity of social and income groups.
- B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.

### Type of Project

- Execution Project
- Detailed Study
- Institutional - Committee set up
- Management - Operations plan
- Regulation - Policy
- Lobbying - Advocacy
- Capacity Building

### Strategic Objective(s)

A3: Improve the provision of public services in Karantina.

B8: Enhance the public realm and provide shared facilities and spaces to promote social connection across the three sub-neighborhoods.

D3: Improve the overall quality of the built environment.

E5: Improve the quality and safety of the public domain which supports the existing socio-spatial practices across the three sub-neighborhoods.

### Project Objective(s)

The project contributes to the following strategies:

A3.2/ B8.2: Facilitate access to existing public spaces, including the public park, and increase their number.

B8.1/ D3.3/ E5.1: Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.

And maintain the public parks and open spaces in Karantina to ensure that they are open and accessible to the public.

### Project Description (concept note)

The Lebanese law delegates the responsibility of managing the public realm exclusively to public authorities. Accordingly, the Municipality of Beirut oversees the management of public spaces in areas within its boundaries according to legislative decree number 118 from 1977 (called the Municipal Law). However, the municipality has fallen short of adequately managing these spaces in Karantina, as the public parks are almost always closed. There are several reasons for this. According to the residents of Karantina, the municipality is understaffed and lacks the capacities that are needed to manage public spaces. Another reason is the mindset of the public authorities which fear vandalism in public spaces. Currently, the excuse given by the municipality for closing the public park in Karantina is the risk of contamination due to the COVID-19 pandemic. Accordingly, this proposed project aims to devise a management plan for the maintenance of the public realm supported by capacity-building programs for the municipal staff. The plan for the project should amplify the capacity of the municipality to perform its role through a reformed governance scheme. The governance scheme should build on the existing system in the municipality where public spaces are managed by two units - the unit of gardens and the unit of sidewalks - that operate under the authority of the engineering department at the Municipality of Beirut. These reforms should address the problems that result in recurring administrative deadlocks and equip the staff with the required capacities through workshops and training sessions.

The governance scheme should also expand its web of support by employing residents, younger people, and women from Karantina to assist in the monitoring process. This approach can empower the local community groups and increase their sense of ownership of public spaces, thus, leading to better maintenance. The role of the Municipality of Beirut should be supported by building the capacities of the residents, exploring civic engagement tools to complement public authorities, and contribute to safe and inclusive public spaces in Karantina.



Figure 8. Karantina public park. Source Baotul Yassin, 2020.

### The Relevant Actors

The relevant actors include the Municipality of Beirut, its engineering department, and the Governor of Beirut, in coordination with local actors and non-governmental organizations such as the Beirut Urban Lab at the American University of Beirut and Catalytic Action, and in consultation with the local residents in Karantina.

### Proposed Source of Funding

The Municipality of Beirut with possible aid from international actors such as the UNDP (or other UN agencies), KfW Development Bank<sup>29</sup>, and United Cities Lebanon<sup>30</sup>.

### Approximate Financial Magnitude

The cost of the training sessions and workshops is estimated between 5,000 and 10,000 USD<sup>31</sup>.

### Period and Timing of Execution

- Short-term
- Long-term
- Phased (The first phase of the detailed study to develop a masterplan: Six months.  
The second phase of implementation and construction works: Two years)

### Expected Results

- A team of trained staff members at the Municipality of Beirut who are equipped with the skills to maintain the public spaces in Karantina.
- The public park in Karantina open and accessible to the public.
- Better street lighting, security, and monitoring mechanisms.
- More community involvement in safeguarding shared spaces.

<sup>29</sup> A German state-owned investment and development bank.

<sup>30</sup> an association in charge of promoting the principles of local democracy, partnership and solidarity between cities, in particular by supporting decentralized cooperation programs and mobilizing funding for the international actions and projects of its members.

<sup>31</sup> Note: These are estimates that do not take into account the fluctuating market due to the economic and financial crisis and need to be reassessed at the time of design and implementation

## ACTION PLAN 13

### Project Title

Design and Implement an open space network that connects, upgrades, and expands on the existing spaces in Karantina.

### General Objective(s)

B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.

### Type of Project

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Execution Project     | <input type="checkbox"/> Regulation - Policy |
| <input checked="" type="checkbox"/> Detailed Study        | <input type="checkbox"/> Lobbying - Advocacy |
| <input type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building   |
| <input type="checkbox"/> Management - Operations plan     |  |

### Strategic Objective(s)

A3: Improve the provision of public services in Karantina.

B1: Connect Karantina spatially with its surroundings.

B2: Reconnect Karantina with the sea and the Beirut Central District.

B3: Integrate Karantina into the city-wide transportation network.

B8: Enhance the public realm and provide shared facilities and spaces to promote social connection across the three sub-neighborhoods.

D3: Improve the overall quality of the built environment.

D5: Improve connectivity and accessibility to Karantina.

E3: Reduce sound and air pollution.

E5: Improve the quality and safety of the public domain which supports the existing socio-spatial practices across the three sub-neighborhoods.

### Project Objective(s)

The project contributes to the following strategies:

A3.2/ B8.2: Facilitate access to the existing public spaces, including to the public park, and increase their number.

B1.1/ D5.1: Re-stitch Mar Mikhael with the southern side of Karantina through a pedestrian network across the highway.

B2.1: Reclaim Karantina's old coastal line as a green promenade and revive it as natural landscape heritage.

B2.2/ B4.3/ D5.3: Extend the sea promenade from the Beirut Central District to Karantina.

B3.1/ D5.5: Establish points of connection with city-scale and wider mobility modes (buses, taxis, etc.).

B8.1/ D3.3/ E5.1: Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.

E3.4: Reduce the negative impact of the highway as a source of noise and air pollution.

Also:

- Design a network of public open spaces that are pedestrian-friendly, safe, inclusive, and well-serviced.
- Redesign and activate the Charles Helou Highway as an urban boulevard with multiple pedestrian crossings that connect Karantina with Mar Mikhael.
- Reconfigure the municipal green space on the highway to operate as a connector between the open space network and the mobility networks.
- Design a public space that activates the intersection of the river with the old coastal line and can potentially link Karantina to the proposed garden in Bourj Hammoud.
- Co-design an urban intervention with the different community groups to reclaim the old coastal line and connect it to the sea at the interface with the Beirut River.
- Integrate the landscape heritage into the open space network plan.

### Project Description (concept note)

Karantina is located between the Charles Helou highway, the port of Beirut, and the Beirut River. It sits on a coastal cliff that overlooks the Mediterranean Sea. Its geographical location rendered it a historical gate into the city with the construction of the Lazaret in the first half of the 19th century. At that time, the coast was easily accessible by the residents, with many socio-spatial practices that are tied to the sea. Karantina also enjoyed a strong connection with the urban side, especially to Mar Mikhael through Ibrahim Pasha Street and Al-Khodor Street. This physical connection was reflected in the solid social network that connected the two neighborhoods. The Beirut River was also a destination for the people in Karantina when it was reachable from Karantina's eastern side. Therefore, Karantina was strongly anchored in Beirut and formed a strong physical and social connection with its surroundings.

However, the radical urban and landscape transformations that took place during the last century have enclaved Karantina. The expansion of the port isolated Karantina from the sea and the construction of the Charles Helou Highway created a physical rupture between Karantina and Mar Mikhael. Similarly, the concrete embankment of the Beirut River, and the construction of the adjacent highway, disconnected Karantina from the river. These infrastructural ruptures affected the socio-spatial and economic connectivity between Karantina and its surrounding neighborhoods. Therefore, Karantina currently suffers from its enclaved spatial condition which contributes to its marginalization. Similarly, in Karantina's internal urban and social fabric, the civil war resulted in the subdivision of Karantina into three sub-neighborhoods with little social ties between them. Another impact of the civil war is the heavy military presence in Karantina. This militarization led to many inaccessible roads and public spaces and caused fragmentation in the urban fabric. Furthermore, Karantina became largely undesirable for residential use and attracted large industries that cause further fragmentation. In terms of available public spaces, Karantina lacks safe and well-designed spaces for social gatherings and play. Children and adults engage in socio-spatial practices in the streets of Karantina without adequate lighting, urban furniture, landscaping, and safety measures. Karantina has a gated public park that is inaccessible most of the time due to restricted access by the Municipality of Beirut and the COVID-19 measures. In addition to the public park, another inaccessible garden exists at the edge of the Charles Helou Highway. Attempts by non-governmental organizations and international agencies to intervene in the public realm remain fragmented. They require integration, coordination, and informed direction. Accordingly, this project aims to challenge the enclaved spatial condition of Karantina by proposing the design of an open space network that involves connecting, upgrading, and expanding on the existing spaces. The network should amplify the accessibility of people to public spaces and natural and heritage landscapes and enhance pedestrian mobility within Karantina and its surroundings.

The proposed project consists of an overarching vision and scheme that is translated into multiple urban design interventions that are recommended for implementation. The urban design scheme aims to generate a network of public open spaces that are pedestrian-friendly, safe, inclusive, and well-serviced. The network connects the streets in Karantina that are linked to the surrounding urban and landscape fabric. The different interventions in this scheme are integrated and conceived as complementary. Accordingly, they can be implemented in parallel or through a phased process if there is a custodianship of the overall vision and scheme.

### An Open Space Network Scheme Integrating the Landscape Heritage:

Shared and open spaces are key to social recovery. With the public park closed and with the limited access to public spaces, the people in Karantina mostly engage in socio-spatial practices on the streets. However, most of these streets are not well-lit or secure. Access to landscape heritage sites is also limited, although they are significant assets in Karantina. These sites include places that are part of the strong collective memories of people, such as the site of the old slaughterhouse and the garden of Al-Saydeh Church. Natural elements are also integral to landscape heritage, such as the natural coastline. The dense vegetative cover that is rich in monumental eucalyptus trees, allegedly planted by the French during the mandate period between 1923 and 1946, also has great value. Most of these landscapes today are subject to neglect, with little public awareness about their importance. Accordingly, this project proposes the design of a 3.6 km network of public open spaces that are pedestrian-friendly, safe, inclusive, and well-serviced. The design integrates landscape heritage sites, upgrades existing public spaces, introduces new public spaces, and provides a soft connection between them. Upgrading the existing spaces will require rehabilitating roads, widening sidewalks, and providing appropriate street lighting, shading, and public seating areas.

Additionally, the heritage landscapes will be repurposed with minimal intervention for public use. Monumental trees must be protected and maintained. The network of open spaces must also be designed to link to other interventions in the area (outside the scope of this project) such as the proposed rehabilitation of the Mar Mikhael train station and the Bourj Hammoud landfill garden through the estuary park that is proposed below.

The following interventions are part of the network of open spaces:

#### The Charles Helou Highway as an Urban Boulevard:

The Charles Helou Highway was implemented in the late 1950s. The road planning did not consider the physical and social ties between Karantina and its surroundings since the area was planned to serve as an industrial extension of the port. As a result, the highway now causes a physical and social rupture between Karantina and Mar Mikhael. Accordingly, this project aims to address the rupture between Karantina and its southern neighbors and re-stitch the city's two parts together. This requires reconfiguring the 2.5 km Charles Helou Highway, which extends from Beirut River to its terminal point at Al-Kataeb building, as an urban boulevard. It should be redesigned with multiple pedestrian crossings into Mar Mikhael, widened sidewalks, and slow travel lanes. Narrowing traffic from a three-lane to a slow two-lane boulevard will transform a heavy car-oriented and high-speed traffic highway into a more pedestrian-friendly corridor. The canceled lanes should serve as green parklands and urban spaces that can be used by pedestrians and cyclists. The boulevard will then become a green space that enhances urban cohesion and re-stitches Karantina with Mar Mikhael. To ensure the success of this intervention, a transportation solution for diverting the traffic flow or the implementation of an underpass should be considered within a larger urban study.

#### A Coastline Corridor:

Karantina is situated on a coastal cliff with a wavy shoreline edge that overlooks the Mediterranean Sea. The cliff is a steep vertical coastal bedrock that reaches 16 meters in height with scattered vegetation. These topographic and geomorphological features that shape the Mediterranean character of this natural setting have unique landscape heritage value. The socio-spatial practices that are tied to the seashore add to the uniqueness of the landscape. Manmade stairs and informal pathways used to connect people to the sea. Activities like fishing and promenades along the shore are still present in the collective memory of the elderly people in Karantina, which reflects a strong connection they used to have with the sea.



Figure 9. The Charles Helou Highway. Source: Abir Cheaitli, 2021.

However, the gradual extension of the Port of Beirut eastwards, which began in the French mandate period, had completely distanced Karantina from the sea by the turn of this century. Today, the natural landscape has partially disappeared or has been incorporated into the built fabric. Parts of this landscape remain around Karantina and act as a slim green buffer between Karantina and the port. Accordingly, this project aims to reclaim the old coastal line and reconnect Karantina to the sea at the interface with the Beirut River. The 1.7 km corridor along the coastline will be reminiscent of the natural heritage that was embedded in the coastal cliff of Karantina. The corridor should also accentuate the link to the Beirut Central District by connecting to the promenade along the waterfront. In addition to improving connectivity, this corridor can include multifunctional spaces for public recreation. These spaces can range from seaside walks, terraces, cantilevered pier overlooks, and bike lanes. A promenade along the sea will also bring back a visual connection with the sea that was lost with time.

#### The Estuary Park:

After the concrete channeling of the Beirut River, the city lost a prominent natural landscape that was once a destination for recreation. People in Karantina, being near the western bank of the river, were also affected. The only remaining natural part of the river is its estuary, a 25,000 sq. m public space, with green vegetation and sand shore. What adds to the potential of this site is its proximity to the fish market and the public market from one side and to the 30,000 sq. m landfill from the other side.

However, this area (northeast of Karantina) is now neglected and highly polluted, with no proper pedestrian or vehicular access from Karantina's side. This project aims to design a public park that activates the intersection of the river with the old coastal line and potentially links to the markets and the proposed garden in the Bourj Hammoud landfill. The estuary area at the mouth of the river is a potential landscape that can provide ecological and social benefits to Karantina and to Beirut at the city scale.

#### The Garden on the Charles Helou Highway:

After the construction of the Charles Helou Highway in the late 1950s, a small municipal garden was leftover from the expropriated lands. The 750 sq. m lot is shaped like a small triangular green patch that is now abandoned and neglected and hosts some archeological remains that were relocated from the Beirut Central District. The location of this garden on the edge of the highway and its proximity to the bridged intersection with Mar Mikhael magnifies its potential to become an active open space. Accordingly, this project aims to reconfigure this space to act as a green hinge that connects the open space network to the mobility networks. This green space should also host public amenities that could cater to people in Al-Saydeh sub-neighborhood.

The proposed open space network will provide more than one pedestrian connection to Mar Mikhael and a 2.5 km long boulevard. It will also introduce new public spaces that will provide a visual and physical connection to natural landscapes such as the Beirut River and the sea. Additionally, the proposed network will enhance the state of the existing public spaces, improve the quality of the urban environment, and enhance the public image of Karantina. The open space network in Karantina will become a catalyst for re-stitching together the different neighborhoods in Beirut as part of a larger vision for an open space network in Beirut.

#### The Relevant Actors in the Design and Execution Phases

The relevant actors include the Municipality of Beirut and the Governor of Beirut, in coordination with other public actors such as the Council for Development and Reconstruction, the Directorate General of Urban Planning at the Ministry of Public Works and Transportation, the Ministry of Environment, the Ministry of Public Health, and the Ministry of Energy and Water and academic institutions and non-governmental organizations such as the Beirut Urban Lab at the American University of Beirut, Catalytic Action, Live Love Beirut, and Offre Joie, and in consultation with the local residents in Karantina.

#### Proposed Source of Funding

They include international actors with similar scope of work as KfW<sup>32</sup>, Agence française de développement (AFD)<sup>33</sup>, the World Bank (3RF), the United Nations Office for Project Services (UNOPS)<sup>34</sup>, the UNDP, SUGi Project<sup>35</sup>, UNESCO, The International Union for Conservation of Nature (IUCN)<sup>36</sup>, the Norwegian Refugee Council (NRC), UN-Habitat, and the International Labor Organization (ILO) that is currently funding the road network in Karantina.

#### Approximate Financial Magnitude

The cost of the initial design work is estimated at 2,000,000 USD. The cost of the construction is estimated between 13,000,000 and 14,000,000 USD<sup>37</sup>.

#### Period and Timing of Execution

Short-term  Long-term

Phased (The first phase of the study to develop a masterplan: Six months.  
The second phase of implementation and construction works: Two years)

#### Expected Results

- A network of well-serviced streets and public spaces that connect Karantina to its surroundings.
- A 1 km green strip along the Charles Helou Highway.
- A 1.7 km green corridor along the coastal line that provides recreational facilities.
- A public park at the interface between the Beirut River and the sea and is accessible from Karantina.

<sup>32</sup> KfW is a German state-owned investment and development bank.

<sup>33</sup> AFD is a French public financial institution that works to fight poverty and promote sustainable development.

<sup>34</sup> UNOPS is a United Nations agency that provides infrastructure, procurement, and project management services.

<sup>35</sup> SUGi is a Swiss funding agency that provides support for investments in nature and the restoration of biodiversity.

<sup>36</sup> IUCN is an international organization that works in the field of nature conservation and the sustainable use of natural resources.

<sup>37</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 14

### Project Title

Devise and implement a parcelization plan that subdivides and reprograms the municipal lot to enhance connectivity and public services in Karantina.

### General Objective(s)

- A. Protect existing affordable housing units and provide a larger stock that is inclusive of a diversity of social and income groups.
- B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.

### Type of Project

- Execution Project
- Regulation - Policy
- Detailed Study
- Lobbying - Advocacy
- Institutional - Committee set up
- Capacity Building
- Management - Operations plan

### Strategic Objective(s)

- A3: Improve the provision of public services in Karantina.
- B1: Connect Karantina spatially with its surroundings.
- B4: Improve accessibility to the different areas within Karantina and between them.
- D1: Advance a development program for Karantina and remove existing obstacles to development.
- D5: Improve connectivity and accessibility to Karantina.

### Project Objective(s)

The project contributes to the following strategies:

- A3.2/ B8.2: Facilitate access to existing public spaces, including the public park, and increase their number.
- B1.2/ D5.2: Increase the permeability of the edges of Karantina with the city.
- B4.2/ D1.2: Subdivide the municipal lot and integrate it into plans for the development of Karantina.

- Design and implement a subdivision plan of the municipal lot.
- Repurpose the municipal lot to include additional facilities.

### Project Description (concept note)

The construction of the Charles Helou Highway in the late 1950s divided a 20ha municipal lot into two lots. The lot used to host a train station, presently on Mar Mikhael's side, in addition to a French military base. The lot occupies around 15% of the total area of Karantina and is currently utilized for a combination of municipal services such as the fire station, a local department, parking space for the Municipality of Beirut, an office for the Lebanese internal security forces, warehouses, and various private institutions. A military base is also present and occupies around 15% of the lot area. As a result, the municipal lot contributes to the isolation of Karantina from its immediate surroundings, and the rest of Beirut, and causes a spatial fragmentation in the inner fabric. The high walls along its borders act as barriers that prevent pedestrian and vehicular accessibility and disrupt visual connectivity. Accessibility from Al-Rehban Street to the inner edges of the lot is also restricted. Several checkpoints and security elements are present on the sidewalks, including cement blocks and metal obstacles.

To strengthen socio-spatial connectivity and promote sustainable development in Karantina, the municipal lot at the southern edge of Karantina should be more permeable towards the area and should be subdivided into smaller lots. Therefore, this project proposes to design and implement a subdivision plan for the municipal lot. The plan should provide horizontal and vertical crossings across the lot and repurpose the subdivisions to promote sustainable development. To do this, the design of the project should include affordable housing units, open spaces, green areas, offices, and retail facilities. Implementing the development of this subdivision plan requires the involvement of a few public institutions.



Figure 10. The municipal lot next to the Charles Helou Highway. Source: Batoul Yassine, 2021.

According to decree number 70 from 1983, the Municipality of Beirut should initiate the process by submitting the subdivision plan to the General Directorate of Urban Planning. The Directorate General of Urban Planning should review and assess the plan and, if approved, propose an implementation decree to the parliament under the name of the Ministry of Public Works and Transportation. A group of local lawyers should also assist the Municipality of Beirut in resolving the encroachments on the lot.

The project will increase the permeability of the edges of the lot for it to become an integral part of Karantina instead of an isolated and peripheral space. A permeable edge will allow people to move freely with little restrictions and choose from a variety of routes to move around Karantina. Once they are accessible, the subdivisions of the lot will catalyze further sustainable development in Karantina. They will boost socio-economic vitality and cater to the needs of the people in Karantina and the surrounding neighborhoods.

### The Relevant Actors in the Design and Execution Phases

The relevant actors include the Municipality of Beirut, the Governor of Beirut, and the Directorate General of Urban Planning, in collaboration with other actors in Lebanon such as the Ministry of Public Works and Transportation and Beirut Bar Association, local consultancy offices such as Dar Al-Handasah, and Khatib & Alami, and academic institutions and organizations such as the Beirut Urban Lab at the American University of Beirut, the Legal Agenda, the UNDP, and UN-Habitat, and in consultation with the residents in Karantina.

### Proposed Source of Funding

The Municipality of Beirut with possible aid from International organizations such as the UNDP and UN-Habitat.

### Approximate Financial Magnitude

The urban planning and design costs of the project are estimated at a total of 30,000 USD<sup>38</sup>, and the estimate cost of implementation to be determined upon the completion of the plan.

### Period and Timing of Execution

- Short-term
- Long-term
- Phased

### Expected Results

- Enhanced accessibility into and within Karantina, with more than one crossing option.
- An increase in the number of affordable housing units.
- Designed open spaces for recreation.
- Enhanced socio-cultural vitality.

<sup>38</sup> It is important to note here that these numbers are estimates that do not account for fluctuating market prices due to the ongoing economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 15

### Project Title

Amend the Building Law to introduce international standards for inclusive design, particularly for people with physical challenges and disabilities.

### General Objective(s)

A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.

### Type of Project

- |   |   |
|---|---|
| <input type="checkbox"/> Execution Project                | <input checked="" type="checkbox"/> Regulation - Policy |
| <input type="checkbox"/> Detailed Study                   | <input type="checkbox"/> Lobbying - Advocacy            |
| <input type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building              |
| <input type="checkbox"/> Management - Operations plan     |   |

### Strategic Objective(s)

A5: Ensure that new developments meet inclusivity standards.

### Project Objective(s)

The project contributes to the following strategies:

A5.1: Adopt an inclusive design approach when rehabilitating existing buildings or designing new housing units. This includes:

- Rehabilitating existing buildings to accommodate the special needs of elderly people, people with physical challenges or disabilities, and people who are visually impaired.
- Designing new developments according to standards of inclusivity.
- Facilitating the integration of elderly people, people with physical challenges or disabilities, and people who are visually impaired into healthy social environments.

### Project Description (concept note)

This project aims to achieve an inclusive environment through inclusive design standards. Inclusive design standards accommodate the diversity of people and challenge construction practices that impose disabling barriers. It accommodates the needs of wheelchair users and mobility-impaired people but can also address barriers experienced by people with learning difficulties, mental illnesses, and visual and hearing impairments. By meeting accessibility needs, inclusive design alleviates the frustrations and hardships that disabled or elderly people and families with young children experience. Karantina has a diversity of mobility-impaired people, children that are below the age of 3, elderly people, and people with disabilities or visual impairment. A considerable percentage of Karantina's population is physically challenged. They are elderly people, disabled, or face health problems that affect their physical performance.



Figure 11. A schematic showing inclusive urban design elements. Source: The Beirut Urban Lab, 2022.

9% of Karantina's population is elderly. It has over 403 reported cases of chronic illnesses and 43 cases of physical disabilities. There is a lack of services that can cater to the needs of wheelchair users, elderly people, and people with physical challenges, disabilities, or impaired vision in buildings and public spaces. Therefore, there is a need to implement developments that are inclusive of the physically challenged groups and other groups such as the visually impaired. The aim is to create healthy and socially friendly environments where these groups do not feel excluded, as well as an environment that protects their right to access housing units and public spaces.

Inclusivity in developments is not protected or embedded as a criterion in the Building Law in Lebanon. Permitting buildings in Lebanon is usually only bound by the requirements of the Building Law and the zoning scheme for Beirut. While the zoning scheme for Beirut specifies built-up ratios, required setbacks, and maximum heights, the Building Law controls the internal configuration and requirements of living spaces. However, the 2004 amendment to the Building Law that is currently in effect does not specify design guidelines for inclusive constructions that can cater to the needs of people with physical challenges. Still, it provides public safety measures for structural stability against earthquakes and fires.

In 2005, decree number 14293 was issued. It added to the Building Law an elaboration on the public safety measures and individual safety measures. The decree explained the role of technical audit offices and their mandatory audit and approval of building plans as a condition to issue construction permits. In principle, and due to the lack of local public and individual safety and inclusivity standards, audit offices rely on international standards to conduct their assessment. These standards are only applied to large-scale constructions, buildings for public use, and residential buildings that exceed 20 meters in height. Individual safety standards within the international standards are limited to requirements for disabled people, including building access through ramps, walkways, and elevators, and particular services with specific dimensions for rooms such as toilets for disabled people.

Therefore, the Building Law needs to be amended to include inclusive design standards and criteria for developments, especially in residential buildings. There are two main amendments, one that applies to new constructions, and another that tackles retrofitting existing buildings. Before the amendment, the Directorate General of Urban Planning should prepare a study following a proposal from the Minister of Public Works and Transportation, in consultation with urban planning and inclusive design specialists in Lebanon. They should review the internal code on inclusive standards and draft the requirements that can cater to the needs of people with physical challenges and disabilities, and with visual impairment. The standards must include the preferred location of the desired floors to accommodate the people with physical challenges and disabilities, and visual impairment, the required dimensions of the shared spaces (staircases, building entrances, and common walkways), and the services that must be provided within them (handrails, benches, elevators, ramps, and recognizable tactile surfaces). The standards must also include public safety measures (escape fire staircases and walkways). Furthermore, in addition to the amendment of the Building Law, inclusive development can be further encouraged by a package of incentives for developers. These incentives can include density bonuses or tax exemptions.

### The Relevant Actors

The relevant actors include the Directorate General of Urban Planning at the Ministry of Public Works and Transportation and the Higher Council of Urban Planning, the Ministry of Social Affairs member of the Lebanese parliament, and the Council of Ministers, in coordination with the Order of Engineers and Architects in Beirut and academics, including urban planning and design inclusive design specialists such as the Beirut Urban Lab at the American University of Beirut, and in consultation with residents from Karantina.

### Proposed Source of Funding

Public authorities involved with possible aid from local or international agencies.

### Approximate Financial Magnitude

The total fee of the required professionals is estimated between 7,000 and 10,000 USD<sup>39</sup>.

<sup>39</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

### Period and Timing of Execution

Short-term     Long-term     Phased

### Expected Results

- A diversity of building typologies that can cater to the needs of people with physical challenges, disabilities, and visual impairment.
- A healthy and inclusive environment that does not exclude people with physical challenges, disabilities, and visual impairment but integrates them into existing and new developments.
- New standards for inclusivity in the Building Law that can lead to the formulation of more specialized laws.

## ACTION PLAN 16

### Project Title

Propose an addendum to the Planning Law that further guides and regulates existing and future land uses and developments.

### General Objective(s)

- A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.

### Type of Project

- Execution Project                       Regulation - Policy
- Detailed Study                             Lobbying - Advocacy
- Institutional - Committee set up       Capacity Building
- Management - Operations plan

### Strategic Objective(s)

- A6: Limit the encroachment of the businesses into the residential sub-neighborhoods.
- D2: Safeguard Karantina against the threats of gentrification and displacement.

### Project Objective(s)

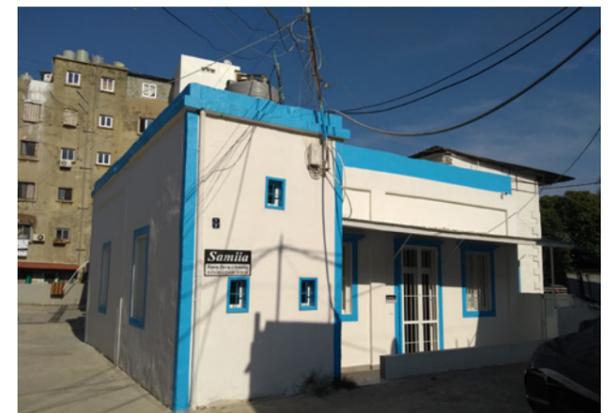
The project contributes to the following strategies:

- A6.1: Regulate the transformations in the use of residential buildings.
- D2.1: Regulate development in the residential and industrial areas of Karantina.

### Project Description (concept note)

Karantina has a complex and diverse land use pattern, with three residential sub-neighborhoods: Al-Saydeh located to the southwest of Karantina, Al-Khodor in the north center, and Al-Senegal in the middle of Karantina. The industrial activities are concentrated to the east, and commercial activities are distributed throughout Karantina. The current zoning scheme for Beirut (municipal decision number 70 from 1954 and decree number 2685 from 1954) is limited to regulations that define a building's permissible envelope (using setbacks, floor-to-area ratios, total exploitation rates, and minimum lot areas and dimensions) but does not set any land use. The southwestern part of Karantina, including all Al-Saydeh sub-neighborhood is in zone 3 of the zoning scheme, while the rest of Karantina is in zone 7.

Since the zoning scheme does not specify functional land uses in Karantina, the area is witnessing the encroachment of several businesses into the residential sub-neighborhoods and the conversion of some residential units into office spaces. Alterations to residential land use are mostly occurring in Al-Saydeh sub-neighborhood. In Al-Saydeh, uses on the ground floors of nine buildings changed from residential to office spaces. Until now, the uses on the ground floors of six buildings in Al-Senegal also changed and two of the six buildings are witnessing similar changes on the upper floors. This land use change were less prevalent in Al-Khodor. This trend is threatening the social fabric and the availability of affordable housing stock in Karantina.



**Figure 12.** Building which use was transformed from a residential house to a business that serves the port. Source: Ali Ghaddar, 2021.

The 17.4% vacancy rate is increasing due to the changes in land uses. Businesses that rent from the landlords create intense competition with tenants. The rental market is to a great extent based on contractual agreements that can be oral, flexible, and largely unregulated. The incentives for landlords to find a tenant that can provide better returns put the tenants of the residential buildings in a vulnerable position. The encroachment of businesses on the residential buildings results in rent hikes, a looming threat of eviction, and further reduces the stock of housing units. As a result, there is a risk that Karantina will lose its social diversity, social networks, and housing affordability. Furthermore, the unguided and unregulated industrial land uses that create noise and increase levels of air pollution need to be assessed and better regulated since they have adverse effects on the living conditions of the residents.

Accordingly, it is important to regulate land uses and development to protect the integrity of the residential sub-neighborhoods and to produce a healthier environment. The goal is not to prohibit mixed land use within clearly delineated areas, but rather to regulate the ongoing transformations to protect the stock of affordable housing units and the social integrity of the residential clusters. This concern should not be limited to the existing stock of affordable housing units but should also apply to future developments.

Urban planning in Beirut is regulated by the planning law of Beirut (municipal decision number 70 from 1954 and decree number 2685 from 1954). The proposed project to draft and implement a detailed masterplan for Karantina is intended to guide and regulate existing and future land uses and developments. This proposal requires the approval of both the municipality (with its 'engineering department') and the DGU (Directorate General of Urban planning), although the initiative can come from either party.

Legislative decree number 118 from 1977 (called the Municipal Law) tasks municipalities to take the lead in managing their area, determining their capacities, and participating in local planning. Article number 49 in the Municipal Law, and articles number 10 and 11 of the Urban Planning Law (legislative decree number 69 from 1983) detail the planning roles of municipalities and the Directorate General of Urban Planning. The Directorate General of Urban Planning may take the initiative or assist municipalities in creating their masterplans or detailed plans, designs, regulations, and parcellation plans. The Directorate General of Urban Planning ultimately approves the masterplan (التصميم والنظام التوجيهي\التصميم التوجيهي) and the detailed masterplan (التصميم والنظام التفصيلي\النظام التفصيلي العام).

The provisions of the masterplan are legally binding for public authorities. Its role is to advance the public interest by outlining the primary land use trajectories and making key strategic choices (article 7 in legislative decree number 69 from 1983). The detailed masterplan is also legally binding for all people. It defines the zoning regulations (using setbacks, floor-to-area ratios, total exploitation rates, and minimum lot areas and dimensions). This is the case in the current zoning scheme for Beirut (municipal decision number 70 from 1954 and decree number 2685 from 1954) but can also include specifications on land use at the level of the lot (article 8 in legislative decree number 69 from 1983). The directorate General of Urban Planning then submits the results to its Higher Council for Urban Planning for final revisions and approval. The detailed plans become legally binding after they are approved in a decree by the Council of Ministers (article number 12 in legislative decree number 69 from 1983). Proposing an amendment or addendum to the existing regulations follows the same procedure (article 13 in legislative decree number 69 from 1983).

In Karantina, the primary concern is to regulate developments in the residential and industrial areas and regulate the transformation of the use of residential buildings. As a result, non-residential uses such as logistics, service businesses, and offices can be limited to the ground floors and the first floors of the residential buildings. It is also important to regulate heavy industries and their operations and locate them away from the residential sub-neighborhoods. They should be limited to the boundaries of the Industrial Zone in Karantina.

### The Relevant Actors

The relevant actors include the Municipality of Beirut, the Governor of Beirut, the Directorate General of Urban Planning and the Higher Council of Urban Planning, and the Council of ministers, in coordination with the Order of Engineers and Architects in Beirut and the residents of Karantina.

### Proposed Source of Funding

Public authorities involved with possible support from local or international agencies.

### Approximate Financial Magnitude

Consultancy fees to be determined.

### Period and Timing of Execution

Short-term     Long-term     Phased

### Expected Results

- Less pressure on the existing stock of affordable housing units from the competition with businesses.
- Limited encroachment of businesses on the residential sub-neighborhoods.
- The protection of tenants from rent hikes and the threats of eviction.
- Residential areas that are safeguarded from the threats of gentrification and displacement.

## ACTION PLAN 17

### Project Title

Set up a monitoring and municipal taxation system for buildings that are not regularly maintained to ensure public safety and limit overcrowding.

### General Objective(s)

- A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.
- E. Improve the overall quality of the urban environment in Karantina.

### Type of Project

- Execution Project
- Detailed Study
- Institutional - Committee set up
- Management - Operations plan
- Regulation - Policy
- Lobbying - Advocacy
- Capacity Building

### Strategic Objective(s)

- A8: Improve the livability and building conditions within the residential clusters.
- D3: Improve the overall quality of the built environment.
- E1: Improve the physical quality of the damaged and degraded buildings.

### Project Objective(s)

The project contributes to the following strategies:

- A8.1/E1.4: Regulate the density of people per housing unit to counter overcrowding.
- D3.1/E1.3: Provide a legal enforcement measure for building rehabilitation.

### Project Description (concept note)

The diagnosis report counted 364 buildings in Karantina, most of which are aging and dilapidated. Many of these buildings need considerable interior and exterior renovation. Leaking pipes, crumbling facades, ceilings, walls, and columns, old window frames, roofs, and terraces are some of the signs of neglect. The property owners and residents cannot afford to maintain the buildings. The port blast further damaged buildings that were already in a poor condition. Numerous apartments are subject to excessive humidity levels that negatively impact the health and well-being of the occupants. Living conditions become dangerous and hazardous especially when the structural integrity of the building is compromised. Article number 74 of legislative decree number 118 from 1977 (the Municipal Law) states that the governor of Beirut is responsible for "demolishing dilapidated buildings and [or] repair them at the expense of their owners in accordance with the provisions of the Building Law"- "هدم المباني المتداعية وإصلاحها على نفقة أصحابها" - "وفقاً لأحكام قانون البناء".

However, the provisions of this article are rarely applied, and the procedure, standards, and assessment process should be revised. The right of the governor of Beirut to repair buildings at the expense of the owners is not subject to a tax system that is well-defined and standardized. The Municipality of Beirut has a monitoring unit in the engineering department (مصلحة الهندسة، دائرة المراقبة). This monitoring unit, however, has no authority to tax or fine the owner of a building that needs maintenance. The responsibility of the municipality is to survey, assess, manage, and maintain public spaces.



Figure 13. Deteriorating residential building. Source: Abir Cheaitli, 2021.

This unit is also not directly concerned with the heritage value of the building, and its role is limited to maintaining public safety. The responsibilities of this monitoring unit are described in decision number 330 from 1956 and decision number 346 from 1967.

The aim here is to set up a municipal monitoring and taxation system in the engineering department to protect public safety, security, and overcrowding. Buildings that fail routine maintenance and upkeep are taxed based on a fair system that should be developed. The standards to be devised should consider a special clause on how to deal with heritage buildings.

The project proposes to expand the responsibilities of the monitoring unit to include the assessment of buildings and private properties. This is done after developing a relevant tax system and recruiting staff with the necessary expertise. The main concern of this system is to maintain public safety, and the security of the residents, and reduce overcrowding. The taxation system should also be sensitive to buildings with heritage value that are assessed based on set criteria.

The collected taxes will go to the municipality. The stakeholders that will develop the system will determine whether the taxes will feed into the municipal fund or an independent fund that will be used for maintenance projects. In accordance with legal requirements, the Governor of Beirut should approve any taxes which must be directly invested in the maintenance of the relevant system. The taxation system should be led by the monitoring unit at the Municipality of Beirut and follow a clear taxation policy.

### The Relevant Actors

The relevant actors include the Municipality of Beirut, the Governor of Beirut, and the Ministry of Interior, in coordination with the Beirut Bar Association, the Directorate General of Antiquities, and the Order of Engineers and Architects in Beirut, and in consultation with residents in Karantina.

### Proposed Source of Funding

Public authorities involved with possible aid from local or international agencies.

### Approximate Financial Magnitude

Not applicable.

### Period and Timing of Execution

- Short-term
- Long-term
- Phased

### Expected Results

- A monitoring and municipal taxation system that is led by the monitoring unit in the engineering department at the Municipality of Beirut.
- Improved conditions of residential buildings.
- Improved public safety and security measures for private buildings.
- Fewer levels of overcrowding in residential units and improvements in the health and safety of the residents.

## ACTION PLAN 18

### Project Title

Create a registry platform that matches donors with property owners for building rehabilitation.

### General Objective(s)

- A. Protect the existing affordable housing units in Karantina and provide a larger stock that is inclusive of a diversity of social and income groups.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.
- E. Improve the overall quality of the urban environment in Karantina.

### Type of Project

- Execution Project
- Detailed Study
- Institutional - Committee set up
- Management - Operations plan
- Regulation - Policy
- Lobbying - Advocacy
- Capacity Building

### Strategic Objective(s)

- A8: Improve the livability and building conditions within the residential clusters.
- D3: Improve the overall quality of the built environment.
- E1: Improve the physical quality of the damaged and degraded buildings.

### Project Objective(s)

The project contributes to the following strategies:

- A8.2/E1.1: Offer financial packages and incentives to support the landlords in rehabilitating their residential buildings and maintain the stock of affordable housing units.
- D3.2/E1.2: Channel funds through donors to vulnerable landlords for building renovation.

Also:

- Create an effective network between the different stakeholders and non-governmental organizations.
- Support vulnerable landlords in rehabilitating their buildings.
- Improve the quality of physical repairs after the port blast.

### Project Description (concept note)

Karantina witnessed several events that led to damages to its built fabric, especially to its buildings. The two events include the 1976 massacre during the civil war and the port blast in 2020. The latter exacerbated the impact of many years of deterioration due to negligence and the lack of development and restoration plans for the built fabric. As a result, the conditions of many buildings in Karantina deteriorated over time. The research at the Beirut Urban Lab also showed that 73% of the residential units in Karantina are occupied by tenants from low-income groups, 14% of which are on old rent contracts. This condition, along with the limited financial capacities of the landlords, contributed to the degradation and decay of many buildings. After the port blast, many non-governmental agencies mobilized to help in the repair work. However, low-quality repairs by some of the non-governmental agencies further degraded the living conditions in several housing units. While Al-Saydeh sub-neighborhood largely benefited from the repairs, fewer investments, and coordination efforts were put into other sub-neighborhoods.



**Figure 14.** Renovation of a residential building in process after the port blast. Source: Abir Cheaitli, 2021.

Some buildings were properly repaired while other repair works only covered up the deteriorated condition of some of the buildings. According to some of the interviewees, many of the residents of Al-Khodor sub-neighborhood expressed their displeasure with the poor quality and unfinished repair works. This risks one of Beirut's most affordable stock of affordable housing units.

Therefore, this proposal aims to develop an information system platform that networks, facilitates outreach efforts, registers cases of buildings in need of repairs, and sets eligibility criteria for repairs. The platform will allow the members who were affected by the port blast to report the damage to their households and connect them with the right non-governmental organizations or private investors. The platform needs to be inclusive of a diversity of people, and play an operational role with activities and processes like management, coordination, and development services. The platform should also have an integrated set of components for collecting, storing, and processing data and providing information and knowledge. The objective is to support landlords and tenants in improving the physical conditions of their units. This will not only safeguard the future of the stock of affordable housing units in Karantina but also improve the quality of the built environment and promote growth in the area of sustainable development.

The platform can be created and administered by a group of professionals from Karantina or non-governmental organizations that are active in Karantina. It should be designed as a user-friendly and open-source platform where non-governmental organizations and local individuals can add information and build their profiles. It is important to also identify potential donors early in the registry design process since they might have significant input on the nature and scope of the data that is needed for them to be involved in the building repairs. The initiative to build the platform can be taken by either one of the active non-governmental agencies, local research labs, or by community members who played significant roles in coordinating the efforts with the non-governmental organizations after the port blast. For its management, a team of experts in the field of software, database entry, and information management is needed. The platform experts will prioritize the cases of buildings that need repairs and match them with the right source of funding.

Collaboration with the private sector can help develop an integrated funding model that can also attract interest from other sources of funding. Additionally, to maintain the network of collaborators, it is crucial for the stakeholders to be transparent on their operations, decision-making, and reporting of results. Transparency will further enhance the credibility of the platform and the validity of its actions.

### The Relevant Actors

The relevant actor is the Municipality of Beirut, in coordination with IMPACT<sup>40</sup>, non-governmental agencies with similar scope of work as the NRC (Norwegian Refugee Council), the UNDP, and private actors such as Valoores Sarl, Creyasoft Sarl, Soft Solutions Sarl, Netways Sarl, Mideast Data Systems Sarl, and Megatron Software Co. Sarl, and in consultation with the residents in Karantina.

### Proposed Source of Funding

Local and international agencies that have a similar scope of work such as NRC and the UNDP.

### Approximate Financial Magnitude

The total budget is estimated between 50,000 USD and 100,000 USD<sup>41</sup>. This budget includes the costs of the required software and electronic and hardware equipment, the costs of integrating the online registration system into the website of the Municipality of Beirut, marketing the platform, data collection, and the costs of building and updating the system.

### Period and Timing of Execution

- Short-term
- Long-term
- Phased

### Expected Results

- More efficient construction processes and repairs by different stakeholders and non-governmental organizations.
- Improvements in the conditions of buildings and their future maintenance.

<sup>40</sup> IMPACT is the first e-government platform in Lebanon. It is an open data website with a central Inspection initiative to give access to the data gathered through the most comprehensive, nation-wide, online data collection operation conducted in collaboration with different ministries and local municipalities.

<sup>41</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 19

### Project Title

Form a local advocacy group that supports donor agencies working on the reconstruction projects of the port to re-connect Karantina with the sea.

### General Objective(s)

- B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- D. Promote a sustainable development strategy that is participatory and phased over a period of time.

### Type of Project

- |   |   |
|---|---|
| <input type="checkbox"/> Execution Project                | <input type="checkbox"/> Regulation - Policy            |
| <input type="checkbox"/> Detailed Study                   | <input checked="" type="checkbox"/> Lobbying - Advocacy |
| <input type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building              |
| <input type="checkbox"/> Management - Operations plan     |   |

### Strategic Objective(s)

- B2: Reconnect Karantina with the sea and the Beirut Central District.
- D5: Improve connectivity and accessibility to Karantina.

### Project Objective(s)

The project contributes to the following strategy:  
B2.3/D5.4: Relink Karantina to the sea through the port.

### Project Description (concept note)

A solid connection between the city and the port existed before the enlargement of the old port. Networks of alleyways connected people to the shoreline and natural docks and maintained physical permeability. Residents of Karantina still recall social activities that are associated with the sea, such as swimming, walking along the seashore, and fishing. However, the city and port dynamics changed with the rapid expansion of the port since the mid-1950s. As the port expanded, Karantina and its residents were deprived of any direct relation with the sea.



Figure 15. Port of Beirut and the Mediterranean Sea.  
Source: Abir Cheaitli, 2021.

Although the port currently acts as a vital economic magnet for Karantina, an adequate spatial connection between Karantina, the port, and the sea is still missing. To enhance the socio-spatial connectivity of Karantina with its surroundings, this proposal intends to reconnect Karantina to the sea through the port. Advocacy efforts are key, in this case, given the currently restricted access to the port, and the complex political circumstances that may obstruct this access. Therefore, this proposal calls for establishing a coordinating body that advocates for public access to the port. A team of urban planners and designers, activists, and politicians with a previous history of advocating for access to public spaces should oversee the negotiations around this issue with the relevant stakeholders. The team should also raise public awareness about the importance of the port in urban life. As the custodian of the port, the Ministry of Public Works and Transportation should be the main actor in this effort, in addition to the donor agencies that are supporting the reconstruction of the port, especially the World Bank. Advocating for public access to the sea through the port is timely and urgent, given that many port reconstruction proposals are under development since the port blast, some of which can potentially exacerbate Karantina's disconnection from the sea.

The proposed team can prepare a counterproposal for the port reconstruction and assign part of the port for public space. This proposal will reinforce the Karantina-port interaction by infusing pedestrian mobility into the port and activating part of its waterfront for public use, in the process, inducing new opportunities such as leisure activities, recreation, and job creation.

### The Relevant Actors

The relevant actors include the Beirut Urban Lab, and other urban activists such as the Lebanese Center for Policy Studies, Public Works, Beit El Baraka, legal agenda, and ACTED, in coordination with public actors such as the Ministry of Public Works and Transportation, the Municipality of Beirut, the Governor of Beirut, the Order of Engineers and Architects in Beirut, and the Lebanese Army, and in consultation with residents in Karantina.

### Proposed Source of Funding

Not applicable.

### Approximate Financial Magnitude

Not applicable.

### Period and Timing of Execution

- Short-term     Long-term     Phased

### Expected Results

- A coordinating body that is committed to advocating for public access to the port.

## ACTION PLAN 20

### Project Title

Conduct a transportation study in Karantina.

### General Objective(s)

- B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.
- D. Promote a sustainable development that is participatory and phased over a period of time.
- E. Improve the overall quality of the urban environment in Karantina.

### Type of Project

- |   |  |
|---|--|
| <input type="checkbox"/> Execution Project                | <input type="checkbox"/> Regulation - Policy |
| <input checked="" type="checkbox"/> Detailed Study        | <input type="checkbox"/> Lobbying - Advocacy |
| <input type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building   |
| <input type="checkbox"/> Management - Operations plan     |  |

### Strategic Objective(s)

- B3: Integrate Karantina into the city-wide transportation network.
- D5: Improve connectivity and accessibility to Karantina.
- E3: Reduce sound and air pollution.

### Project Objective(s)

The project contributes to the following strategies:

- B3.1/ D5.5: Establish points of connection with city-scale and wider mobility modes (buses, taxis, etc.).
- E3.1 Manage the traffic of trucks, their access, and parking in the area.

Also:

- Determine and propose the best points of connection in Karantina to the existing modes of transportation and road networks in Beirut.
- Advocate for the introduction of stations and bus stops in Karantina to further connect the residents to the rest of Beirut.
- Expand the capacity of the existing truck parking spaces in Karantina.
- Design a traffic scheme for Karantina that addresses density concerns, the timing, and the rerouting of trucks away from the residential areas.

### Project Description (concept note)

Before the civil war, Karantina used to have a bus stop that was part of an old transportation network that linked several areas in Beirut. However, this transportation network was gradually discontinued after the end of the civil war and was replaced by an informal one. These networks of informal transportation, such as taxis and buses, do not run inside Karantina but operate along its edge. The residents in Karantina reported a low dependence on these transport networks due to difficulty of walking to the bus stops across the highway, or because of a lack of trust in these buses. The residents also reported an undesired movement of trucks in Karantina. The movement of the trucks increases the levels of noise and air pollution from the heavy smell of diesel and smoke and the foul odors from the transported livestock.



Figure 16. The Charles Helou highway. Source: Sami Diab, 2019.

Trucks also utilize the sidewalks, streets, open spaces, and vacant and residual spaces in Karantina for parking because of a shortage of parking spaces that are designated for trucks in the port, which adversely impacts the safety and lives of the residents. Trucks circulate within Karantina with no set schedule and do not follow dedicated routes. They use inner streets to operate during non-working hours and avoid officers when they are present. Therefore, trucks contribute to the deterioration of the physical and environmental quality in Karantina. They wear out the asphalt on the streets, create potholes, and cause physical damage to public spaces, such as roads and vacant lots, and private property such as cars and front gates. They also cause congestion and pose a threat to street users, especially children and elderly people.

To strengthen socio-spatial connectivity between Karantina and its surroundings and enhance its urban environment, it is essential to integrate Karantina into a city-wide transportation network and reduce the pollution that is caused by trucks. Therefore, this proposal requires conducting a thorough transportation study that considers the following recommendations:

- New nodes inside Karantina should be connected to the existing transportation networks in Beirut. Accordingly, the study should determine the best connection points and link them to the city-wide network. Van no. 2 and the van along the airport-Antelias line can divert their route to cut across Karantina and stop at the different proposed nodes. The nodes should be chosen across the three sub-neighborhoods with well-serviced stations and gathering spaces.
- Additional parking spaces for the trucks inside the port to accommodate the existing number of trucks. The study should rethink the programming of the port and explore the different options for the provision of extra parking spaces while considering the port's operation requirements, supply chains, and logistics. The underutilized spaces in the port can be repurposed for parking.
- A traffic scheme for Karantina that addresses density, timing, and rerouting of trucks away from the residential areas. The traffic scheme should keep the heavy trucks out of Karantina's residential clusters. The area between Brazil Street and Sahara-Iben Sarjouon Streets must become off-bounds for the trucks with street signs and barriers, penalties for violations, and possibly designed to narrow down the street entrances (for example, by expanding the sidewalks or providing planted, median street barriers). This step can maintain smooth access for the trucks in and out of the port as well as their free movement throughout the more industrial, eastern part of Karantina. Timing and traffic flow directions for the streets where the trucks are allowed to move must be carefully configured to respond to the port's operational needs and consider the Karantina residents and businesses along these streets.
- New modes of transportation such as trains and sea taxis. The study should explore more time-efficient and sustainable transportation modes and advocate for their integration into the existing network in the long term.

The transportation study will ensure people in Karantina have access to decent transportation modes that are linked to several areas in Beirut. Transportation is vital for improving living standards, especially for marginalized communities like the ones in Karantina. By enhancing their mobility, the residents in Karantina can access better jobs and services, commute to a wide buffer area around Karantina, and engage in public and social life. The study will also ensure a better urban environment and the well-being of residents as it will limit noise and air pollution.

### The Relevant Actor

The relevant actor is the Ministry of Public Works and Transportation, in coordination with other public actors such as the Municipality of Beirut, the Governor of Beirut, and the Council for Development and Reconstruction, academic institutions and non-governmental organizations such as the Beirut Urban Lab at the American University of Beirut and TrainTrain<sup>42</sup>, and international actors and non-governmental organizations such as the UNDP, ILO, and CMA CGM<sup>43</sup>, and in consultation with the residents in Karantina.

<sup>42</sup> A non-governmental organization that advocates for the rehabilitation of the Lebanese railway rehabilitation and for railway heritage preservation.

<sup>43</sup> A French transportation and shipping company that is currently active in the Port of Beirut.

**Proposed Source of Funding**

Public authorities involved supported by international actors such as the UNDP, the World Bank, the EU, and KfW Development Bank<sup>44</sup>.

**Approximate Financial Magnitude**

The cost of conducting the study is estimated at 70,000 USD<sup>45</sup>.

**Period and Timing of Execution**

Short-term  Long-term  Phased

**Expected Results**

- Nodes of transportation inside Karantina that are connected to a city-scale network.
- Enhanced mobility and traffic circulation inside Karantina.
- Less noise and reduced levels of pollution in the residential sub-neighborhoods.
- New modes of transportation for the residents of Karantina.

<sup>44</sup> A German state-owned investment and development bank.

<sup>45</sup> It is important to note that these estimates do not account for the fluctuations in market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

**ACTION PLAN 21****Project Title**

Develop protocols of cooperation, networking, and the transfer of expertise and knowledge between the different businesses in Karantina.

**General Objective(s)**

B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.

C. Support, increase, and sustain cultural and economic vitality in Karantina.

**Type of Project**

- Execution Project  Regulation - Policy
- Detailed Study  Lobbying - Advocacy
- Institutional - Committee set up  Capacity Building
- Management - Operations plan

**Strategic Objective(s)**

B5: Strengthen the role of economic drivers to connect Karantina to the city-scale economy.

B7: Connect the different businesses within Karantina.

C5: Support the growth of port-related businesses.

**Project Objective(s)**

The project contributes to the following strategy:

C5.1/B5.2/ B7.1: Network, protect, and strengthen the sustainable agility and capacity of port-related and other industrial businesses. This requires:

- Increasing communication and the transfer and exchange of knowledge between the different businesses in Karantina.
- Promoting collaboration between the businesses.

**Project Description (concept note)**

Karantina's economy is characterized by groups of businesses with similar sizes and scope of work. For example, micro businesses account for 82% of the total number of businesses in Karantina. A third of these micro businesses include retail shops and recreational services in the food sector. They include mini markets, butchers, bakeries, juice shops, coffee shops, restaurants, and hookah places. They are spread throughout Al-Khodor, Al-Senegal, and Al-Saydeh sub-neighborhoods. These businesses mostly employ locals from Karantina and cater to the residents of the sub-neighborhood where they are located. Furthermore, several micro businesses, especially smaller ones with 0 to 2 employees, act as gathering places and anchors for social connectivity among the residents of each sub-neighborhood.

Karantina also has several businesses in the cultural sector. Among them are micro businesses for traditional manufacturers and handicraft businesses. They include carpentry and the manufacturing of furniture, metal works, and sewing. They are also spread across Karantina's three sub-neighborhoods. Some of them date back to the pre-civil war period. This proves their vitality and entrenchment in Karantina. Their work conceivably intersects with that of the new cultural functions that opened in Karantina before the port blast. These new functions include ateliers, showrooms, and art venues like Forum de Beyrouth, SMO, and Sfeir-Semler Gallery. These attract different user groups like young people, artists, and other visitors from other areas across Lebanon and abroad.

Additionally, the location next to the Port of Beirut, a vital economic and transportation hub, attracted more port-related businesses to Karantina, including freight and logistics facilities. 70% of these facilities are in the industrial zone. They are mostly small to medium in size and employ skilled professionals from outside Karantina.

Their Karantina branches are mainly dedicated to storing products and barely generate any pedestrian inflow but attract other related businesses such as mechanic shops and garages. Many mechanic shops and garages are located across Karantina and account for 18% of the total number of businesses. They are mostly micro-scale, involve manual labor, and employ people from Karantina.

There is no coordination or cooperation between the businesses despite their similar scope of work. The diagnosis report showed that there is poor communication and networking among the businesses, leaving most of them to operate in isolation. Due to the economic crisis in Lebanon, and the impact of the port blast, the businesses in Karantina are more vulnerable and in need of collaboration and mutual support. For example, many businesses are threatened with significant rent hikes, increases in production costs, and a decrease in demand. The port blast damaged their properties, facilities, equipment, and vehicles. Many of these businesses also lack adequate financial resources and struggle to secure funding to fully recover or sustain their operations. Moreover, the mismanagement or neglect of facilities such as the slaughterhouse, dating back even before the economic crises, disrupted the supply chains of several businesses.

Accordingly, this project proposes to increase communication between the businesses in Karantina and establish networks of cooperation. This requires setting up a public-private partnership or a non-profit initiative that can act as an intermediary between the businesses and promote collaborative plans. The project can be a model that is first implemented in Karantina and adapted to other areas in Beirut.

This project can also rely on support from local or international non-governmental organizations that work in the field of business research and development and the Ministry of Economy and Trade. Their role will be to research the conditions and needs of the Karantina businesses and devise a program for the recruitment and training of intermediaries and networking brokers. The brokers will manage the process of identifying collaborative opportunities for the businesses and acting as mentors or facilitators in the creation of new collaborations. The businesses that will potentially benefit from this project must be incentivized financially to participate in the scheme.

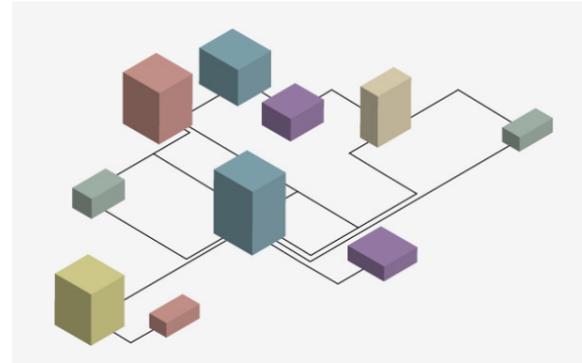


Figure 17. Diagram of business networks. Source: BUL, 2022.

Social events to initiate the partnerships are important after the potential businesses that can participate in the scheme are identified, followed by detailed feasibility studies. The businesses must then commit to the scheme in writing. An operational structure for the partnerships or networks will be developed. The brokers can temporarily oversee these partnerships and networks; however, the target is to ultimately have the participating businesses improve their knowledge and capacities to manage their collaborations independently. There is no clear data on which businesses would be interested in the collaborations and to which extent and the number of required brokers; accordingly, a pilot phase for the project is essential. The data from this pilot will dictate the number and types of businesses that are interested in the scheme. It will also indicate the number of brokers that are required in the next phase and their scope of work.

The resulting collaborations between the businesses in Karantina will vary in type, scale, and size. They can take the shape of a simple development circle for regular meetings to exchange knowledge of business techniques and solutions to overcome problems. This is especially important to businesses in the same sector and with similar activities and size. They can also coordinate collective actions to solve problems; for example, the butchers can advocate for the reopening of the slaughterhouse to improve their products. The businesses can also form strategic partnerships that can help to reduce costs and increase efficiency. These partnerships are particularly relevant to the mechanic shops and the freight and logistics facilities. Local artisans can also benefit from the different forms of collaboration with art galleries and ateliers. Other businesses can also benefit from more loose models of cooperative whereby the involved businesses share common resources and activities. Local artisans and handicraft businesses can also share equipment and transport vehicles. Additionally, stronger forms of collaboration like joint ventures or cooperatives and mergers are important. They can be highly beneficial for the micro businesses in the same sector to upscale their activities and become more resilient.

Accordingly, this project, if implemented, can improve economic connectivity and vitality for businesses in Karantina. Forms of partnerships that are mutually beneficial, timely, and cost-effective can help businesses improve their agility and function more synergistically.

#### The Relevant Actors

The relevant actors are local businesses and non-governmental organizations such as Daleel Tadamon<sup>46</sup> and the Lebanese Development Network<sup>47</sup>, and consultancy offices in the private sector such as Beirut Consulting<sup>48</sup> and legal agenda, and in consultation with the General Directorate of Cooperatives which is under the authority of the Ministry of Agriculture, the Ministry of Economy and Trade.

#### Proposed Source of Funding

International agencies with similar scope of work such as USAID, KfW, ILO, and the International Development Research Center (IDRC).

#### Approximate Financial Magnitude

The cost of the initial research, the recruitment and training, and communicating the program to potential participants is estimated between 15,000 and 20,000 USD. The cost of conducting the pilot phase of the project is estimated at 80,000 USD<sup>49</sup>. There are additional costs that depend on the number of participating businesses and the types of collaborations.

#### Period and Timing of Execution

Short-term       Long-term

Phased (Preliminary research phase: Two months. Training and recruitment: Two months. Outreach to potential participants and organizing introductory meetings and events: Three months. Feasibility studies leading to the implementation of businesses collaborations: One month. It is important to note that the duration of each step might change depending on the ratio of staff to the number of participating businesses and the types of collaborations.

#### Expected Results

- Solidarity and collaboration between the businesses in Karantina.
- Improved economic connectivity to and within Karantina.
- Strengthened communication and coordinated action among the businesses.
- Upscaled and intensified economic activities.
- Increase in business efficiency and reductions in costs.
- Improved business capacities to overcome challenges.
- A pilot model to enhance collaborations between the different businesses on a national scale.

<sup>46</sup> Daleel Tadamon is an initiative that supports collectives and small to medium enterprises in Lebanon and promotes their co-operation and collaboration to increase the social and economic resilience of local community groups.

<sup>47</sup> The Lebanese Development Network (LDN) is a national non-profit organization which assists individuals, community groups, and institutions in improving their performance and addressing development challenges. The organization also works to leverage shared resources, expand synergetic capabilities, and develop co-operational processes and joint ventures.

<sup>48</sup> Beirut Consulting is a financial advisory firm that provides a wide range of services including feasibility studies, business valuations, and planning for alliances, joint ventures, and mergers.

<sup>49</sup> It is important to note that the estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 22

### Project Title

Design and build a community center in a strategic location that is equally accessible to the residents of the three sub-neighborhoods.

### General Objective(s)

B. Strengthen the socio-cultural, economic, and spatial connectivity of Karantina internally and externally with its surroundings.

### Type of Project

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Execution Project     | <input type="checkbox"/> Regulation - Policy          |
| <input type="checkbox"/> Detailed Study                   | <input type="checkbox"/> Lobbying - Advocacy          |
| <input type="checkbox"/> Institutional - Committee set up | <input checked="" type="checkbox"/> Capacity Building |
| <input type="checkbox"/> Management - Operations plan     |   |

### Strategic Objective(s)

B8: Enhance the public realm and provide shared facilities and spaces to promote social connection across the three sub-neighborhoods.

### Project Objective(s)

The project contributes to the following strategy:

B8.1/ D3.3/ E5.1: Adopt an inclusive and integrated design approach while upgrading and rehabilitating existing public spaces and introducing shared facilities.

Accordingly, the project also aims to:

- Motivate the different community groups in Karantina to understand and change their circumstances by involving them in the design and decision-making process and inspiring them to take ownership and responsibility for their shared spaces by building their capacities.
- Empower vulnerable community groups, primarily women and younger generations, to help promote their skills and specialties through income-generating activities, such as the production and marketing of local crafts. Such skills include self-sufficiency, independence, and resilience.
- Enrich the skills of the different community groups by building their capacities, teaching them life skills such as self-expression, and providing vocational training and workshops.
- Provide therapy support to improve the mental health and self-esteem of the vulnerable groups, primarily, people who were directly or indirectly impacted by the port blast.

### Project Description (concept note)

Karantina has a social fabric that is diverse across different nationalities, religions, age groups, and educational backgrounds. However, people tend to aggregate within the sub-neighborhood enclaves - Al-Saydeh, Al-Senegal, and Al-Khodor - based on kinship and religious ties. Although the three sub-neighborhoods and their residents share some common attributes, social segregation is still prevalent between the sub-neighborhoods. The research revealed strong social connections within each sub-neighborhood but not between them. The analysis of the answers to the questionnaires further showed that the sense of belonging to the sub-neighborhoods is at its highest in Al-Khodor at 71%. Al-Saydeh and Al-Senegal sub-neighborhoods had similar results, at 58% and 52% respectively.

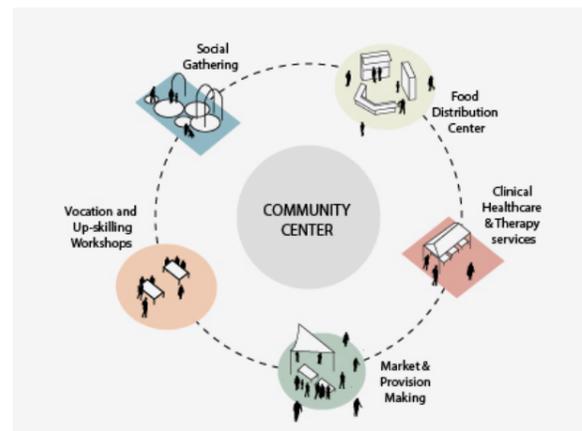


Figure 18. A schematic of the proposed community center activities. Source: BUL, 2022.

Therefore, there is a need to have shared public facilities that can enhance social connectivity among the different community groups across the three sub-neighborhoods. One proposed example of these facilities is a community center that can operate as a space of recovery and empowerment for Karantina and its residents.

The center aims to develop community capacities and serve as a place for self-expression and community consultations to foster a strong feeling of belonging. As a result, it can help the different community groups heal collectively from the trauma of the port blast. It can also establish a vibrant relief hub for people in Karantina who are struggling so they can interact and support each other, forge a network of solidarity, and enhance their social cohesiveness. The center can be established in one of the abandoned municipal buildings on lot number 358.

### Proposed programs:

The residents of Karantina noted in the answers to the household questionnaire a lack of public spaces, high unemployment rates, the trauma they suffered from the port blast, and the levels of inequality and poverty in Karantina. Therefore, the community center can provide the following proposed services but is also not limited to them:

- Setting up a program for local support called Mouneh for Resilience. The program will provide vocational training for young men and women from vulnerable communities and will aim to develop a sense of attachment and pride toward their food culture so they can become more self-sufficient in marketing their products.
- Provide clinical healthcare and therapy services for individuals and groups. The aim is to support children, younger people, and adults in overcoming the psychological trauma from the port blast and improve the medical and mental health of the residents of Karantina while they recover from the lockdowns of the COVID-19 pandemic.
- Provide vocational, upskilling, and capacity-building workshops to empower women and younger people to engage in income-generating activities.
- Provide a food distribution center to the soup kitchen Leqmet Mariam. Leqmet Mariam is managed by a non-governmental organization - for example, Jouzourouna - and provides hot meals to people facing financial hardship.
- Organize social gatherings and town hall meetings to reinforce a sense of belonging for people and create a sense of unity among the different community groups. Multipurpose spaces will also be used by the different community groups in the sub-neighborhoods in Karantina to discuss the main social issues and propose solutions. They will help build trust among the residents of the sub-neighborhoods and bring them together.

### Operation and management:

The community center will be operated and managed by a non-governmental organization that is responsible for running its different activities. In parallel, a neighborhood advisory committee will operate as the link between the different community groups and the non-governmental organizations that are active in Karantina. The committee will identify the needs and demands of the community groups, prioritize them, and match them with the available programs by the non-governmental organizations.

The non-governmental organizations that will manage the community center will work closely with the community advisory committee to set priorities for local needs and monitor and evaluate the impact of the center regularly. It will also work closely with other non-governmental organizations that can provide programs that are relevant to the needs of the community groups and set a time frame for the programs.

The profile of the non-governmental organizations that will manage the community center should include:

- A good reputation and good record of previous work.
- A scope of work that includes similar types of programs like running capacity building and recovery healing workshops and setting up soup kitchens.
- Good connections with the Municipality of Beirut and the community groups.
- A record of similar activities or previous interventions in Karantina.
- An official registration as a non-governmental organization in Lebanon.
- A clear work plan and financial management skills.

The profile of the Community Advisory Committee should:

- Ensure a level of inclusivity and representativeness: the nomination and the selection process of individuals to become members of the committee should ensure diversity, inclusiveness, and representation across the three sub-neighborhoods in Karantina and across gender, age, and religious groups.
- Ensure a level of diversity of backgrounds and occupations: the members of the committee should come from a diversity of educational backgrounds and have previous or current occupational skills that can contribute to the social, economic, and educational missions of the community center.
- Ensure a level of community involvement: the members of the committee should be involved in the social life in Karantina and they should be nominated by other community members.
- Demonstrate the required capabilities: their capabilities should be known to the research team at the Beirut Urban Lab through their prior engagement with the team as local researchers or in the community events (the workshops, town hall meetings, and focus group discussions).

The Community Advisory Committee is composed of representatives of the community groups in Karantina, the Municipality of Beirut, as well as representatives from the Beirut Urban Lab at the American University of Beirut, Design for Communities, and the non-governmental organizations that are active in Karantina.

#### The Relevant Actors in the Design and Execution Phases

The relevant actors are the Municipality of Beirut, the Governor of Beirut, the Beirut Urban Lab and the DI-Lab at the American University of Beirut, Design for Communities D4C, and non-governmental organizations that are active in Karantina, in coordination with the proposed neighborhood committee.

#### Proposed Source of Funding

These include local actors such as the Municipality of Beirut and international actors such as Cités Unies Liban, La Guilde, the Norwegian Refugee Council NRC, and UNHCR and other UN agencies.

#### Approximate Financial Magnitude

The funding must cover the construction and rehabilitation costs estimated at 140,000 USD, the costs of the required equipment and furniture estimated at 20,000 USD, and consultancy fees estimated at 30,000 USD<sup>50</sup>.

#### Period and Timing of Execution

Short-term  Long-term  Phased

#### Expected Results

- A new social space for people in Karantina where they cultivate a sense of communal belonging.
- Improvements in the local economy in Karantina by building the capacities of the residents and providing them with income-generating activities.
- Restored trust in the local authorities such as the Municipality of Beirut that will establish the community center.

<sup>50</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 23

#### Project Title

Expand financial support opportunities and institute mechanisms to link these opportunities with the micro businesses in Karantina.

#### General Objective(s)

C. Support, increase, and sustain cultural and economic vitality in Karantina.

#### Type of Project

- Execution Project  Regulation - Policy
- Detailed Study  Lobbying - Advocacy
- Institutional - Committee set up  Capacity Building
- Management - Operations plan

#### Strategic Objective(s)

C3: Support the existing micro businesses and sustain their operations in Karantina.

C4: Increase the diversity and vitality of the traditional crafts and other manufacturers in Karantina.

#### Project Objective(s)

The project contributes to the following strategy:

C3.1/C4.1: Offer financial incentives to micro and specialized businesses.

Also:

- Match the micro-enterprises in Karantina with the appropriate funding opportunities to expand their operations.
- Increase the capacities of microfinance institutions and their outreach in Karantina.
- Decrease financial burdens on craft manufacturers and businesses in Karantina.

#### Project Description (concept note)

52 small and micro businesses account for 63% of the total number of businesses in Karantina. 16 other larger micro businesses account for 19% of total businesses<sup>51</sup>. They include retail shops, mini markets, butchers, bakeries, mechanic shops, hookah stores, and carpentry businesses. Micro businesses mostly employ people who live in Karantina. They are also mostly owned by older residents and are their only source of income.

The field observations and answers to the questionnaires also showed patterns of social connectivity that are anchored around these businesses, especially the smaller micro businesses, with residents gathering and socializing around the shops. Hence, micro businesses are pivotal to sustain the livelihoods of the residents of Karantina - including business owners, workers, and their families - while fostering their socio-spatial and socio-economic practices. Additionally, most of the old manufacturers and handicraft businesses in Karantina are micro-scale and include carpentry and the manufacturing of furniture, metal works, and sewing. Their products, along with the associated knowledge and expertise, are regarded as cultural assets. They are spread across Karantina's three sub-neighborhoods, and some of them date back to the pre-civil war period and remained vital in Karantina.



Figure 19. A micro business in Karantina. Source: BUL, 2021.

<sup>51</sup> The strategic diagnosis report defined micro enterprises in Karantina as enterprises with 0 to 2 employees and small to larger micro businesses as businesses with 3 to 10 employees.

However, the activities of these businesses were negatively impacted by the economic crisis in Lebanon, the devaluation of the Lebanese lira, and the port blast. For example, 19 micro businesses that were surveyed in 2021 were partially open and 5 had already closed. They are forced to cope with drastic increases in production and operation costs. With the increase in fuel prices, transportation costs are also increasing, and access to key services like water and electricity is compromised. The micro businesses in Karantina are also facing rent hikes as well as threats of eviction. Also, demand is shrinking with the decrease in the purchasing power of customers. Even with the distribution of aid funds after the port blast, many businesses still had to rely on their savings and loans from their social networks for the repairs. Some of the businesses also did not receive any aid funds. The handicraft businesses are particularly vulnerable to competitive larger-scale businesses that are less impacted by the economic crisis and are relocating to Karantina. Additionally, many micro businesses do not qualify for loans from local banks. On the one hand, many business owners do not have guarantees to apply for loans or knowledge about funding opportunities; on the other hand, financial institutions such as local banks find it difficult and costly to obtain sufficient information on the operation and financial conditions of micro businesses.

Accordingly, this project proposes to develop financial support opportunities for the micro businesses and crafts in Karantina, while matching each business with the appropriate financial opportunity. It aims to decrease the financial burdens on businesses and increase their access to loans and sources of financial support. This will allow them to sustain their operations and even promote their growth.

It is crucial to increase the exposure of the micro businesses in Karantina to financial opportunities that are available to them. A suggestion is to set up business consultancy clinics that can identify the financial opportunities and link them to the businesses. These clinics can be integrated into the Business and Career Training Center that is proposed in action plan number 8. The role of these clinics is to initially map the financial opportunities and financing programs, including microfinance institutions or grant providers like venture philanthropies. Then, businesses in need of funding will have access to sessions with consultants at the clinics to match them with the appropriate financing programs. These clinics will also help the businesses draft business plans and feasibility studies as prerequisites to applying for financial support. It is imperative that the clinics also strictly adhere to promoting responsible financing and lending activities, ensuring their credibility, and that of the relevant financial institutions, and protecting the micro businesses over dept.

In parallel, the scope and sustainability of the financing opportunities that are suitable to the micro businesses need to be expanded; accordingly, the microfinance sector in Beirut needs to be strengthened. Firstly, it is important to mitigate the information asymmetries around financing micro businesses. Accordingly, the outreach and capacities of the existing microfinance institutions (MFIs)<sup>52</sup> need to be improved. Their programs need to be more widely marketed while maintaining transparency and clarity. In addition to the work of the business consultancy clinics, such outreach efforts will allow the micro businesses to become more informed about the different loan and financing programs that are available to them. Additionally, encouraging coordination and networking between the MFIs will help upscale and sustain their operations. The work and scope of activities of the Lebanese Micro-Finance Association (LMFA), which already brings together nine MFIs, should be strengthened. For example, an important initiative that needs to be implemented collaboratively is the creation of soft infrastructure, like a nationwide micro business credit risk database. This will allow the MFIs to share information with the micro businesses that are requesting funds, facilitating the financing operations, and decreasing the associated risks.

It is also important to design schemes that can override the typical lack of guarantees for micro businesses to apply for loans. Accordingly, groups that provide loans with joint liability can be highly effective, especially in Karantina with its tightly knit sub-neighborhood community groups. It can incentivize the financial programs to rely on social ties to screen, monitor, and enforce loan repayment. Certain loans can also be backed by or facilitated by government institutions. Several funding schemes for businesses are already established through governmental or quasi-governmental bodies like Kafalat<sup>53</sup> and the Economic and Social Fund for Development (ESFD)<sup>54</sup>, but these schemes are currently mostly inactive or not inclusive enough to serve the vulnerable businesses in Karantina.

<sup>52</sup> The total number of micro finance enterprises and providers in Lebanon exceeded 20, and they include ADR, Vitas, Emkan, Al-Majmoua, the Makhzoumi Foundation, CLD, Al-Tamkeen, AEP, and EDF among others.

<sup>53</sup> Kafalat S.A.L is a loan guarantee company that the Lebanese government established in 1999 and has the following ownership structure: 75% of its shares are owned by the National Institute for the Guarantee of Deposits and 25% of its shares are owned by fifty Lebanese banks. Kafalat provides financial guarantees for loans from commercial banks to small and medium size enterprises that are engaged in the following economic sectors: industry, agriculture, tourism, traditional crafts, and high-end technology.

<sup>54</sup> The Economic and Social Fund for Development (ESFD) is part of the Euro-Med Partnership established between the European Commission and the government of Lebanon in 2000. Its objectives are to alleviate levels of poverty and improve living conditions in Lebanon. Among its activities is guaranteeing business loans to small to medium enterprises through a partnership with five commercial banks.

Their scope of work and criteria need to be reactivated and expanded. Micro businesses, especially the ones that have social and cultural value, like the craft businesses, must be prioritized for government-backed loans. In this case, the Kafalat funding scheme can be reassessed for a possible adjustment to accommodate the traditional craft businesses in Karantina. A more encompassing proposition would be for ESFD to initiate a partnership with the MFIs, creating a risk-sharing scheme. The partnership can provide micro-loans for unbanked micro businesses or those with insufficient guarantees. Government institutions, through the ESFD, can support the MFIs and their operational costs, and guarantee the payment of a percentage of their loans.

With this kind of financial support, the micro businesses will potentially be able to sustain and even upscale their operations. They will be able to maintain the diversity of businesses in Karantina and further establish their essential role in providing services that have cultural value and in generating income and job opportunities for people.

### The Relevant Actors

The relevant actors include private consultancy offices, Lebanese and international non-governmental organizations like Sanabel<sup>55</sup> and OXFAM, micro finance institutions in Lebanon, LMFA, Kafalat, and ESFD, in coordination with the Ministry of Economy and Trade, the Ministry of Finance, the Investment Development Authority of Lebanon, the Central Bank of Lebanon, and International Executive Service Corps<sup>56</sup>.

### Proposed Source of Funding

They include local actors such as ESFD and Sanabel and international such as the World Bank, the Partnership Council for the Lebanon Financing Facility (LFF)<sup>57</sup>, the EU, the government of the Netherlands<sup>58</sup>, USAID<sup>59</sup>, SANAD<sup>60</sup>, and KfW<sup>61</sup>.

### Approximate Financial Magnitude

The cost to establish the business clinics for training, mapping, and matching financial opportunities is estimated at 80,000 USD. The cost to support the micro finance enterprises is estimated at 10,000 USD<sup>62</sup>.

### Period and Timing of Execution

- Short-term       Long-term
- Phased (Establishing the business clinics: One month. Mapping the funding sources: Two months, followed by the needs assessments and sessions with the different enterprises)

### Expected Results

- Improved financial inclusion.
- An increase in the financial capacities of the micro enterprises.
- An expansion in the fixed assets of the micro enterprises.
- Upscaled operations of micro enterprises and a larger number of job opportunities.
- Karantina business owners and their families feeling more empowered and supported to ensure their success.
- Sustained socio-spatial practices and social connectivity associated with micro enterprises.
- Sustained craft businesses and their cultural productions.
- Sustained business diversity in Karantina
- Enhanced operations and networks of microfinance institutions.

<sup>55</sup> Sanabel is a regional institution in the Arab world. Its mission is to support and build capacities in the micro finance sector for the provision of sustainable finance strategies that are inclusive of low-income groups.

<sup>56</sup> IESC already worked on enhancing the micro finance sector in Lebanon through the Lebanon Investment in Microfinance Program (2009-2015). It worked with the Lebanese MFIs and helped establish the LMFA.

<sup>57</sup> LFF is a multilateral donor agency that the World Bank established in 2020 in cooperation with the UN and the EU and with support from other key donors. Its objective is to catalyze immediate as well as medium-term socio-economic recovery of vulnerable populations and businesses affected by the Port of Beirut blast.

<sup>58</sup> The European Union (EU) and the Government of Netherlands fund the ESFD.

<sup>59</sup> The USAID funded the Lebanon Investment in Microfinance Program (2009-2015).

<sup>60</sup> The SANAD Fund for MSME is an impact investment fund dedicated to supporting entrepreneurs in the Middle East and North Africa. It channels funding to MSMEs through investing in local partners such as microfinance institutions and other financial intermediaries.

<sup>61</sup> KfW is among the funders of SANAD.

<sup>62</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 24

### Project Title

Set up offices in the Municipality of Beirut to organize and promote cultural events in Karantina, in partnership with the private sector.

### General Objective(s)

C. Support, increase, and sustain cultural and economic vitality in Karantina.

### Type of Project

- |  |  |
|--|--|
| <input type="checkbox"/> Execution Project                           | <input type="checkbox"/> Regulation - Policy |
| <input type="checkbox"/> Detailed Study                              | <input type="checkbox"/> Lobbying - Advocacy |
| <input checked="" type="checkbox"/> Institutional - Committee set up | <input type="checkbox"/> Capacity Building   |
| <input type="checkbox"/> Management - Operations plan                |  |

### Strategic Objective(s)

C6: Improve cultural vitality and leisure activities in Karantina.

### Project Objective(s)

The project contributes to the following strategy:

C6.1: Activate the open spaces in Karantina to host occasional, weekly, monthly, and annual cultural and economic festivals. This includes:

- Position the Municipality of Beirut as a catalyst of cultural vitality.
- Generate interest in Karantina as a destination for cultural and artistic activities.
- Involve the local community groups in the local cultural development efforts.

### Project Description (concept note)

The cultural sector in Karantina has the potential for growth. This potential is evident in the number of new entertainment and cultural businesses in Karantina. Leisure and entertainment venues like BO18, KED, Forum de Beyrouth, and the art galleries attracted younger people, artists, exhibitors, and visitors from areas across Lebanon and from abroad. However, the increase in the number of new entertainment and cultural businesses was disrupted by the port blast, with a few businesses relocating or closing, while the businesses that are still open are struggling with the impact of the economic crisis. Additionally, while these businesses increased the pedestrian flow to Karantina and enhanced its connectivity with the rest of Beirut, their direct impact on the residents of Karantina was minimal. Many of these businesses do not serve the local community due to their expensive services and their relative incompatibility with prevalent local lifestyles. They also do not employ the residents. The number of cultural and recreational venues that serve the residents is small; they include three coffee shops, one computer gaming shop, one hookah store, and one car training workshop. It is important to note, however, that the open public spaces in Karantina do not always accommodate the local cultural practices.

Despite their availability, the open spaces in Karantina are either inaccessible or compromised. Many of the large lots in Karantina are owned by the Municipality of Beirut and central government institutions. Accordingly, open public spaces have significant potential to accommodate social and cultural activities. However, most of these spaces are used by the military or truck drivers and are subject to high levels of pollution and mismanagement. For example, four military bases are located on large pieces of land at the peripheries of Karantina.



Figure 20. Municipal land that has potential to be transformed into a cultural and recreational hub. Source: Batoul Yassin, 2021.

The industrial functions, waste management facilities, and unregulated truck circulation contribute to the levels of pollution and the unwelcoming perception of the urban environment. As a result, and as the diagnosis report demonstrated, 50% of the households in Karantina were not satisfied with the quality of the existing public and shared spaces, and 72% avoided using these spaces in their free time. Hence, most of the socio-spatial practices of people in Karantina are confined to the residential sphere or the workplaces. Therefore, this action plan, with the action plans that propose the rehabilitation of the urban environment and the shared spaces in Karantina such as action plan 13, 20, 29, aims to enhance the economic and cultural potentials of these spaces by bringing people to Karantina while benefiting the locals. It requires establishing a municipal unit that can partner with the businesses in Karantina to promote and organize cultural events.

The municipal council is by law required to establish, manage, or contribute to social, cultural, and artistic practices in Beirut<sup>63</sup>. Accordingly, the Municipality of Beirut must support community groups in distress, including community groups in Karantina, and enhance their economic and cultural vitality. Accordingly, the Municipality of Beirut should establish a Cultural Activities Department that is entrusted with proactively handling and supporting cultural programs and events. For example, it can promote local cultural assets such as local traditional industries and crafts and the value of historic sites, scenic spots, monuments, and landscapes. More specifically for Karantina, it can offer or rent out the large municipal lot, in coordination with the Governor of Beirut, to host social and cultural events. These events can include festivals, souks, and artistic installations. The souks, for example, can include micro and small businesses and promote their local mouneh products and crafts. Artistic events can encourage and promote local artists and creative initiatives. They can be hosted occasionally, weekly, monthly, seasonally, or annually. The suggested Cultural Activities Department can partner with private institutions that can invest funds in organizing such cultural events.

It is also important to establish a municipal socio-cultural committee that is composed of council members, experts, and other citizens - ideally representative of the local community groups - to aid and bolster the work of the Cultural Activities Department. Through the work of the socio-cultural committee, people in Karantina will be involved in suggesting plans, participating in the organization of events, and communicating their needs. The role of people in Karantina and their relationship with the council must be clear. Also, the Lebanese Municipal Law does not encourage, but it does not forbid community groups from becoming members of municipal committees. This leaves the power relationships and roles within the committees unclear and further discourages community engagement. Accordingly, further detailing and clarifying the requirements of the Municipal Law in terms of the roles of council members and committee members can potentially help induce community engagement and improve levels of trust.

With such institutional arrangements the envisaged cultural activities will likely generate external interest in Karantina while remaining inclusive and catering to the cultural needs and lifestyles of the locals. The social and communal nature of such public activities can also enhance social connectivity and contribute to the local economy by increasing the flow of pedestrians to Karantina.

### The Relevant Actors

The relevant actors include the Municipality of Beirut and the Governor of Beirut, in coordination with the Ministry of Culture, the Ministry of Interior and Municipalities, the parliament to implement amendments to the Municipal Law, various local civil society groups and residents and businesses in Karantina.

### Proposed Source of Funding

Public authorities involved with possible support from local and international agencies.

### Approximate Financial Magnitude

Not applicable.

<sup>63</sup> Article number 50 in the Municipal Law - Legislative Decree number 118 (dated 30 June 1977).

### Period and Timing of Execution

Short-term       Long-term

Phased (The formation of the socio-cultural committee does not require major funding and can be implemented immediately after enhancing the cultural role of the Municipality of Beirut. The second phase includes the establishment of the Cultural Diversity Department that may take time since it requires securing some funds.)

### Expected Results

- Increase in the number and diversity of cultural practices in Karantina.
- A Cultural Activities Department that enhances the role of the Municipality of Beirut as a catalyst of cultural vitality.
- An increase in the level of citizen engagement.
- Active open and shared spaces in Karantina for cultural events.
- A more vibrant local economy with an increased pedestrian flow and exposure to local businesses.
- Enhanced social connectivity.
- People not residing in Karantina have a better and more accurate perception of the area as a cultural hub.

## ACTION PLAN 25

### Project Title

Establish a design hub in Karantina with shared resources and facilities for rising young designers to launch their careers and serve as a catalyst for further cultural development.

### General Objective(s)

C. Support, increase, and sustain cultural and economic vitality in Karantina.

### Type of Project

- Execution Project       Regulation - Policy
- Detailed Study       Lobbying - Advocacy
- Institutional - Committee set up       Capacity Building
- Management - Operations plan

### Strategic Objective(s)

C6: Improve cultural vitality and leisure activities in Karantina.

### Project Objective(s)

The project contributes to the following strategy:

C6.2: Engage artists and designers to work, network, and complement the existing crafts and the activities of industries in Karantina. This requires:

- Re-engaging designers and artists in everyday life in Karantina through their work and practices.
- Supporting emerging artists and designers by providing them with shared resources that are affordable such as labs, and workspaces.
- Fostering collaborations between designers and artists for shared cultural production.
- Offering businesses and the residents of Karantina opportunities to interact and collaborate with designers and artists by using the proposed design hub for workshops to advance their work or skill sets.

### Project Description (concept note)

The in-depth profile of the distribution of business types and densities in the sub-neighborhoods in Karantina showed that around 10% of the businesses are in the arts, crafts and design (ACD) category. Before the port blast, Karantina was becoming a destination for art and design businesses. The re-expansion and diversification of cultural practices can strengthen Karantina's cultural vitality but is limited by the area's severed ties to the rest of Beirut, the post blast decrease in ACD activities, and the lack of tools that are necessary for artistic and cultural production.



Figure 21. Schematic of a lab hub for innovation and design. Source: BUL, 2022.

To empower artistic and cultural practices within Karantina, it is imperative to establish a creative hub that facilitates innovation, collaboration, and experimentation within Karantina and the rest of Beirut.

Accordingly, this project aims to establish an art and design hub in Karantina to provide work, production, and exhibition spaces for artists, crafts manufacturers, and designers to work independently or collaboratively. The hub can be implemented and managed by a collective of designers and artists. Given the social and cultural value of the hub, the Municipality of Beirut and the Governor of Beirut should provide support by allocating municipal or governmental land for the building and charging a small symbolic rental fee.

The hub will operate to its full potential if it is integrated within the active urban core of Karantina. It should be located close to the residential clusters and near the public park and the community center that is currently under construction on the municipal lot number 358 to the north of the Charles Helou Highway. A multi-story structure of at least 1000 sq. m in total is envisaged to accommodate the activities of the hub<sup>64</sup>. The activities of the hub will include private studio spaces, private offices, common workspaces, exhibition spaces, makerspaces, and print and production rooms, supported by a kitchen and possibly guest artist accommodation units. The workstations can be rented out for short or long periods and they can share facilities, labs, and tools to make them more affordable. Art workshops and classes can also be organized in the hub. Furthermore, makerspaces can be equipped with tools and machines for experimentation and production such as 3D printers, vinyl cutters, industrial laser, digital garment printing machines, an engraving machine, and a cameo silhouette. Additionally, equipment such as cameras, tripods, and microphones can be available for rent at the hub.

Within such a strategically located and well-equipped hub, the vibrant artistic and cultural practices will broaden interest in Karantina, increase pedestrian inflow and social connectivity, and encourage more cultural and creative engagement from the local community groups.

#### The Relevant Actors in the Design and Execution Phases

The relevant actors include artists, non-governmental organizations such as Haven for Artists<sup>65</sup> and Ashkal Alwan<sup>66</sup>, the Ministry of Culture, the Municipality of Beirut, and the Governor of Beirut, in consultation with residents in Karantina.

#### Proposed Source of Funding

They include international funding agencies such as Sony, the Andrew W. Mellon Foundation, the Puffin Foundation (in collaboration with a non-governmental organization that is registered in the United States), the Awesome Foundation, UNESCO (IFPC), Burning Man Arts, Mondriaan Fund, Trans Arts, the Prince Claus Foundation, Stavros Niarchos Foundation, the Arab Fund for Arts and Culture (AFAC), and Wijhat, Culture Resource.

They also include local non-governmental organizations such as the Arab Resource Center for Popular Arts and philanthropies such as Computeraid.org, computerswithcauses.org, and pcsforpeople.org which donate computer supplies, and Opus Art Supply and Dreaming Zebra which donate art supplies.

#### Approximate Financial Magnitude

The cost of the construction is estimated at 600,000 USD, ranging between 160 USD per 1 sq. m and 645 USD per 1 sq. m. The cost of equipment and computers is estimated at 200,000 USD and the cost of the needed furniture is estimated at 100,000 USD<sup>67</sup>.

#### Period and Timing of Execution

Short-term  Long-term

Phased: First Phase Consultations with the Public (six months). Design and build (one year)

#### Expected Results

- A design hub that can facilitate innovation, collaboration, and experimentation.
- Machinery and tools that will encourage young innovators to conduct experiments and build prototypes.
- An expansion in cultural and artistic practices in Karantina.
- An increase in the number of established arts, crafts, and designs that operate outside Karantina.
- An increase in incoming visitors from Beirut to Karantina.
- New job opportunities that prioritize the residents of Karantina.

<sup>64</sup> The spatial configuration of uses can include: common workspaces with a total area of 100 sq., three makerspaces, each with an area of 60 sq., ten studio spaces, each with an area of 20 sq., three workshop and conference rooms, each with an area of 20 sq., six offices, each with an area of 10 sq., one exhibition space with an area of 100 sq., kitchens and bathrooms, each with an area of 40 sq., accommodations for artists and designs in residence, each with an area of 100 sq., in addition to reception and service facilities.

<sup>65</sup> Haven for Artists is a local non-governmental organization that creates a shared platform for underground artists in the Middle East and combines art with activism. It currently manages a community center in Achrafieh that also functions as a cultural hub.

<sup>66</sup> Ashkal Alwan, the Lebanese Association for Plastic Arts, is a local non-governmental organization that is committed to the advancement of contemporary artistic practice, research, and modes of study. It aims to facilitate artistic production, foster critical thinking around contemporary social realities, and engage in community mobilization.

<sup>67</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 26

#### Project Title

Design and implement an integrated sewage and wastewater management plan for Karantina.

#### General Objective(s)

- D. Promote a sustainable development strategy that is participatory and phased over a period of time.
- E. Improve the overall quality of the urban environment in Karantina.

#### Type of Project

- Execution Project
- Regulation - Policy
- Detailed Study
- Lobbying - Advocacy
- Institutional - Committee set up
- Capacity Building
- Management - Operations plan

#### Strategic Objective(s)

D4: Improve the local infrastructural services and amenities.

E4: Improve the dilapidated water, sewage, and other infrastructural networks.

#### Project Objective(s)

The project contributes to the following strategy:

D4.1/E4.1: Upgrade and improve the performance and management of the existing infrastructural networks to respond to density demands and adopt emerging technologies. This requires:

- Keeping an inventory of the wastewater management systems.
- Determining the current and future needs of wastewater management.
- Identifying options for addressing these needs and selecting the appropriate approach.
- Repairing the sewage line and the drainage network in Karantina, and redirecting the discharge to the Beirut River and the sea.
- Creating a wastewater treatment station.
- Introducing basic indicators for sewage and wastewater monitoring and evaluation.
- Outlining how the selected approach will be implemented and financed, including the timeline and phasing approach.

#### Project Description (concept note)

Water supply, sanitation, and waste disposal have all been planned, managed, and developed separately and at different times in Karantina. Karantina is connected to an old and degraded sewage system that channels the wastewater from the residential buildings, commercial, industrial, and other facilities like the hospital, slaughterhouse, and fish market into the Beirut River without any treatment. Stormwater also flows naturally into the sea without control or mitigation techniques like rainwater harvesting or filtering. Impervious surfaces like asphalt are still commonly used in Karantina and elsewhere in Beirut. According to the residents of Al-Saydeh sub-neighborhood, there are many incidents of flooding during the winter season due to the inadequate maintenance of inlets. The dangers that wastewater poses to the environment are known to people in Karantina: 89% of the residents highlighted the importance of a proper sewage network infrastructure. Drainage systems and their maintenance, if neglected, can trigger sewer overflow due to intense rainfall, street blockages, and wastewater precipitate in public spaces. As such, they pose a threat to the community, public health, and the environment by causing rising numbers of infections as well as the emergence of multi-resistant bacteria and repugnant smells. The wastewater issue transcends the scale of Karantina to a pose a national hazard in Lebanon. 90% of Lebanon's wastewater is discharged into the sea directly or through river streams, leading to a serious and ongoing pollution crisis (Moussa, 2018).

There are eight medium wastewater treatment plants (WWTPs) in Lebanon, and seventeen small plants. Therefore, wastewater treatment is almost non-existent in Lebanon and serves only 8% of the total population, while 60% of the population is connected to a sewage collection network" (EBRD, 2019). Many sewage and wastewater outlets in Beirut discharge directly into the Beirut River and the Mediterranean Sea. Accordingly, this project proposes upgrading the performance of the existing sewer infrastructure and planning an integrated wastewater management and treatment plant WWTP, whereby existing and future wastewater demands are addressed in a sustainable and efficient way. A WWTP can impact land development patterns. Because of its significant land use implications, the Municipality of Beirut should lead the wastewater management planning process in collaboration with the Ministry of Environment and the Beirut and Mount Lebanon Water Establishment.



**Figure 22.** Household wastewater leakage into public property. Source: Batoul Yassine, 2021.

However, the project requires a thorough plan that will control construction, operation, maintenance, and financing of wastewater systems and infrastructures. It should also survey a variety of elements, such as the size of the planning area, the rate of development or population change, the types of land uses, service standards, financial capability, environmental features and influences, connections with neighboring jurisdictions, and water usage.

In addition to enhancing and upgrading the infrastructure, a wastewater treatment plant facility should be established to collect and re-channel the water. One example could be to investigate covered lagoons for wastewater collection and treatment. In addition to reducing odors, this form of wastewater treatment also produces biogas that can be stored. However, it is necessary to secure the consent of the residents who might object to the construction of the facility. Such a facility will need to be operated and maintained by qualified professionals, preferably through a private-public partnership that assigns operational responsibilities to a private actor and secures funding from the government and non-governmental organizations. Also, the private actor should be given the authority to penalize the agent that oversees those operations. The proposal should also investigate other green wastewater innovation projects that are implemented in Lebanon such as MAIA-TAQA<sup>68</sup> or nature-based solutions such as the NAWAMED project<sup>69</sup>.

### The Relevant Actors in the Design and Execution Phases

The relevant actors are the Municipality of Beirut, the Council for Development and Reconstruction, the Ministry of Energy and Water, the Beirut & Mount Lebanon Water Establishment, the Ministry of Environment, and the Ministry of Public Works and Transportation, in collaboration with local water and infrastructural engineers.

### Proposed Source of Funding

They include local actors such as the Municipality of Beirut, the Council for Development and Reconstruction, the Ministry of Environment, the Ministry of Public Works and Transportation, private sector funding sources such as LEPAP<sup>70</sup>, and international organizations such as the ILO, KfW, UNOPS, the UNDP; USAID, Die Heinrich-Böll-Stiftung<sup>71</sup>, and ENI CBC MED<sup>72</sup>.

### Approximate Financial Magnitude

The total cost of the proposed project is estimated between 1,000,000 USD and 1,500,000 USD. The cost is broken down as follows:

- Between 25,000 USD and 30,000 USD for the cost of the survey.
- 500,000 USD for the cost of upgrading and expanding the capacity of the sewage line.
- Between 500,000 USD and 1,000,000 USD<sup>73</sup> for the cost of the WWTP. This estimate is inclusive of all the necessary design, engineering, equipment, installation, and startup activities. It also depends on the biochemical oxygen demands and the discharge limits.

### Period and Timing of Execution

Short-term       Long-term       Phased

### Expected Results

- Upgraded the sewage infrastructure to accommodate the growing local needs in Karantina.
- Improved and resized culverts and inlets to avoid flooding in the streets.
- The protection of the Beirut River from the pollutants in the sewage water.

<sup>68</sup> <https://www.enicbcmed.eu/projects/maia-taqa>.

<sup>69</sup> <https://www.enicbcmed.eu/nawamed-project-stakeholders-perspective-nature-based-solution-waste-water-management-lebanon>.

<sup>70</sup> LEPAP supports the financing of industrial pollution through interventions in the industry and working with commercial banks to offer zero or minimum interest loans.

<sup>71</sup> The Heinrich Böll Foundation is a German and legally-independent political foundation. It is part of the worldwide green political movement that focuses on ecology and sustainability, democracy and human rights, and self-determination and justice.

<sup>72</sup> ENI CBC MED is the largest Cross-Border Cooperation initiative implemented by the EU under the European Neighborhood Instrument. They priorities contributions to addressing the main socio-economic and environmental challenges in the Mediterranean region.

<sup>73</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 27

### Project Title

Design and implement alternative energy and greening solutions.

### General Objective(s)

- D. Promote a sustainable development strategy that is participatory and phased over a period of time.  
E. Improve the overall quality of the urban environment in Karantina.

### Type of Project

- Execution Project  Regulation - Policy  
 Detailed Study  Lobbying - Advocacy  
 Institutional - Committee set up  Capacity Building  
 Management - Operations plan

### Strategic Objective(s)

D4: Improve the local infrastructural services and amenities.

E3: Reduce sound and air pollution.

E4: Improve the dilapidated water, sewage, and other infrastructural networks.

### Project Objective(s)

The project contributes to the following strategies:

D4.1/ E4.1: Upgrade and improve the performance and management of the existing infrastructural networks to respond to density demands and adopt emerging technologies.

E3.2: Regulate private generators, particularly the ones that are placed in proximity to residential buildings.

E3.3: Empower the Municipality of Beirut to monitor and coordinate efforts to protect the environment in Karantina. This includes:

- Improving security and access to sources of energy.
- Building local knowledge of sustainable practices and green technologies.
- Reducing the dependency on the use of fossil fuels.
- Reducing harmful emissions from fossil fuel generators.

### Project Description (concept note)

Lebanon's electricity sector collapsed with the start of the economic crisis in 2019, extending the hours of power cuts and increasing the demand for private generators. The provision of electricity was exacerbated by the government's inability to import or subsidize the cost of gasoline, combined with Lebanon's dependency on fossil fuels. Electricité du Liban (EDL), the public institution that provides electricity in Lebanon, has a history of problems with the transmission and distribution of electricity in Beirut and the rest of the country. This is partially due to the civil war, the repeated Israeli attacks on the Lebanese infrastructure, the post-war privatization schemes, and the fragile economic conditions in Lebanon. Furthermore, the percentage of electricity demand that is unmet by EDL increased from 22% in 2008 to 37% in 2018 to a total of around 8.1 terawatt-hours. The shortage grew from 2019 until the present; the electrical supply by EDL no longer exceeds 2 to 3 hours per day. Consequently, there is a massive increase and reliance on private generators, amounting to more than 75% of the electricity demand in Lebanon.

The gap between the electricity that is supplied by EDL and the demand is covered by expensive, polluting, and noisy diesel generators that are dispersed almost everywhere in the country (Ahmad, 2020). Diesel generators are estimated to have contributed to around 39% of the total electricity Greenhouse Gases Inventory in 2018, which is equivalent to 3400 Gg CO<sub>2</sub>eq or 11.4% of Lebanon's total estimate of greenhouse gas emissions (Ahmad, 2020). The residents and businesses in Karantina, as is the case in the rest of Lebanon, depend on private diesel generators for electricity. According to the answers to the household questionnaire, 91% of families in Karantina have access to local private diesel generators.

Also, to support the needs of the businesses, there is a projected future use of larger diesel generators in Karantina. Diesel generators are located on sidewalks, streets, inside buildings, on vacant lots, and building entrances, exposing people in Karantina to high levels of noise and air pollution.

Alternatively, this project proposes the use of renewable sources of energy from the sun or the waste that is generated locally. It aims to reduce the reliance on fossil fuels by investing in alternative sources of energy that are clean, accessible, affordable, sustainable, and more reliable. The goal is to share expertise and guide reform proposals that are aimed at assisting efforts to transition from the reliance on private diesel generators to the production and use of alternative sources of energy through more sustainable, cost-effective, and dependable technologies (on-grid or off-grid).



Figure 23. The implementation of solar panels in Al-Khodor sub-neighborhood. Source: Batoul Yassine, 2021.

As an emergency response to the increased shortage of electricity since 2019, many residents across Lebanon started using alternative sources of energy, especially solar energy, on an individual or communal level. At the individual level, households are installing solar panels on rooftops. A successful communal case study was implemented in Baaloul. The residents developed together an electricity supply system based on renewable energy from hybrid photovoltaic and diesel mini-grids. It adopted a community-led model that embodied a cooperative and participatory approach to the provision of local electricity service. Caritas Lebanon implemented the system in 2018 under the BALADI program and with funds from USAID Lebanon. After the port blast, another solar communal project started in Karantina. In 2020, UNOPS was awarded funds from the KfW to implement a central solar plant in Karantina to cover the electricity needs of the residents, businesses and in the public domain. This project is still in the assessment phase; UNOPS is assessing the energy needs in Karantina. However, the project will operate under the Municipality of Beirut which currently does not have a technical center for the management and operation of such a project.

The challenge here is to introduce new techniques and embed the already emerging practices within a framework that is adopted by the central government or local municipalities. In general, there are critical regulatory and infrastructure obstacles to the development of renewable energy, and it requires efficient institutions. Hence, the framework needs to be formed in a way to tackle institutional and policy barriers, market failures and economic barriers, education and training barriers, shortage of data, information, and general awareness, and sociocultural barriers. Accordingly, this project proposes two parallel tracks: the formation of technical offices, and capacity building for the staff members at the Municipality of Beirut and the relevant ministries. Technical offices must be established for the realization of the full potential of the initiatives to oversee the legal, technical, and administrative operations such as net metering in all its categories, peer-to-peer on-site and off-site trading of renewable energy and equipment leasing models. Capacities should be built across all organizations to reduce technical obstacles.

Furthermore, the proposed project should investigate the market for private diesel generators in Lebanon and examine all relevant factors such as market size, value chain, cost of power generation, charged tariffs, profit margins, expected revenues, ownership and organizational structures, and political economy aspects and aim to integrate them in the proposal. There is also a need to regulate the location of private generators close to residential buildings, not only in Karantina but within Greater Beirut. All the generators should include diesel generator air filters to filter emissions of toxic air pollutants such as Particulate Matter and Oxides of Nitrogen that are harmful to humans and the environment. Additionally, soundproofing measures for generators are important to decrease the levels of noise pollution.

Additionally, there is a need to advocate for new laws for renewable energy initiatives. In 2019, a legal framework and administrative protocol were developed to propose a new initiative to enact a distributed renewable energy law that was supported by the European Bank for Reconstruction and Development, the Ministry of Energy and Water, EDL and the Lebanese Center for Energy Conservation. However, the law has not yet been approved.

This project also contributes in implementing action plan number 28 'Design and implement solid waste management plan'. Action plan number 28 proposes to study the possibility of using solid waste from the solid waste management facility and landfill in Karantina to generate energy.

### The Relevant Actors

The main actors include Electricité du Liban (EDL), the Municipality of Beirut, and the Ministry of Energy and Water, in coordination with the private sector such as Energy24<sup>74</sup>, and academic institutions such as American University of Beirut and ESMAP<sup>75</sup>.

### Proposed Source of Funding

They include local actors such as the Ministry of Energy and Water, NEEREA,<sup>76</sup> LCEC<sup>77</sup>, LEEREFF<sup>78</sup>, and private developers and international actors with similar scope of work such as UNOPS<sup>79</sup>, Caritas, USAID, CEDRO<sup>80</sup>, UNDP, AFD<sup>81</sup>, EIB<sup>82</sup>, EBRD<sup>83</sup>, GEFF<sup>84</sup>, and the NRC.

### Approximate Financial Magnitude

The overall cost of the project is estimated between 800,000 USD and 1,400,000 USD. The cost of the capacity-building workshops is estimated at 50,000 USD. The cost of the assessments and surveys is estimated at 50,000 USD. The cost of installing 100 to 80 kWp of photovoltaics to power Karantina is estimated between 200,000 USD and 300,000 USD. The cost of improving the infrastructural networks is estimated between 500,000 USD and 1,000,000 USD<sup>85</sup>.

### Period and Timing of Execution

Short-term     Long-term     Phased

### Expected Results

- A decreased dependency on the use of private generators.
- The use of renewable energy to power new street lights, public facilities, residential buildings, and businesses.
- Upgraded infrastructure and electricity networks.

<sup>74</sup> E24 is an end-to-end energy solution provider. It offers turnkey energy generation, conversion, storage, transmission, and billing solutions.

<sup>75</sup> The Energy Sector Management Assistance Program (ESMAP) is a global knowledge and technical assistance program that is administered by the World Bank. It provides analytical and advisory services to low and middle income countries to increase local knowledge and institutional capacities to achieve environmentally sustainable energy solutions.

<sup>76</sup> The National Energy Efficiency and Renewable Energy Action (NEEREA) is a national financing mechanism that allows private sector entities to get subsidized loans for any type of energy efficiency and renewable energy projects.

<sup>77</sup> The Lebanese Center for Energy Conservation (LCEC) is the national energy agency in Lebanon. It is a not-for-profit organization that is situated within the Lebanese Ministry of Energy and Water but has financial and administrative independence.

<sup>78</sup> The Lebanon Energy Efficiency & Renewable Energy Finance Facility (LEEREFF) secured in 2020 an 80 million EUR global loan from EIB (EUR 50 million) and AFD (EUR 30 million). It aims to support small-scale investments in energy efficiency and renewable energies by private companies in Lebanon, with a particular focus on small to medium enterprises.

<sup>79</sup> The United Nations Office for Project Services (UNOPS) provides infrastructure, procurement, and project management services to advance sustainable practices. After the port blast in Beirut, UNOPS partnered with the government of Germany to restore vital public services such as water, sanitation, and energy. It proposed a three-year project which includes providing solar energy solutions for the most damaged, low-income, and underserved parts of the areas in Beirut that were affected by the port blast. It also provides sustainable energy solutions to two government hospitals in Lebanon to install photovoltaic systems with funding from the government of Japan.

<sup>80</sup> Country Entrepreneurship for Distributed Renewables Opportunities (CEDRO-UNDP) is a United Nations Development Programme that is co-funded by the European Union. For more than twelve years the CEDRO-UNDP project has been advocating for the inclusion of solar energy technologies in the Lebanese market.

<sup>81</sup> The French Development Agency (AFD) is a public financial institution that implements policies by the French government in other countries. It aims to reduce levels of poverty and promote sustainable development in these countries.

<sup>82</sup> The European Investment Bank (EIB) is the lending arm of the European Union. It is one of the biggest multilateral financial institutions and one of the largest providers of climate finance.

<sup>83</sup> The European Bank for Reconstruction and Development (EBRD) is an international financial institution. It worked in Lebanon to support private sector competitiveness, promote sustainable energy supply, and enhance the quality and efficiency of the delivery of public services. EBRD provides, in collaboration with Bank Audi in Lebanon, a financial package of 100 million USD to support local green projects that create sustainable energy.

<sup>84</sup> Green Economy Financing Facility (GEFF) supports businesses and homeowners to invest in green technologies.

<sup>85</sup> It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 28

### Project Title

Design and implement a solid waste management plan.

### General Objective(s)

E. Improve the overall quality of the urban environment in Karantina.

### Type of Project

- Execution Project     Regulation - Policy  
 Detailed Study     Lobbying - Advocacy  
 Institutional - Committee set up     Capacity Building  
 Management - Operations plan

### Strategic Objective(s)

E2: Reduce and contain hazardous wastes and harmful emissions.

### Project Objective(s)

The project contributes to the following strategy:

E2.1: Regulate the management of solid waste. This requires:

- Devising a waste management plan that aims to reduce pollution levels and integrates green technologies.
- Develop green technologies for waste management.
- Adopt the following principles of sustainable production and consumption: reuse, reduce, and recycle.

### Project Description (concept note)

In 1997, the Council for Development and Reconstruction (CDR) planned an integrated national solid waste management system for Lebanon. It constructed two sorting facilities in Karantina and Amroussieh with a combined sorting capacity of 4,200 tons per day and a composting capacity of 750 tons per day. With the implementation of these projects, the CDR aimed at controlling the chaotic waste management in Beirut after the end of the civil war. However, the planned national solid waste management system was limited to temporary solutions rather than long-term and sustainable ones. The outcomes of the temporary solutions, the lack of coordination between the relevant ministries, the inefficiency in networking between public and private initiatives, conflicting political leadership, and the absence of a strategic management system and information flow led to a garbage crisis in Beirut in 2015.

The garbage crisis was triggered by the closure of one of the country's largest landfills in Naameh and, as a result, garbage accumulated in streets and public areas in Beirut and Mount Lebanon. To control the crisis, the Governor of Beirut instructed the company SUKLEEN to temporarily store garbage in Karantina on a site across the Bakalian Flour Mill. In 2018, the Ministry of Environment was also charged under law number 80 from 2018 to develop an integrated solid waste management plan at a national scale; however, despite multiple efforts, the law was not approved. The landfill in Karantina is still open today with accumulated garbage even though the Governor of Beirut assured the residents of Karantina that the landfill will be closed as soon as another location is identified.



**Figure 24.** Karantina's waste management landfill.  
Source: Abir Cheaitli, 2021.

SUKLEEN operated and managed the waste management facility in Karantina under a contract with the CDR since 1994. However, SUKLEEN was replaced with the company Ramco in 2018, and this change negatively impacted Karantina. Around 165 households complained about the repugnant smells from the waste management facility after 2018 and they mentioned that it became unbearable after the port blast. This is partially due to the serious damage to the waste management facility from the port blast. Its roof and walls collapsed and most of the machines were damaged. As a result, the facility is currently not operating. As for the landfill, 70% of the residents asked the Municipality of Beirut to relocate the temporary garbage landfill somewhere else due to the strong smells in Karantina, especially at night. They noted that each night smoke comes out of the landfill, indicating that the waste is being burnt instead of being treated. Furthermore, piles of rubble from the port blast and the reconstruction works accumulated in the landfill. The Municipality of Beirut, along with the port authority, granted permission for the debris to be collected on the landfill to support the clearing of the port. The debris posed additional environmental risks to public health in Karantina. The UNDP (2020) report explained that asbestos, which is a known carcinogen was found in damaged structures and piles of rubble. The residents expressed their concerns about the debris even though UN-Habitat co-launched an initiative called Rubble to Mountains<sup>86</sup> directly after the port blast to properly manage the contamination from the debris in the landfill.

Therefore, this project proposes options to introduce green and clean technologies (renewable energy and information technology), in addition to the traditional form of waste management (sorting, recycling, landfilling, and composting) to mitigate the impact of the dumping and burning of the contaminated debris. The objective is to encourage innovative solutions and strategies that intersect with different sectors to widen their impact and alleviate the gravity of waste mismanagement while benefiting the environment, economy, and society. Clean technologies as such smart waste bins<sup>87</sup>, waste-to-energy facilities<sup>88</sup>, and economic models such as the “closed-loop<sup>89</sup>” or the “circular economy<sup>90</sup>” can support this goal if they are contextualized in Karantina. Therefore, with the Municipality of Beirut as the main stakeholder, an Environmental Impact Assessment for the implementation of green and clean technologies are important according to EIA studies<sup>91</sup> and the World Bank's O.P. 4.01<sup>92</sup>.

Also, the project should assess the closure and rehabilitation of landfill that should incorporate the proposed mode of Biogas capitation and treatment as well as the transfer of waste. In addition, strict guidelines should emphasize the importance of monitoring and evaluating the technical, environmental, and economic aspects of waste management. Furthermore, this project needs to be linked into a comprehensive vision for Beirut and its surroundings, based on close cooperation and coordination between municipalities, the relevant ministries, stakeholders, and the civic society groups. The relevant strategies should maintain engagement between the relevant actors and the residents of Karantina to raise awareness of ways to reduce the production of waste at source and offer incentives to encourage sustainable practices. The strategies should advocate for reducing waste and recycling at schools, universities, households, businesses, and public facilities. This can be achieved by networking with local non-governmental organizations such as FabricAid, Live Love Recycle, Chemrec, Compost Baladi and CubeX or align efforts with initiatives such as the Rubble to Mountains.

Furthermore, the project should contribute to action plan number 13<sup>93</sup> which aims to link the proposed garden in the landfill with a network of open spaces. The proposed garden reclaims the land as public open space, thus, increasing the quality and number of open green areas in Karantina and Beirut in general.

86 The proposals aim to enhance the sorting, storing, and crushing of waste in a safe and contained environment. They aim to convert the construction and demolition waste into multipurpose material, rebuild quarries, and rehabilitate mountains. Retrieved from: <https://unhabitat.org/node/145271>.

87 The smart waste bin is designed for public places to simplify the recycling process for people. The bin is used to sort and compress the waste automatically, and it controls the capacity to hold waste and processes data for convenient waste management.

88 Waste-to-energy plants burn municipal solid waste, often called garbage or trash, to produce steam in a boiler that is used to generate electricity.

89 Closed-loop recycling is the process by which a product or material can be used and then turned into a new product indefinitely without losing its properties during the recycling process.

90 The circular economy is a sustainable alternative to the traditional linear (take-make-dispose) economic model. It aims to reduce the production of waste to a minimum by reusing, repairing, refurbishing, and recycling existing materials and products.

91 EIA is a principal agency in the United States that is responsible for collecting, analyzing, and disseminating energy information to promote sounder policymaking, making markets more efficient, and enhancing the public understanding of energy and its interaction with the economy and the environment.

92 O.P.4.01 requires stakeholders to conduct an environmental assessment of projects that are proposed for bank financing to help ensure that they are environmentally sound and sustainable and, thus, to improve decision making. Retrieved from: [http://web.worldbank.org/archive/website01541/WEB/0\\_-2097.HTM](http://web.worldbank.org/archive/website01541/WEB/0_-2097.HTM).

93 Propose an open space network that requires connecting, upgrading, and expanding on the existing spaces.

### The Relevant Actors in the Design and Execution Phases

The relevant actors include the Municipality of Beirut, the Ministry of Environment, the Ministry of Public Health, OMSAR<sup>94</sup>, and the Council for Development and Reconstruction, in coordination with the German Co. Passavant Roedinger, LibanConcult AGM, and local civil society groups and academic institutions such as the AUB, WMC<sup>95</sup>, LEM<sup>96</sup>, and LEF<sup>97</sup>.

### Proposed Source of Funding

They include local and national actors in Lebanon such as the Municipality of Beirut, the Ministry of Environment, and the Council for Development and Reconstruction, with the support of international actors such as the UNDP; LFF<sup>98</sup>, KfW, Die Heinrich-Böll-Stiftung<sup>99</sup>, and KFAED<sup>100</sup>.

### Approximate Financial Magnitude

The cost of the rehabilitation of the waste management facility is estimated between 7,000,000 USD and 8,000,000 USD. The total operating costs are estimated between 400,000 USD and 600,000 USD. The total cost of conducting the assessments and the surveys is estimated between 25,000 USD and 30,000 USD. The cost of rehabilitating the landfill is estimated between 20,000 USD and 30,000 USD<sup>101</sup> per 1 cubic meter.

### Period and Timing of Execution

Short-term  Long-term  Phased

### Expected Results

- Better environmental quality.
- Less dumping of solid waste into the Beirut River.
- Controlled capacities of waste in the landfill.
- More awareness of the importance of recycling and reducing the production of waste at the source.
- Better cooperation and coordination between the organizers of waste management initiatives, including the Municipality of Beirut and different civil society groups.

94 The Office of Minister of State for Administrative Reform (OMSAR) is a government entity that leads the transformation to a citizen-centric and performance-oriented public sector. With funding from the European Commission, OMSAR developed a Solid Waste Management Program for Lebanon which aimed at improving the overall efficiency and effectiveness of solid waste management.

95 The Waste Management Coalition (WMC) is a group of civil society organizations, independent experts, and environmental activists in Lebanon. It includes Cedar Environmental, Green Area, Greenpeace, the AUB Nature Conservation Center, Recycle Lebanon, TERRE Liban, Badna Nhaseb, Choueifat Madinati, Sohet Wladna Khatt Ahmar, and Muntada Insan.

96 The Lebanon Eco Movement (LEM) is a large network of environmental organizations and associations. It is composed of around sixty non-governmental organizations from all Lebanon working to face Lebanon's environmental challenges, preserve its natural and cultural heritage, and create a healthier and sustainable environment.

97 The Lebanese Environment Forum (LEF) is a non-profit organization, working towards the protection of environment in Lebanon. Its activities include protecting natural sites and reserves, launching climate projects and coastal conservation campaigns, and publishing urban planning and environmental reports.

98 The Lebanon Financing Facility (LFF) is a multi-donor trust fund that the World Bank established. It works closely with the United Nations and the European Union and with support from key donors.

99 The Heinrich Böll Foundation is a German and legally independent political foundation. It is part of the worldwide Green political movement that focuses on ecology and sustainability, democracy and human rights, and self-determination and justice.

100 In 2021, the Kuwait Fund for Arab Economic Development (KFAED) provided the UNDP in Lebanon with 2.5 million USD to support its efforts at strengthening solid waste management. The aim was to improve social and environmental health across the country.

101 It is important to note that these estimates do not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and they need to be reassessed at the time of design and implementation.

## ACTION PLAN 29

### Project Title

Conduct a study to revitalize the Beirut River and activate its edges.

### General Objective(s)

E. Improve the overall quality of the urban environment in Karantina.

### Type of Project

- Execution Project
  Regulation - Policy  
 Detailed Study
  Lobbying - Advocacy  
 Institutional - Committee set up
  Capacity Building  
 Management - Operations plan

### Strategic Objective(s)

E2: Reduce and contain hazardous wastes and harmful emissions.

### Project Objective(s)

The project contributes to the following strategy:

E2.2: Clean and green the Beirut River corridor. This requires:

- Conducting a detailed study on the rehabilitation of the Beirut River that proposes design tools for cleaning and greening the river.
- Advocating for the enactment of the penalty taxation system on major pollutants that are channeled to the river, including pollutants from nearby factories and industrial facilities.

### Project Description (concept note)

The Beirut River is a coastal river that extends from its headwaters on the western slopes of Mount Lebanon to the Mediterranean Sea. The river flows around 20 km westwards before it changes its flow direction in the last 5 km. In this segment, the river flows north in a highly urbanized area passing through the eastern edge of Karantina. The river had a meandering typology before anthropogenic disturbances modified the natural riparian system. To overcome the problem of flooding and regulate discharge, the river was channeled with large reinforced concrete walls built along its floodplain. This approach to river channel management, prevalent during the functionalist modernist period, led to a shrinkage in the floodplain and the isolation of the river from the city of Beirut. It also led to a disturbance to the natural ecosystem and shrinkage in green spaces. Road infrastructure, which expanded in the late 1960s, further separated the river from the surrounding neighborhoods which include Karantina. In addition to the physical disturbance to the riparian system, heavy pollution caused damage to the river ecology. As the river diverges to the urban area, it becomes subjected to pollution and abuse. Domestic wastewater discharge, industrial effluents discharge, and solid waste dumping contribute to the deteriorated state of the river. Water pollution also compromises air quality and produces a disturbing odor in the vicinity.

To improve the quality of the urban environment in Karantina, it is essential to limit pollution in the Beirut River. Accordingly, this project proposes to conduct a comprehensive rehabilitation study of the Beirut River. The study should build on existing academic studies on the revitalization of the river, and consider the hydrological, ecological, and cultural dimensions of the riparian system. To that end, the study should re-question the engineering approach to river management by considering alternatives for flood mitigation.

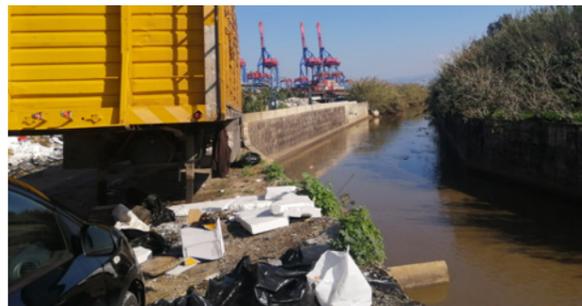


Figure 25. Beirut River. Source: Wiaam Haddad, 2022.

It should also reconsider the river as a green corridor that can serve as an amenity landscape for Karantina and its surrounding areas. As a prerequisite, a cleaning campaign should be designed to improve the water quality and restore the riparian natural habitat. In parallel, advocacy is pivotal to enforce the enactment of penalty taxation on the use of major pollutants and removing encroachments on the floodplain. Rivers are protected by the Lebanese Law number 221 from 2000, which states that rivers are national resources that should be protected. Law number 444 from 2002 protects rivers from pollution by requiring industries to treat their water on-site and imposes legal actions against violators. Beirut River is an essential ecological, urban, and landscape asset for Beirut and, as such, for Karantina. Implementing the study recommendations will improve the quality of the urban environment and bring back the cultural and natural vibrancy of the river.

### The Relevant Actors

The relevant actors include the Ministry of Energy and Water and the Ministry of Environment, in collaboration with other local and national public actors such as the Municipality of Beirut, the Governor of Beirut, the Ministry of Public Health, the Council for Development and Reconstruction, and the Ministry of Industry, academic institutions and non-governmental organizations such as the Beirut Urban Lab at the American University of Beirut, Public Works, theOtherDada, and Nahnoo, and international actors such as the UNDP.

### Proposed Source of Funding

Public authorities involved with possible support from local or international agencies such as the UNDP.

### Approximate Financial Magnitude

The cost of conducting the rehabilitation study is estimated at 100,000 USD<sup>102</sup>.

### Period and Timing of Execution

- Short-term
  Long-term
  Phased

### Expected Results

- Improvements in water and air quality in the areas that are close to the Beirut River.
- The Beirut River operating as a cultural destination with green spaces.
- Restored riparian habitat along the Beirut River.

<sup>102</sup> It is important to note that this estimate does not account for the fluctuations in market prices due to the economic crisis in Lebanon, and it needs to be reassessed at the time of design and implementation.

## ACTION PLAN 30

### Project Title

Identify elements of landscape heritage in Karantina and propose a law for their protection.

### General Objective(s)

E. Improve the overall quality of the urban environment in Karantina.

### Type of Project

- Execution Project
  Regulation - Policy
- Detailed Study
  Lobbying - Advocacy
- Institutional - Committee set up
  Capacity Building
- Management - Operations plan

### Strategic Objective(s)

E6: Protect and maintain the layers of landscape heritage in Karantina.

### Project Objective(s)

The project contributes to the following strategy:

E6.1: Develop a legal framework for the identification and protection of landscape heritage.

This requires:

- Applying the UNESCO study guidelines to identify the layers of landscape heritage.
- Proposing a law that formalizes the requirement to protect the landscape heritage.

### Project Description (concept note)

Landscape heritage sites are significant assets for Karantina. They include places with a strong sense of collective memory, like the location of the former slaughterhouse or institutional green and open spaces like the garden of Al-Saydeh Church. Natural components are also essential to landscape heritage since their topographic and geomorphological characteristics contribute to the distinctive character of the setting. The historic coastline is the most noticeable feature that embodies a unique Mediterranean landscape. Hardly much of this landscape is left since construction activities encroached on the area. Due to military bases blocking access to a significant part of the coastal edge, this landscape is currently inaccessible. Therefore, the coastline is currently abandoned, and little is documented about its value. Another significant component of landscape heritage is the dense vegetative layer. Large eucalyptus and ficus trees, likely planted by the French during the mandate period between 1923 and 1946, can be seen scattered throughout Karantina in groups or standing alone. Their canopies offer sufficient shading and attract social gatherings and public interactions. They are under the custody of the Municipality of Beirut that manages the public domain. Even though this vegetative layer is an essential environmental resource that offers a wide range of ecosystem services, it is currently neglected and misused. A case of unauthorized tree-cutting took place on a private property without prior notification or approval from the relevant authorities. Another case took place in a public area, where the Municipality of Beirut cut a huge eucalyptus tree on a sidewalk due to the damage it was causing to the underground infrastructure.

Protecting and maintaining the landscape heritage layer is pivotal to improve the overall quality of the urban environment in Karantina. Therefore, this proposed project aims to identify the landscape heritage in Karantina based on the UNESCO study for identifying cultural heritage attributes in Beirut as the first step towards its protection and valorization. The study titled "Identifying Cultural Heritage Attributes in Beirut Blast Damaged Areas" was commissioned by UNESCO and submitted by



Figure 26. Greenery and trees in Karantina. Source: Abir Cheaitli, 2021.

BUL to the benefit of the Directorate General of Antiquities (DGA). It set the framework for identifying these landscapes considering their spatial, urban, cultural, and environmental values. It classified cultural and natural landscapes under heritage, including residential gardens, green and open spaces, and monumental trees. After the identification phase, a team of legal experts should draft a law that protects these landscapes and mitigates the shortcomings of the existing laws. While several laws were issued for heritage conservation and environmental protection, there are no current precedents for a legal setup in Lebanon that recognizes landscape as heritage in a comprehensive manner. These laws fail to acknowledge artificial landscapes as heritage and to protect trees in urban settings.

The Protected Areas Law number 130 from 2019 recognizes the importance of natural landscape heritage and classifies them into four categories: natural reserves, natural parks, natural sites and monuments, and "Hima." A Hima is a site of ecological biodiversity and cultural value. The law does not acknowledge the heritage value of landscapes that are introduced by human beings, such as parks and gardens. The Landscape Protection Law, issued during the French mandate period, also recognizes the importance of protecting natural landscapes but also disregards manmade heritage. Law number 0 from 1939 assumes that man-made heritage is classified and protected by the Antiquities Law number 166 from 1933. However, it is only concerned with buildings, artifacts, and natural sites that are modified by human intervention. Law number 0 from 1939 also includes trees or tree species that need protection for their age, aesthetic value, and historical value. The National Physical Masterplan of the Lebanese Territories, approved in decree number 2366 from 2009, recognizes the value of physical features of the environment, including ecological heritage, geological heritage, and major landscapes. These landscapes include river valleys, rocks, and remarkable natural sites. Ramlet El Bayda and the Pigeon's rock are two of the identified landscapes in Beirut. In conclusion, the proposed law in this action plan should enforce the protection of trees in urban settings, recognize man-made landscapes such as gardens and open spaces, and allow the repurposing of these landscapes for public use with minimal intervention.

### The Relevant Actor

The relevant actors include the Directorate General of Antiquities and the Ministry of Environment, in coordination with other local and national public actors such as the Municipality of Beirut and the Governor of Beirut, academic institutions and non-governmental organizations such as the Beirut Urban Lab at the American University of Beirut, Beit al Barakah, and the Beirut Heritage Initiative, and international actors such as the UNESCO, and in consultation with the residents in Karantina.

### Proposed Source of Funding

Public authorities involved with possible support from relevant local and international actors such as the UNESCO.

### Approximate Financial Magnitude

The total cost of identifying the layers of landscape heritage and conducting workshops with the relevant experts to draft the heritage law is estimated between 40,000 USD and 50,000 USD<sup>103</sup>.

### Period and Timing of Execution

- Short-term
  Long-term
  Phased

### Expected Results

- Identified landscape heritage sites in Karantina that are properly mapped and documented.
- A draft of a law that aims to protect the landscape heritage in Karantina pending the approval of the parliament.

<sup>103</sup> It is important to note that this estimate does not account for the fluctuations in the market prices due to the economic crisis in Lebanon, and it needs to be reassessed at the time of design and implementation.

### 3. IMPLEMENTATION AND MOVING FORWARD

As was mentioned earlier in the report, the action plans and proposed projects adopted a participatory approach. Accordingly, a town hall meeting was held on 29 September 2022 with the local community groups to collect their feedback and validate and prioritize the action plans according to the needs of the residents.

After the team of researchers at the Beirut Urban Lab presented the objectives and action plans, the residents and local researchers prioritized 18 projects. The team sensed the dire need for job opportunities in Karantina since many of the attendees strongly welcomed the idea of creating a career and training center and the rehabilitation of the slaughterhouse and the public and fish markets. نحننا اللبي بهمنا أكثر شيبي. "إعادة مسلخ بيروت وفتح فرص عمل للشباب القاعدين", said a father in his 70s. Another group of attendees stressed the need for reopening and maintaining the public gardens to operate as recreational spaces for the different community groups. "بدنا تتساوى الحديقة عنا عشان الولاد تتطور أكثر." The residents also stressed the importance of a transportation plan that will improve their connection to the city and limit the movement of trucks in Karantina. Other attendees prioritized the action plans for the improvement of the local environment, housing and building rehabilitation, and urban services.



Figure 27. A town hall meeting held on 29 September 2022 to discuss the different action plans with the community groups. Source: Abir Cheaitli, 2022.

The concept notes that were developed in the action plans will be presented to the relevant stakeholders to initiate a process of implementation. The research team at the Beirut Urban Lab will approach the different public actors, local and international non-governmental organizations, and donor agencies to share with them the action plans and to advocate for their implementation however incremental. The research team will continue to engage the community members in these projects. The community members were already engaged in the implementation of a small design intervention in Al-Khodor.

In parallel with the process of developing the strategic plan and the action plans, and to build trust with the community groups and test the participatory method, the team implemented a pilot design intervention in Al-Khodor sub-neighborhood. The pilot design intervention was a community public space that is inclusive, safe, and well-served.

Al-Khodor was a priority for the research team since it is considered the most deprived sub-neighborhood in Karantina. It received the least amount of aid after the port blast. Additionally, Al-Khodor hosts a diversity of low-income groups, mostly Lebanese and Syrian families. To select the site, the research team conducted an exhaustive mapping of the socio-spatial practices that were concentrated in the heart of Al-Khodor. These practices were diverse and involved a diversity of user groups, and they involved spaces where women spent their afternoons, children rode their bicycles and played, and men gathered to play cards and smoke hookah.

The research team further conducted consultation sessions and co-designing workshops with the community groups in Al-Khodor to identify the best location for the intervention and co-design the intervention. The residents and business owners described the space along Mashghara Street as the heart of Al-Khodor and the 'Square of Affinity' or 'Sahat Al Elfa' in Arabic "ساحة الألفة". They also shared their aspirations with the research team and sketched on paper their important social practices and their visions for the space.



Figure 28. Some of the socio-spatial practices on the streets. Source: Batoul Yassine, 2022.



Figure 29. The residents drawing their visions of the street. Source: Batoul Yassine, 2021.

The early consultation sessions paved the way for initiating the design process that included a series of co-design workshops with the community groups. Three main co-design workshops took place in Al-Khodor, on 2, 7, and 25 June 2021. The research team used different design and representational tools to simplify the reading of the design proposals for the residents and the business owners, help them interact with the research team, and comfortably share their concerns and needs.



Figure 30. Pictures from the three co-design workshops. Source: Yehya Al-Said, 2021.

The final design was set for implementation after many revisions during the workshops and in consultation with the Municipality of Beirut. The implementation was launched on the first anniversary of the port blast in a public event titled الألفة تجمعنا. The event was organized jointly with the funding agencies - including University College London which funded the design and ACTED and the Norwegian Refugee Council which funded the design implementation. The actual implementation of the design started in December 2021 after the research team secured a construction permit from the Municipality of Beirut.

Building further on the position of the Beirut Urban Lab to promote participation, the community groups were also engaged in the multiple stages of the implementation of the intervention. Firstly, two of the previously trained citizen scientists supervised the implementation. They were also trained to read engineering and construction details and played a major role in resolving any disputes between the residents during the implementation. They also acted as a bridge between the contractor and the Beirut Urban Lab research team, and they reported on the progress of the work.

Secondly, the community groups were engaged in the implementation of the intervention as part of the skilled and non-skilled labor force. A quota of local workers was imposed on the contractor. The members of the community groups also assisted in cleaning the site before and after the implementation of the intervention, securing the equipment at night, tiling the sidewalks, planting the trees, and painting the building facades.



**Figure 31.** The current conditions of the streets after the completion of the design intervention. Source: Postray, 2022.

The design of the project was funded by University College London and the implementation was funded by ACTED and the Norwegian Refugee Council. The intervention included the introduction of a sidewalk, the installation of bollards, solar streetlights, trash bins, benches, and tree grates, planting trees, and asphaltting. The building facades around the space were also renovated, plastered, and painted. The implementation of the design was completed in May 2022.

The research team at the Beirut Urban Lab hopes that the participatory efforts that brought together academic intuitions, funding agencies, the Municipality of Beirut, and local community groups will be used as a model in other areas in Beirut. They also hope that the implementation of the action plans over time will result in the translation of the vision and the strategic plan for the sustainable recovery of Karantina.



**Figure 32.** The space after the completion of the design intervention. The pictures depict how they are used by different community groups. Source: To the left, Postray, 2022; to the right, Hasan Al-Aswad, 2022.

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