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Relying on Markets for the Beirut Blast Shelter Response

Emergency Market Mapping and Analysis of Selected Construction Material Markets in Lebanon

September 2020

The Emergency Market Assessment and Analysis (EMMA) exercise is the result of interagency collaboration that took place in Lebanon in September 2020. Agencies who provided logistical support and field staff for this assessment include: Caritas Switzerland, Caritas Lebanon, ACTED, Concern Worldwide, and the CAMEALEON team for NRC.

The assessment was funded by Caritas Switzerland.

The lead author of this report (Jürgen Mika, independent consultant - CVA and Markets Expert) wishes to express sincere gratitude for the diligent work of the researchers from the above noted organisations who made this survey possible. These researchers include: Karma Haidar (CAMEALEON/NRC), Tania Saab (ACTED), Bilal Hussein (Concern) and Nadiya Ibrahim (Caritas Switzerland) as team leaders.

In addition, the very valuable support offered by Sonia Ben Salem and Frederic Wiesenbach from Caritas Switzerland is noted and appreciated.

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List of Abbreviations

ACTED	Agency for Technical Cooperation and Development
BoQ	Bill of Quantities
CACH	Caritas Switzerland
CAMEALEON	Cash Monitoring, Evaluation, Accountability, and Learning Organisational Network
CVA	Cash and Voucher Assistance
EMMA	Emergency Market Mapping and Analysis
E-Cash	Electronic Cash
E-Voucher	Electronic Voucher
HC	Humanitarian Coordinator
HH	Household
KII	Key Informant Interview
KYC	Know Your Customer
LRC	Lebanese Red Cross
LBP	Lebanese Pound
MT	Metric Tons
MBP	Market-based Programming
MDF	Medium-density Fibreboard
SMEB	Survival Minimum Expenditure Basket
MSNA	Multi-Sector Needs Assessment
mm	Millimetre
NGO	Non-Governmental Organization
NRC	Norwegian Refugee Council
PoS	Point of Sale
SQM	Square Metres
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
USD	United States Dollar

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Executive Summary

This report summarizes the findings from the Beirut Port Blast emergency market mapping and assessment (EMMA) for construction materials. This EMMA focused specifically on those markets that are critical for supporting the reconstruction materials needs of Beirut Port Blast-affected people.

The specific objectives of the EMMA study are as follows:

- To identify, through a market analysis, appropriate humanitarian response options to meet shelter recovery needs, with a particular emphasis on market-based programming activities.
- To strengthen the market analysis capacity of both national and international NGO/Agency staff, and of relevant members of the broader humanitarian community.

The following four market commodities and services were selected for the assessment, each of which is of critical importance to the reconstruction of houses damaged by the Beirut Port Blast.

Cement and hollow blocks are key building materials necessary for reconstruction of homes and businesses. The assessment of the cement market system revealed that the market system is functioning and the supply chain linking the factories to retailers and consumers remains essentially intact. The main issue is that commerce is at a low ebb caused by larger economic and financial crises rather than by the Beirut Port Blast itself. Additional constraints are: (I) the uncertainty on the Lebanese Government's decision to re-activate two cement factories which were previously closed down for environmental reasons, and (II) the imposed price lid at the middlemen level which actually resulted in a tremendous price drop from the previous 1,200,000 LBP/MT to 300,000-325,000 LBP/MT.

Flat glass (6mm transparent) is the most relevant glass type for the Beirut Port Blast shelter response in high-density poor neighbourhoods like Karm el Zeytoun, Bourj Hammoud, and Quarantina, where many non-Lebanese, such as Syrian refugees and migrant workers, are hosted. Lebanon is importing glass and, according to our research, the market chain has not been affected by the blast. While the demand for flat glass increased significantly, the assessment revealed that sufficient glass is available or can be imported at reasonable costs to meet the needs of the affected population.

Medium-density fibreboard (MDF) 8mm is the most commonly used material for standard external doors. Like aluminium and glass, MDF is imported. In the past, timber traders usually bought MDF throughout the year from geographically diverse providers based on volume and price market opportunities. This resulted in substantial stocks that can serve up to 3 months for medium-sized wholesalers, and up to 1 year for large wholesalers/importers, from the time of the survey. The Beirut Port Blast had no functional impact on the supply chain of timber since 80% of all timber and timber products such as MDF are traded through the Port of Tripoli, and all large wholesalers are based in Tripoli. Similar to the glass and aluminium markets, prices for MDF are stable and traders are not expecting any change.

Aluminium frames are the preferred material for windows in modern buildings and demand has certainly increased. However, while many windows were shattered, depending on the proximity to the blast window frames might be still be intact and repairable. That considered, the aluminium frames market nevertheless remains critical, and it was important to establish how well it is functioning.

The assessment of the aluminium market indicated that aluminium frames used in Lebanon are imported from all over the world, but mostly from neighbouring countries within the Middle East and North African (MENA) region. The supply chain linking local frame producers, importers, wholesalers, and assembling workshops is intact and has not been affected by the blast. Supply to meet the additional demand is available in the country or can be imported without facing major issues. Prices did not increase and are likely to remain stable in the coming months.

Since the selected markets are well-functioning, a market-based approach is recommended. The Lebanese Government allows cash distributions in USD, so the most feasible modalities are either USD through direct cash distributions (cash in hand) or by using Financial Service Providers (FSP) such as banks or BoB Finance. Following in Section 10 of this report are more detailed response options that humanitarian actors and donors might consider. The overall objective of these response options is repairing damaged buildings through local market systems by using a market-based approach (MBA) such as cash or vouchers.

SECTION 1: Background

1.1 Beirut Port Blast

Shortly after 18:00 local time on August 4th, 2020, multiple blasts and explosions occurred at the Port of Beirut in Lebanon. The explosions are suspected to be the result of ammonium nitrate catching fire. The explosions engulfed the entire port area adjacent to the downtown core of Beirut, damaging residences, schools, hospitals, and businesses. The injuries overwhelmed hospitals already struggling as a result of the coronavirus pandemic and the ongoing economic crisis. Complete destruction of buildings and infrastructure was reported within a 2km range from the port. Buildings up to 8km from the explosion site reported extensive structural damage, while properties 20km from the blast reported minor damage. More than 300,000 persons were reportedly displaced.

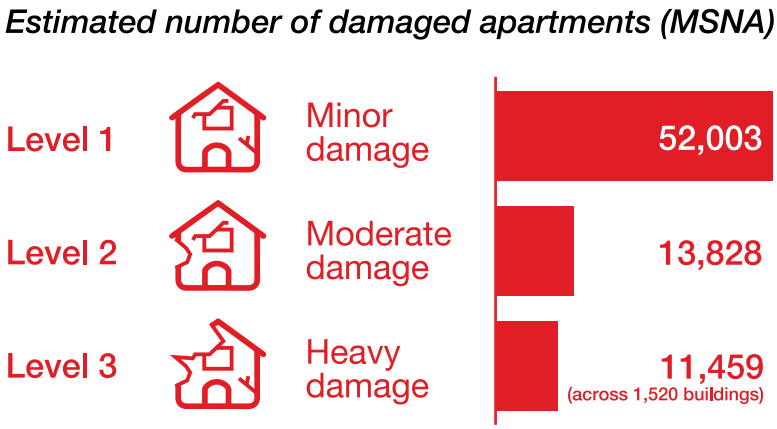


Figure 1: Estimated number of damaged apartments

When the large quantity of ammonium nitrate exploded on 4th August, 2020, Lebanon was already in the middle of an unprecedented economic crisis, and facing the impact of COVID-19. Now, more than 40 days after the explosion that killed nearly 200 people and injured more than 6,000, Lebanon's humanitarian and financial needs have been further exacerbated. Within 5 kilometres of the explosion site, residential and commercial areas were destroyed or severely damaged, leaving 300,000 people homeless. It is expected that some households may be displaced for an indefinite period. For example, in the Quarantina neighbourhood, assessments indicate a timeline of up to one year for people to return to their homes.

1.2 Economic Crisis

Even prior to the explosion, Lebanon was already reeling from multiple crises since 2011:

1. Spillover from the conflict in Syria, which led to Lebanon hosting the largest refugee-per-capita population in the world.
2. Financial and economic crisis that has induced systemic macro financial failures, including: impairment of the banking sector and risk of deposits; exchange rate collapse; default on sovereign debt; triple-digit inflation rates; and severe economic contraction.
3. Impacts from the COVID-19 pandemic. Lebanon, not unlike other countries, responded with lockdowns that further exacerbated economic and financial stresses.

Lebanon's defaults on its debts led to a currency crisis, with an estimated gap between USD supply and USD demand at USD 8 billion for 2020[2]. The Lebanese lira is officially pegged to the US dollar at a rate of 1,507 to 1 but due to the dollar shortage in the country, combined with the economic and financial crisis, the lira lost more than 80% of its value on the black market (8,300 LBP for 1 USD on Wednesday September 30th, 2020).[3]

[1]UNHCR, Flash Update on Lebanon: Beirut Port Explosions. 20 September, 2020
[2]Firas Abi Nassif, E., Lebanon's Economic Crisis: A Ten Point Action Plan for Avoiding a Lost Decade, https://carnegie-mec.org/2020/01/06/lebanon-s-economic-crisis-ten-point-action-plan-for-avoiding-lost-decade-pub-80704 (Last Accessed: 06.10.2020)
[3]Lira Rate, https://lirarate.com/ (Last Accessed: 06.10.2020)

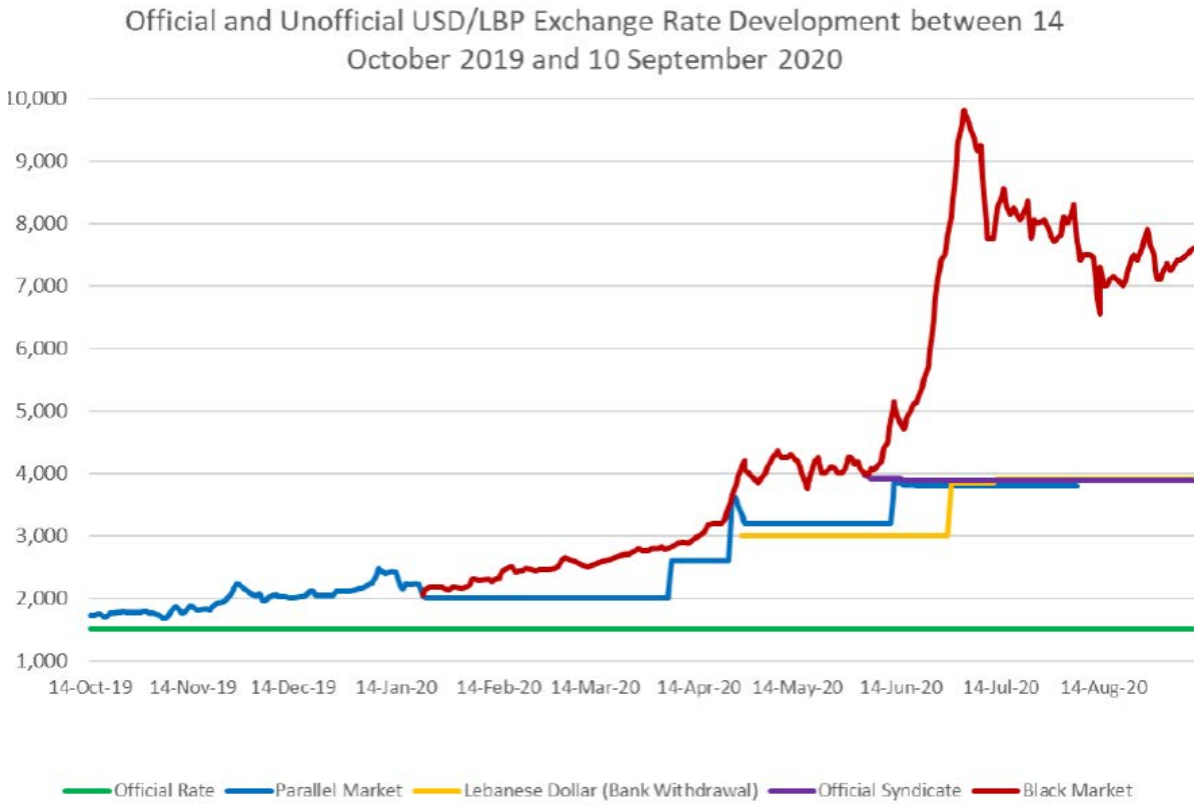


Figure 2: Official and Informal / black market exchange rate of LBP – USD[4]

Efforts from the central bank to stabilize the rate down to between 3,000 and 3,800 did not prevent the increase of prices[5]. The dollar shortage impedes importers from securing dollars at the pegged rate to pay for their goods. As such, prices of goods in lira jumped, with some products almost doubling in price[6]. Since imported goods and services represent 39.61% of Lebanon's GDP[7], and locally produced products often have an imported component (e.g. packaging, raw material), sellers raised their prices nationwide.

The weekly food component of the Survival Minimum Expenditure Basket (SMEB) increased between October 14th, 2019 and August 31st, 2020 by approximately 181%. Within this period, prices increased by 97% between March 16th, 2020 - which marked the start of the COVID-19 measures - and August 31st, 2020.[8]

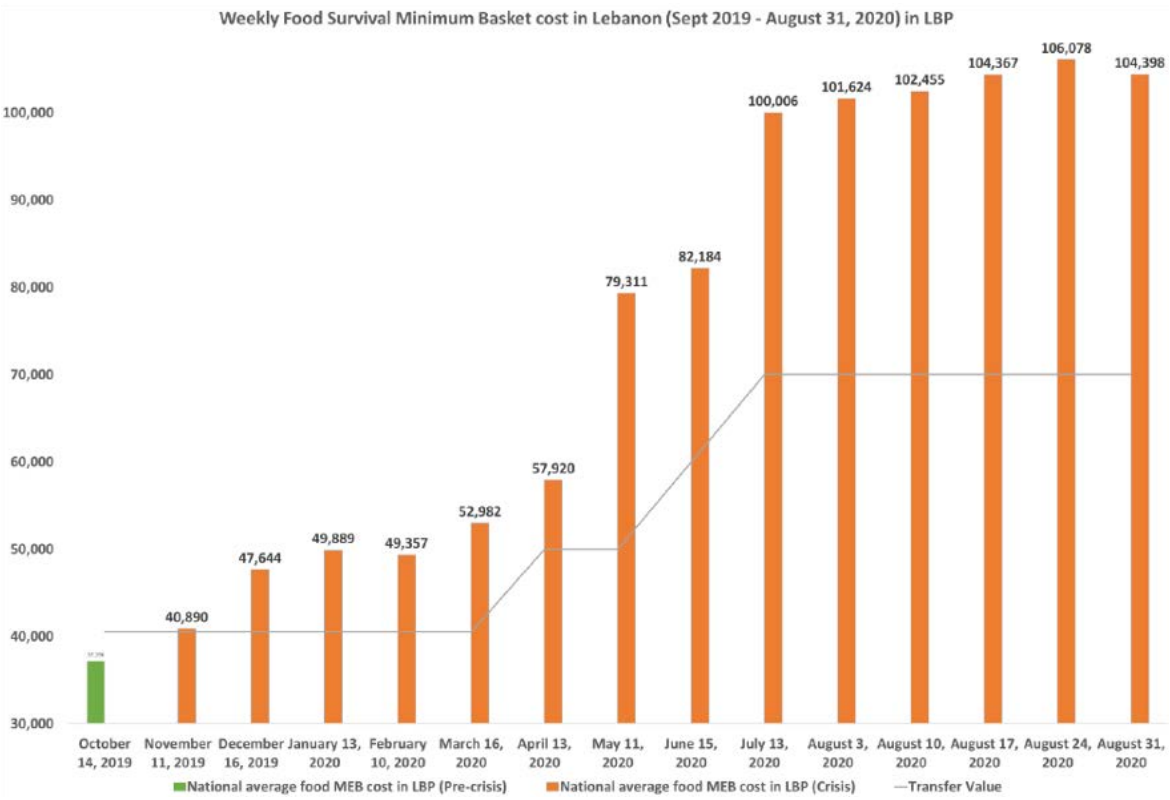


Figure 3: Price Increase of the food component of the SMEB in Lebanon[9]

As unemployment increases and salaries in LBP remain unchanged, the middle class is disappearing and the Lebanese population is being pushed into poverty, with people unable to afford food and basic non-food items.

That situation now exists alongside previous long-term structural vulnerabilities that include low-grade infrastructure, a dysfunctional electricity sector, water supply shortages, inadequate solid waste and wastewater management, public financial mismanagement, large macroeconomic imbalances, and deteriorating social indicators. These vulnerabilities are, in turn, taking place against the backdrop of high levels of corruption, political turmoil, and poor governance.

In order to recommend response interventions that are appropriate, Caritas Switzerland, together with Caritas Lebanon, ACTED, Concern Worldwide, and the Cash Monitoring, Evaluation, Accountability, and Learning Organisational Network (CAMEALEON) for the Norwegian Refugee Council (NRC) launched an EMMA to better understand the impacts of the emergency on critical shelter market systems in Beirut.

This EMMA focused specifically on those markets that are critical for supporting the reconstruction material needs of Beirut Port Blast-affected people, namely cement, glass, MDF timber, and aluminium frames. The analysis focused on identifying critical market systems through a rapid market analysis in key geographic areas of Lebanon in order to inform appropriate program design and targeting, including the feasibility and appropriateness of cash transfers (cash and/or vouchers, market support options) as a response option to support the reconstruction of damaged structures.

1.3 Shelter Reconstruction Needs

According to UNDP, a total of 200,000 housing units were affected by the explosions, with an estimated 40,000 buildings damaged (3,000 severely) and an estimated 500,000 to 600,000 windows shattered. Over 15,000 establishments – some 50% of all Beirut establishments – are also estimated to be damaged, the majority in the wholesale, retail, and hospitality sectors. This disproportionately affects the most vulnerable who, in the affected areas, may have lost both their homes and incomes.

The following needs have been established by the shelter working group[10]:

- Level 1: An estimated 52,000 apartments have minor damage to property, such as broken glass, doors, locks, and collapse of false ceiling. There is no structural damage at this level. The shelter remains habitable with no or minor compromises on safety, security, and access to services, including water, sanitation and electricity.
- Level 2: An estimated 13,800 apartments have moderate damage to property, more than level 1, though still with no apparent structural damage. At this level the apartment is either uninhabitable or habitable with the safety and security of the premises compromised. Services including water, sanitation, and electricity are not or may be only partly accessible.
- Level 3: An estimated 11,450 apartments and buildings show heavy damage of structural (load-bearing) and/or architectural elements, with possible collapse presenting acute risk at both resident household and community/ street level. Several buildings have collapsed either immediately after or within days of the explosion.

An estimated 480,000 m^2 of glass and 1,027,638 linear meters of frames will be needed to repair all the houses/apartments.

[4]WFP VAM Supply Chain Unit, Lebanon National FSSWG Situation Analysis Monitoring Results for FSSWG Meeting, 11 September 2020
[5]Al Arabiya English, Lebanese banks set new exchange rate for small accounts, central bank source says, https://english.alarabiya.net/en/business/economy/2020/04/06/Lebanese-banks-set-new-exchange-rate-for-small-accounts-central-bank-source-says.html (Last Accessed: 06.10.2020)
[6]Al Arabiya English, Prices soar as Lebanon's economic crisis worsens, https://english.alarabiya.net/en/News/middle-east/2020/05/01/Prices-soar-as-Lebanon-s-economic-crisis-worsens (Last Accessed: 06.10.2020)
[7]World Bank, Lebanon Trade, https://wits.worldbank.org/countrysnapshot/en/LBN/textview (Last Accessed: 06.10.2020)
[8]WFP VAM Supply Chain Unit, Lebanon National FSSWG Situation Analysis Monitoring Results for FSSWG Meeting, 11 September 2020
[9] WFP VAM Supply Chain Unit, Lebanon National FSSWG Situation Analysis Monitoring Results for FSSWG Meeting, 11 September 2020
[10]Flash Appeal, MSNA (data as of 4/9/20), Sector 4W, FTS; (Last Access: 06.10.2020) https://reliefweb.int/sites/reliefweb.int/files/resources/200920%20UNHCR%20Flash%20Update%20on%20Lebanon%20-%20final.pdf (Last Accessed: 06.10.2020)

SECTION 2: EMMA APPROACH & METHODOLOGY

2.1 Objective of the EMMA

This EMMA focused specifically on those commodity markets that are critical for supporting the material reconstruction needs of Beirut Port Blast-affected people. The analysis focused on identifying relevant critical market systems in key areas of Beirut in order to inform appropriate program design and targeting, including the feasibility and appropriateness of cash transfers (cash and/or vouchers, market support options) as a means to support reconstruction of damaged buildings.

2.2 Methodology: Emergency Market Mapping and Analysis

The EMMA is a market analysis approach[11] designed to be used in the first few months after the onset of a crisis, but usually not before 2 weeks after a shock. Its rationale is that a better understanding of markets is important to support lives and livelihoods in an emergency. The EMMA also enables decision makers (i.e. donors, NGOs, governments, other humanitarian actors) to consider a broader range of market-informed responses. It is not intended to replace existing emergency assessments, or more thorough household and economic analyses, but instead should add to the body of knowledge after a shock.

EMMA is an iterative process from preliminary analysis to communication of results, and includes the following key analytical steps: market mapping, gap analysis, market analysis, and response analysis. The core feature of the approach is the production of market system maps showing how market actors interact and how the market chain is influenced in its functioning by environmental factors (institutions, rules, norms and trends), as well as by key infrastructures, inputs, and market support services.

The partners conducted the EMMA exercise to assess the appropriateness and feasibility of a market-based response to the Beirut Port Blast for select critical market chains. This included identifying intervention options for market-based support (direct vs. indirect support, or a combination of both), determining the most appropriate modalities for market-based programming (in-kind, voucher or cash, conditional/non-conditional), assessing the risk of doing harm, and informing the partner NGOs and the Cash and the Shelter working groups of their market-based strategy.

2.3 Beirut Port Blast Shelter Construction Material Assessment

The partners conducted an EMMA to assess the feasibility of a market-based shelter response focusing in rehabilitation modalities. The exercise sought to answer two critical questions related to the markets of cement, glass, MDF, aluminium window frames, and construction labour:

- Does the market system have the capacity to meet the needs and services required by Beirut Port Blast-affected people in sufficient quantities and at reasonable prices?
- Which types of market-based responses are the most cost efficient/effective and feasible?

The target beneficiary groups for the analysis were households (HH) whose homes were damaged and who are vulnerable economically and/or socially.

The exercise developed pre- and post-Beirut Port Blast maps for the respective market systems, analysed gaps, and proposed response options.

In preparation for the assessment and to build market assessment capacity among the partner organisations, 10 participants from 5 different organizations attended a 2-day training from 31st of August to 1st of September, 2020: Caritas Switzerland (lead), Caritas Lebanon, ACTED, CONCERN, and CAMEALEON for the NRC. Caritas Germany provided additional support with shelter expertise. There was a mix of skills in the EMMA team, and most participants were programme staff covering a range of fields such as shelter, livelihoods, and monitoring & evaluation.

[11]https://www.emma-toolkit.org/toolkit (Last Accessed: 06.10.2020)

The EMMA assessment that followed the training offered additional on-the-job training to the team members during the 8-day fieldwork (September 2nd – 11th, 2020), under the overall supervision of the Cash and Markets Expert in the field.

Figure 4: The EMMA Training in Beirut

The EMMA participants were organised in 4 sub-teams; each was headed by a market team leader and covered one of the 4 selected market systems. The EMMA team members conducted surveys with market actors, as outlined below:

	Aluminium	Cement and Hollow Concrete Blocks	Glass	Timber	Grand Total
Importer	2		1	4	7
Producer		7	3		10
Wholesaler		3	3	8	14
Retailer	8	2	5	4	19
Construction company (small)		5	1		6
Construction company (large)		3	2		5
Carpentries (small/medium)				3	3
Workshops	7		6		13
Grand Total	17	20	21	19	77

Figure 5: Types of actors interviewed

For each market system, two maps were produced, the first showing how the market system functions in a normal situation (baseline), and the second capturing the current crisis (after the Beirut Port Blast).

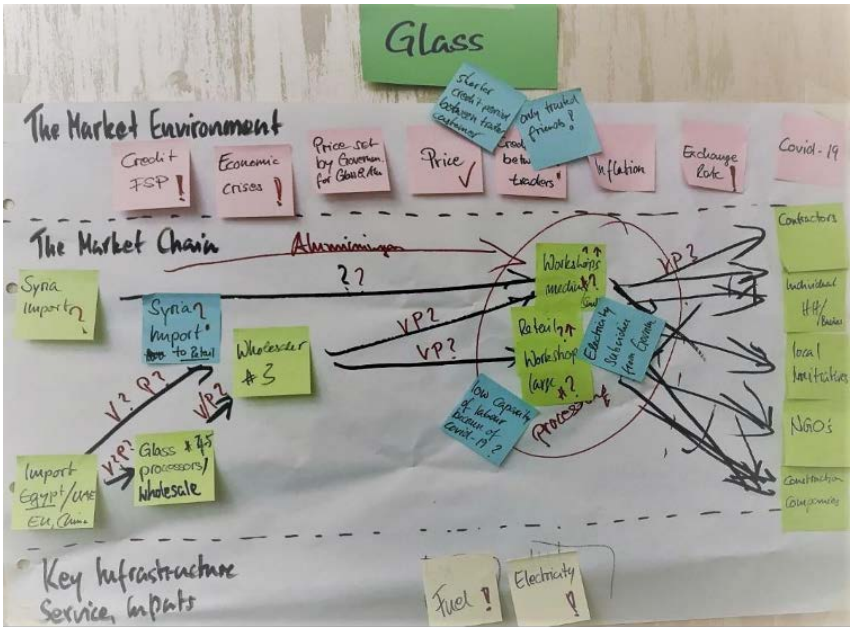


Figure 6: The preliminary glass market system map

Overall, the EMMA team members conducted interviews with approximately 10 key informants from UN agencies, and 77 market actors.

The questionnaire for the assessment was collectively developed by those participating in the EMMA training. The questionnaires had both closed and open-ended questions that could be quantitatively and qualitatively analysed. To avoid data inconsistency, bias, and lack of trustworthy business-specific knowledge, data collectors were requested to speak to business owners directly (if available), or a business representative. An Information & Communications Technology in Emergencies (ICT4E) solution was used to collect data: Key informant interview (KII) responses were entered into mobile phones/tablets running KoboToolbox and analysed through Tableau.

The team held a debrief meeting every day after data collection to compile quantitative and qualitative information from different tools used, and to update the market system mapping. Secondary sources and desk-based research were used to maximize use of available information prior and following the data collection.

2.4 Limitations

The market mapping and analysis exercise faced several limitations:

- The desk review was limited in terms of availability of secondary information/data for the target markets Information obtained might be missing details or components, or be underreporting the specific issue. It is also important to acknowledge that the completeness of data may vary from market to market, and between different commodities. In many cases, market/commodity-specific information was not available.
- Traders were not categorized into small-scale, medium-scale, and large-scale. Inadequate definition of these categories resulted in wide ranges.
- The coverage of geographies and traders was limited because there was not enough time to conduct comprehensive field work. There were also difficulties in keeping to scheduled times, as business owners and their employees were busy attending to customers, resulting in longer periods spent with traders that did not always result in receiving all the information requested.
- A number of the business owners did not want to reveal prices and stock volumes.
- In Lebanon, prices are usually negotiable (the so-called “no-fix-price” tradition) so listed prices in the report are based on price range statements of traders.

SECTION 3: SCOPE OF THE ASSESSMENT

3.1 Geographic Scope

The geographic scope is the impact zone in Greater Beirut, with an emphasis on the worst-affected areas within a five-kilometre radius of the explosion site.

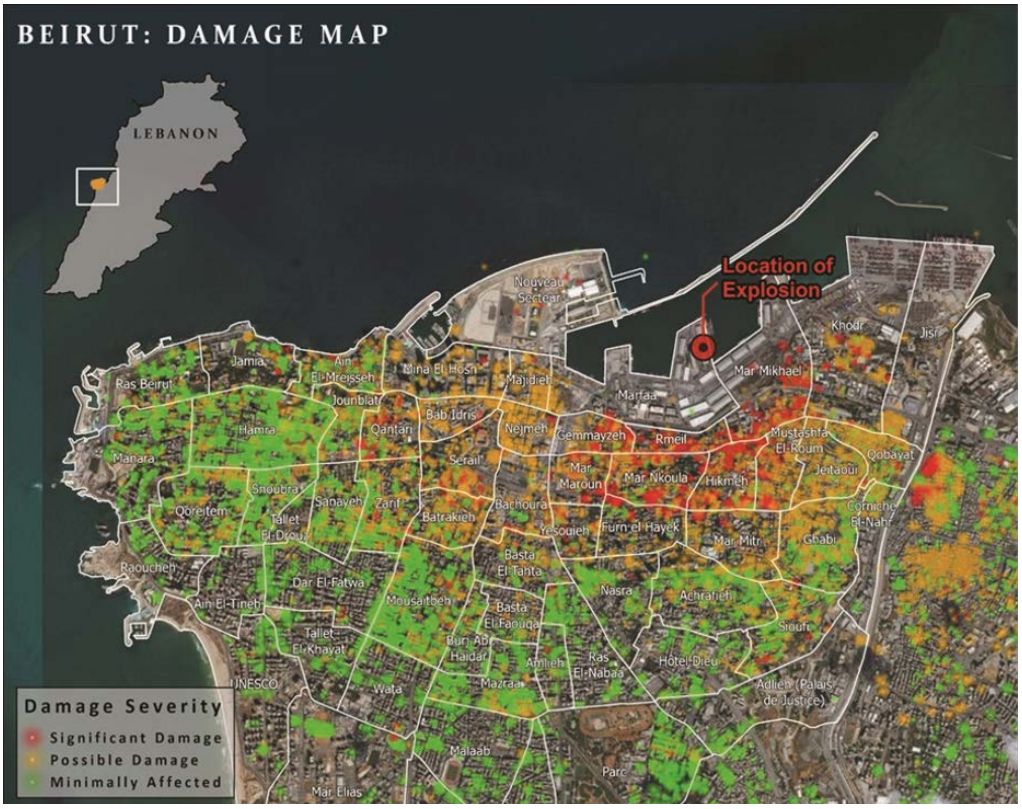


Figure 7: Beirut Damage Map[12]

3.2 Primary Data Collection

In total, 77 interviews were conducted. Due to logistical constraints, many interviews were conducted via phone, which was more time efficient and safer given the COVID-19 pandemic:

Figure 8: Total number and type of interviews conducted

The interviews were conducted mainly in and around Beirut, with the exceptions of the MDF market and its key traders in Tripoli, and the cement market with factories close to the quarries in the Chekka region.

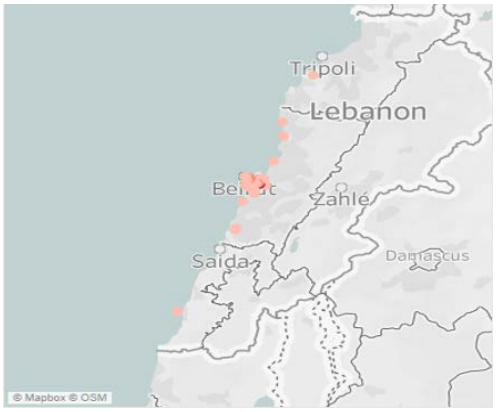


Figure 9: Location of face-to-face interviews

[12]World Bank, Beirut Blast Rapid Needs Assessment, http://documents1.worldbank.org/curated/en/650091598854062180/Beirut-Rapid-Damage-and-Needs-Assessment.pdf (Last Accessed: 06.10.2020)

SECTION 4: CRITICAL MARKET SELECTION AND KEY ANALYTICAL QUESTIONS

4.1 Critical Market Selection

Market systems were selected on the basis of need, on the recommendations of the shelter working group, and with priority markets pre-selected by the assessment partners. The number of critical markets was limited to 4 to ensure quality data collection, and to remain in accordance with the resources (HR, vehicles) available for the assessment.

Based on these consultations, the EMMA team decided to analyse the following critical market systems[13]:

- cement and hollow blocks
- flat glass, transparent 6mm
- medium-density fibreboard (MDF) 8mm
- aluminium window frames

In addition to the assessment of these critical markets, the EMMA teams also explored the capacity of service providers (carpenters and contractors) to meet the high demand of repairs of windows and doors.

4.2 Key Analytical Questions

Key analytical questions were drafted during consultations with the collaborating organisations prior to both the training program and the assessment exercise. During the training program the key analytical questions were revised and agreed on as the following:

- **Does the market system have the capacity to meet the needs and services people require in sufficient quantities and at reasonable prices?**
- **Which types of market-based responses are the most cost-efficient/effective and feasible?**

[13]See also Emergency Response to the Beirut Blast, Emergency Cash Taskforce - Mapping of Emergency Cash Assistance Programs, Annex IV - UNHCR BoQ for Immediate Cash for Minor Shelter Repairs, September 2020

SECTION 5: CEMENT MARKET SYSTEM

5.1 Cement Market Analysis

Cement Baseline Analysis

The cement market in Lebanon is largely dependent on local production, with minimal to no imports. The three main cement-producing factories in Lebanon, *Cimenterie Nationale* and *Holcim*, both in Chekka, and *Ciment de Sibline S.A.L* in Sibline-Chouf, are capacitated to cover the market needs under normal circumstances, which could reach up to 5 mil. metric tons (MT) annually. *Cimenterie Nationale's* total annual production, amounting to 3 mil. MT, accounts for the biggest share of total cement production in Lebanon, followed by *Holcim* at around 2.2 million MT, and *Sibline* at around 1.35 mil. MT.

Holcim covers the market needs for both grey and white cement, while *Sibline* and *Cimenterie Nationale* produce only grey cement. Raw materials essential to produce cement are in large part available locally, extracted from quarries owned by the three biggest manufacturing companies, or at other smaller quarries. The main source of raw materials in Lebanon is the Chekka-Batroun district, but producers may also import them from countries such as Greece and Cyprus.

The trajectory of the Lebanese cement industry is tightly linked to that of construction and real estate. The demand for cement witnessed considerable growth starting in 1995 due to the initiation of large-scale reconstruction projects after the Lebanese Civil War (1975-1990). This was followed by a recession that began in 2010 due to the following reasons:

- The war in Syria and its repercussions on political stability and internal security in Lebanon.
- Decline in foreign investments in real estate.
- Decreased purchasing power of Lebanese households due to deteriorating economy.
- Housing loans crisis since 2017.
- Economic and financial crisis since end of summer 2019.
- COVID-19 crisis in 2020.

In order to protect the local market from price competition with cheaper imported cement, the government issued a decision banning all imports in 1993 and then again in 2001, in addition to imposing prohibitive tariffs on imports of cement derivatives that can reach up to 75% for grey cement, clinker, and related products, and 25% for white cement. Since cement production is higher than demand, Lebanon exports cement mainly to neighbouring countries such as Syria, Egypt, and Cyprus.

The cement market had been rapidly growing before 2010 with little consideration to the environment or the health of people living close to the quarries and cement factories. After the end of the 15-year Lebanese Civil War in 1990, quarries began proliferating as the country tried to rebuild itself following large-scale destruction. There are more than 1,300 quarries over 50 square kilometres (19 square miles) in the country, according to a 2017 satellite survey conducted by the Lebanese army, of which approximately 700 - 1,300 are illegal or unregulated.

As a result of the lobbying efforts of environmental activists and the residents of areas where quarries are established, the Government of Lebanon issued a decision in September 2019 stopping the operation of quarries that are posing a threat to the environment. Consequently, the availability of raw material became an issue, and production in two of the biggest cement manufacturing companies dropped considerably.

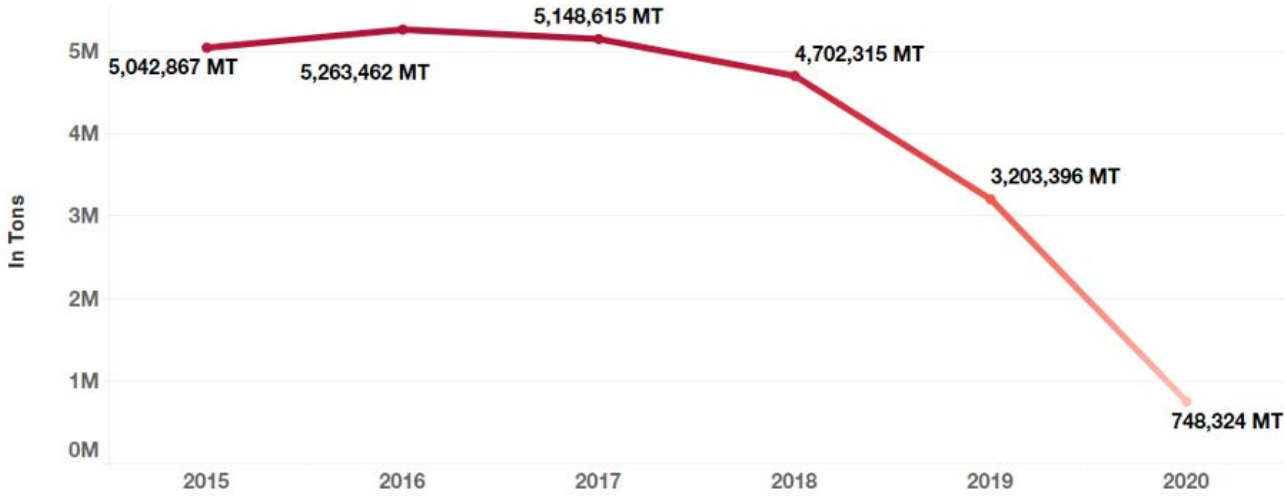


Figure 10: Annual Cement Delivery Volume[14]

One of the interviewed cement companies mentioned that their production decreased by 60% to 70% between September 2019 and February 2020, and then stopped almost completely until the end of August 2020. Market needs for cement during that period were largely met by one company – *Sibline* – with additional minimal production maintained by two companies using their stocks of raw material and the clinkers they purchased from *Sibline*. The interviewed cement-producing company stated that before September 2019, a large wholesaler used to buy, on average, 1700 MT of cement per month. In 2020, due to low availability, wholesalers are buying 20% to 30% of that quantity. Between September 2019 and early July 2020, due to limited supply of cement coupled with the fluctuating exchange rate and inflation across the country, the price of cement increased from approximately 160,000 LBP/MT to a maximum of 1,300,000 LBP/MT.

In order to control the price of cement in the market, the Lebanese Government issued a decision on July 14, 2020 fixing the selling price of cement at 266,000 LBP/MT (240,000 LBP/MT + VAT).

It appears the Lebanon cement market is controlled by a "*conglomerate*" of producers and middlemen. One of the three interviewed cement wholesalers stated that they do not have direct access to the three primary cement producers and therefore must get the product through middlemen that could be selling cement at prices higher than the prices of the primary producers. This effectively puts the cement market price under the control of middlemen. Due to the fact that the price of cement reached very high levels prior to its regulation on July 14, cement wholesalers reported not being able to stock cement in July, and therefore selling less quantities.

Due to the high price, demand for cement from individual households decreased, and subsequently retailers bought no more than 1 to 2 MT from wholesalers in July at an upper price of 1,200,000 LBP/MT. The retailers sold one bag of cement (50 kg) for a maximum of 65,000 LBP, which is almost six times the price prior to the cement crisis.

Cement Emergency Analysis

Following the Beirut Port Blast that took place on August 4th, 2020, and in order to meet the demand of the construction market for the rehabilitation of damaged houses, the Lebanese Government allowed the quarries to re-open between August 24th and September 24th, in addition to lifting the ban on cement imports[15]. Cement producers became operational again, but with an upper limit for production set by the Government because of environmental concerns, which makes it difficult for them to increase their stocks.

However, none of the interviewed cement traders expressed concerns in meeting the higher demand caused by the Beirut Port Blast since the total cement demand within Lebanon is already low in comparison to previous years.

According to the interviewed large cement producer, production is now set at 5,000 MT per week, of which

[14]Lebanon Central Bank, Statistics, https://www.bdl.gov.lb/webroot/statistics/ (Last Accessed 20.09.2020)
[15]Ministry of Industry, Decree 48/1, http://www.industry.gov.lb/getattachment/LawRegulations/48-1.pdf?lang=ar-LB (Last Accessed: 06.10.2020)

some is not sold but being stocked. The company refused to disclose how much they are currently stocking. Trade volumes of cement thus increased as compared to July 2020, and prices decreased.

The wholesalers are now buying cement from middlemen at 300,000 to 325,000 LBP/MT and selling to retailers at around 350,000 to 560,000 LBP/MT.

Two interviewed retailers increased their sales of cement following the Beirut Port Blast; one retailer doubled the quantity of sales per week as compared to July while the other retailer quadrupled sales of cement. Stocks of small retailers currently range between 3 to 10 MT depending on the available space. Retailers can replenish their supplies within one day if product is available and priced reasonably.

5.2 Cement Market System Map (Baseline Situation)

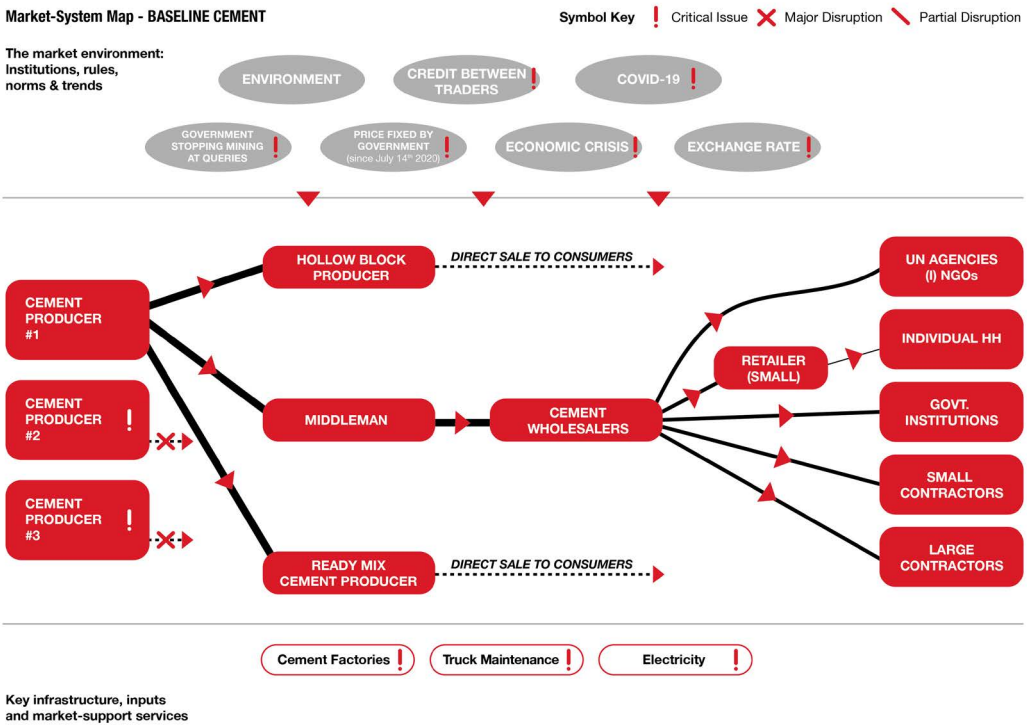


Figure 11: Cement Market System Map (Baseline Situation)

5.3 Cement Market System Map (Crisis Situation)

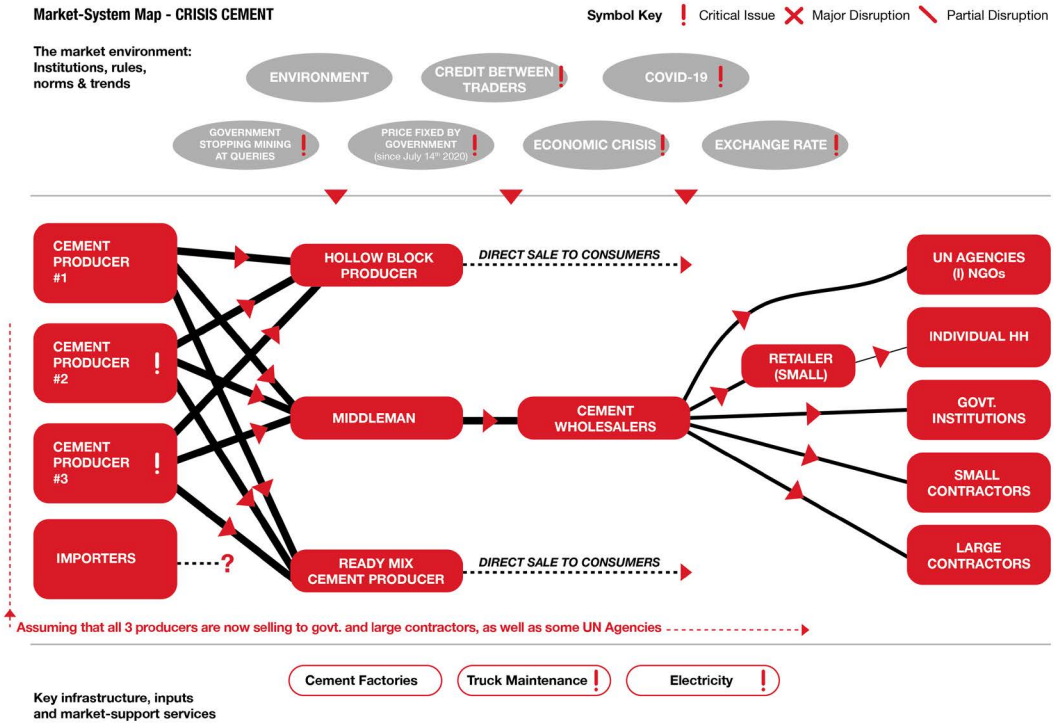


Figure 12: Cement Market System Map (Crisis Situation)

Cement Value Chain				
	Producer (Metric Tons)	**Middleman (Metric Tons)**	**Wholesaler (Metric Tons)**	**Retailer (50kg)**
Baseline Price (LBP)	266,000 LBP	1,200,000 LBP	1,300,000 LBP	65,000 LBP/bag
Crisis Price (LBP)	266,000 LBP	300,000 to 325,000 LBP	350,000 to 560,000 LBP	28,000 LBP/bag

Figure 13: Cement Value Chain (Baseline & Crisis Situations)

5.4 Hollow Block Market Analysis

Hollow Blocks Baseline Analysis

The production of hollow blocks is mainly dependent on the availability of cement. According to the majority of the interviewed block producers, production has decreased since September 2019 due to the cement crisis in Lebanon. In July 2020, the production of blocks was ongoing, and stocks were filled regularly.

Production varies depending on the size of the producer. Small producers manufactured around 2,000 to 4,000 units per week, while the quantities produced by large manufacturers ranged between 30,000 and 100,000 units. Hollow blocks were sold at 700 to 800 LBP/unit before the cement crisis and the financial and economic crisis.

The selling price increased gradually, and in July 2020 it reached 2,300 LBP/unit at companies that sell in LBP and 0.45 USD at companies that sell in USD.

Hollow Blocks Emergency Analysis

Most hollow block producers saw an increase in demand after the Beirut Port Blast, but to date only one has increased production. Current stocks do not differ much from stocks available in July. Stocks vary according to the size of production and sales, and adjust according to demand. Because of the USD exchange rate and labour cost, some producers increased their prices from 2,300 LBP/block to 2,400 LBP/block and from 0.25 USD/block to 0.36 USD/block. The main challenge stated by market actors are government regulations and difficulties to purchase raw material and components for further processing.

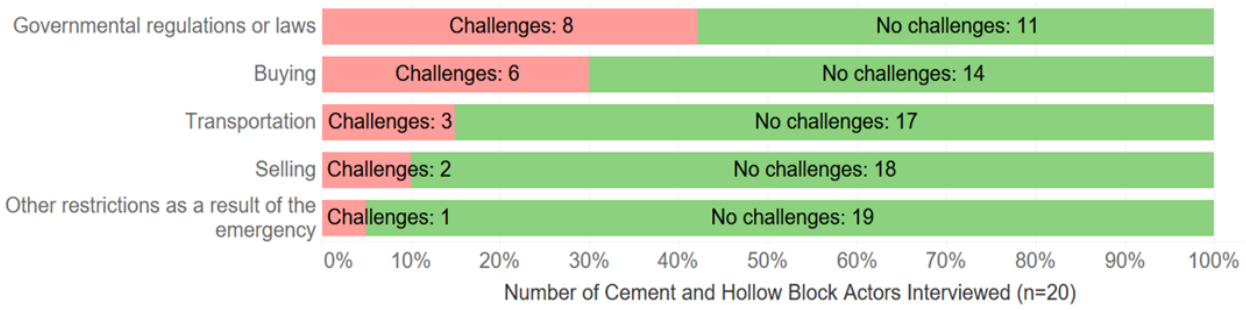


Figure 14: Reported Challenges by Cement and Hollow Block Traders

Most cement actors stated that they have no access to credit in USD, while access to credit in LBP seems to be unproblematic.

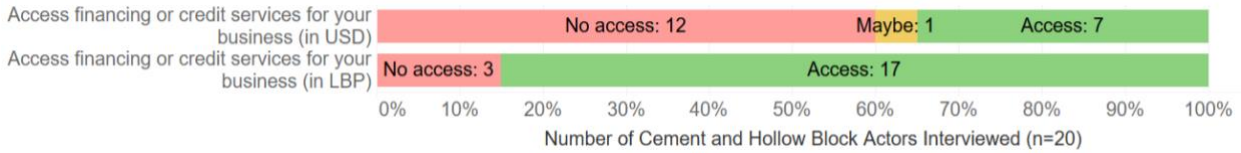


Figure 15: Reported Credit Access by Cement and Hollow Block Traders

SECTION 6: GLASS MARKET SYSTEM

6.1 Glass Market Analysis

Glass Baseline Analysis

Lebanon's glass industry is based on imports from a variety of countries. In the past five years, the importing of flat glass[16] dropped significantly from over 33,407 MT in 2015 down to 1,350 MT in of June 2020, mainly due to economic constraints.

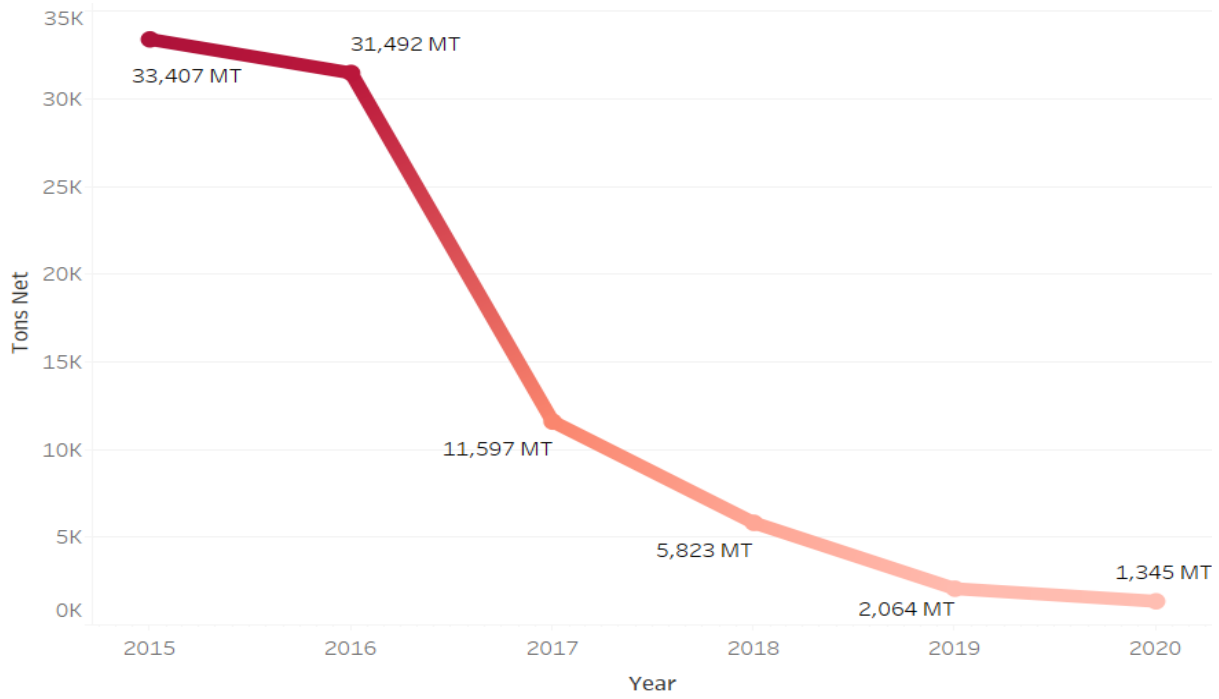


Figure 16: Annual Import Volume of Flat Glass to Lebanon[17]

There are some large importers of flat glass products and a number of wholesalers and glass processors purchasing glass, depending on best price opportunities on the worldwide glass market.

In 2019[18], glass imports from Saudi Arabia, Belgium, India, Germany, UAE, and China met more than half of the total import of Lebanon's flat glass needs.

Some glass processing factories operating in Lebanon also export processed glass, covering the MENA region and several West African countries. Glass processing in Lebanon includes architectural glazing, tempering furnace, PVB lamination line, and double glazing.

Governmental institutions, retailers, and workshops where glass is assembled for installation are buying from wholesalers.

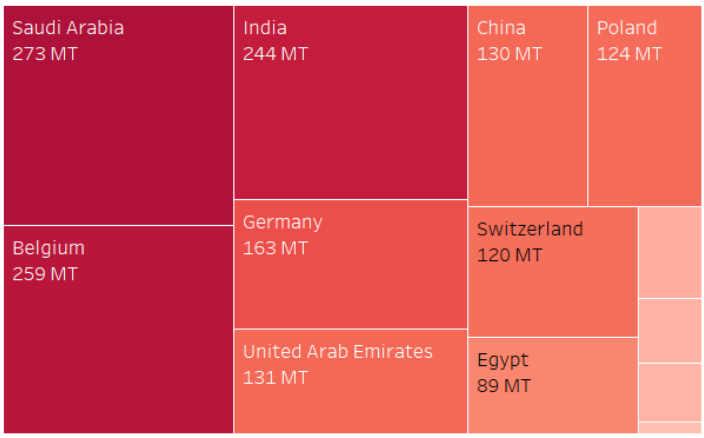


Figure 17: Exporters of Flat Glass to Lebanon in 2019

[16]Flat glass is flat like sheets of paper. It is also sometimes called sheet glass and plate glass. The most common use of flat glass is in windows, doors, automotive glass, mirrors and in solar panels. Flat glass is made by melting sand and other materials into a liquid, spreading the liquid (molten) glass to a desired thickness, and cooling into the final product.
[17]Lebanon Customs, http://customs.gov.lb (Last Accessed: 20.09.2020); item selected based on Harmonized Commodity Description and Coding System: 7005.10.00
[18]Lebanese Customs, http://customs.gov.lb (Last Accessed: 20.09.2020); Harmonized Commodity Description and Coding System: 7005.10.00

Glass Emergency Analysis

Apart from an increase in demand and, to some extent, in price, the glass market has not changed substantially. The importers-to-retailers supply chain is not affected by the Beirut Port Blast.

The only difference between the baseline and crisis market system is that UN agencies and (I)NGOs responding to the blast became active glass market actors since they are now buying glass to reconstruct damaged windows.

To maintain a stable glass price, the Ministry of Trade and Industry introduced a price cap for glass[19] of 90,000 LBP for a square meter of 6mm glass including installation.

Some of the glass market actors stated facing challenges purchasing raw material and components for processing as well as selling products due to the economic crisis.

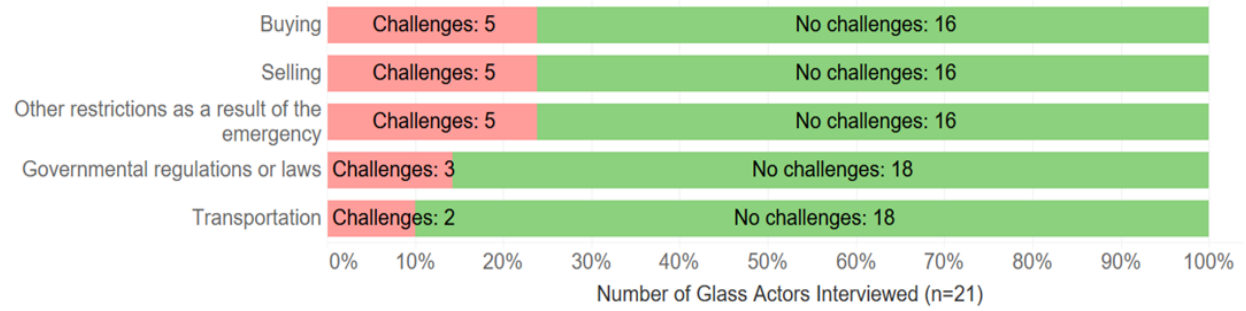


Figure 18: Reported Challenges by Glass Actors

Like in the previous market, the majority of glass actors do not have access to USD credit. Quite striking is the finding that access to LBP seems to be a challenge as well.

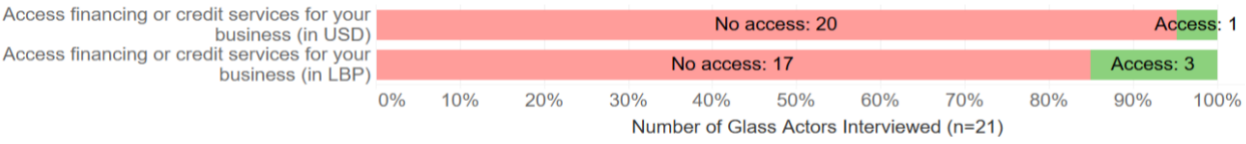


Figure 19: Reported Credit Access by Glass Actors

Future Forecast

Importers do not foresee any supply issues in the coming months since warehouses are well stocked and importing more glass is not a problem. So far, interviewed actors mentioned an increase in glass imports of approximately 240% in comparison to the baseline, and this increase in demand/sales is expected to continue steadily into the near future.

Most traders anticipate a slight price increase of 0.5 - 1 USD/SQM to a maximum of approximately 10 USD/SQM. So far, the increase has only materialised at wholesale level, while retailers and workshops are appearing to keep their usual selling price, with some stating that they wouldn't like to take advantage of the current situation and others explaining that the price is stable due to the lack of competition between actors ("There are jobs for everyone.").

The main challenges facing traders are the shortage of USD, and the exchange rate, yet most wholesalers and retailers are able to restock/double/triple their stock within 1 to 2 days, while importers need 30 to 45 days. According to traders, most customers are currently asking for tempered glass since this is safer if it were to ever shatter. This should be taken in account when setting the MEB for shelter items while planning a response.

[19]Lebanese Ministry of Industry, Decree 57/1, http://www.industry.gov.lb/getattachment/FormsApplications/57-1.pdf?lang=ar-LB and Decree 3/1, http://www.industry.gov.lb/getattachment/LawRegulations/3-1-(2).pdf?lang=ar-LB (Last Accessed: 06.10.2020)

6.2 Glass Market System Map (Baseline Situation)

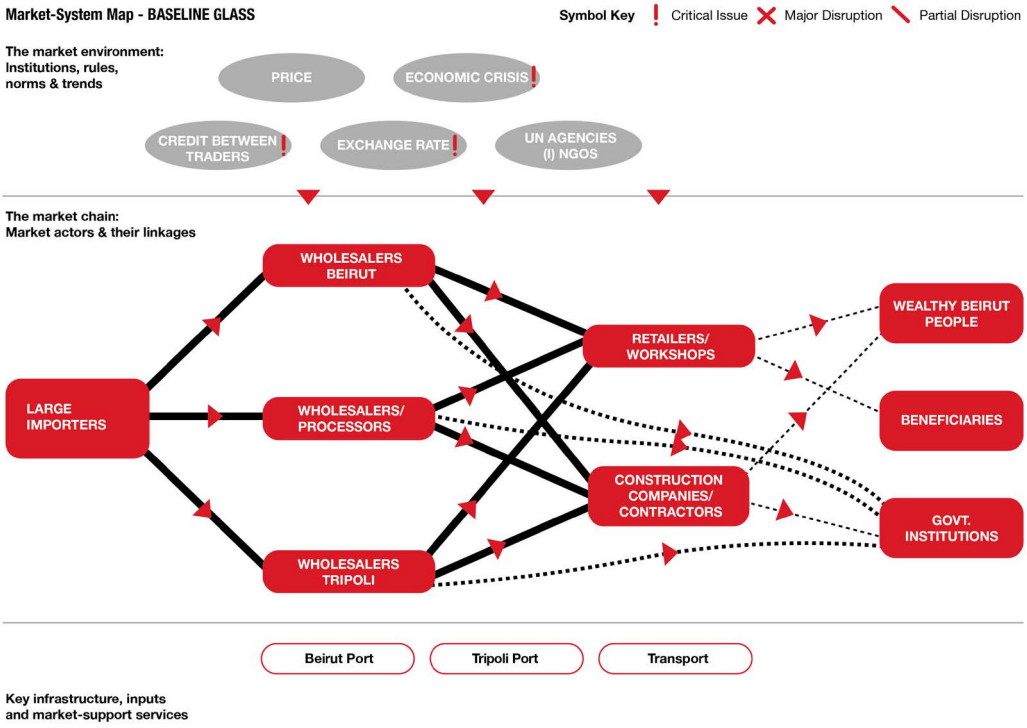


Figure 20: Glass Market System Map (Baseline Situation)

6.3 Glass Market System Map (Crisis Situation)

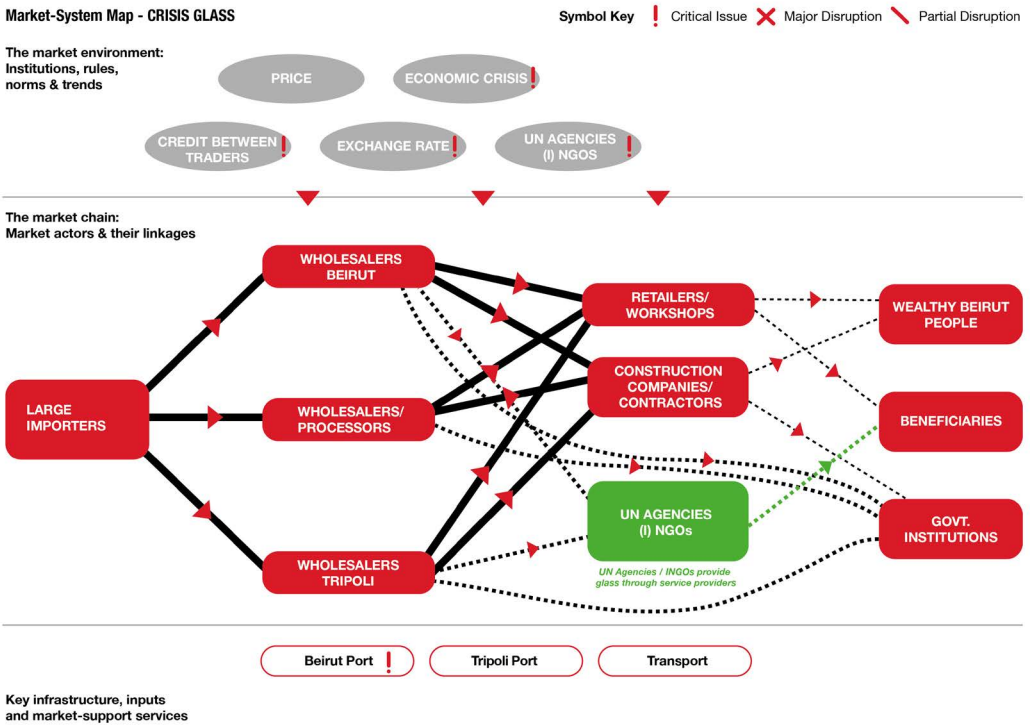


Figure 21: Glass Market System Map (Crisis Situation)

Glass Value Chain		
Price per SQM (USD): Baseline & Crisis	**Import/Wholesaler**	**Retailer**
	9 to 11 USD*	15 USD

Figure 22: Glass Value Chain (depending on volume)

SECTION 7: MEDIUM-DENSITY FIBREBOARD (MDF)

7.1 MDF Market Analysis

MDF Baseline Analysis

MDF is the most commonly used material for standard door production. The shelter working group recommended assessing a standard medium-density fibreboard (MDF) as being an engineered wood product made by breaking down hardwood or softwood residuals into wood fibres, and with a standard size of 2,440mm x 1,220mm x 8mm.

MDF, like most timber products, is purchased from countries around the world and imported into Lebanon. Timber and timber products are imported duty-free. Timber traders usually buy throughout the year from around the world based on volume vs. price market opportunities. This has resulted in a large existing stock that can serve up to 3 months for the medium-sized wholesalers, and up to 1 year for the large wholesalers / importers.

According to *Jabwood*, the largest timber importer, the overall import per year for timber in Lebanon is estimated at 400,000 m^3 worth USD 100 mil. (based on the last report in 2019). 20% of this overall number is dedicated to MDF boards.

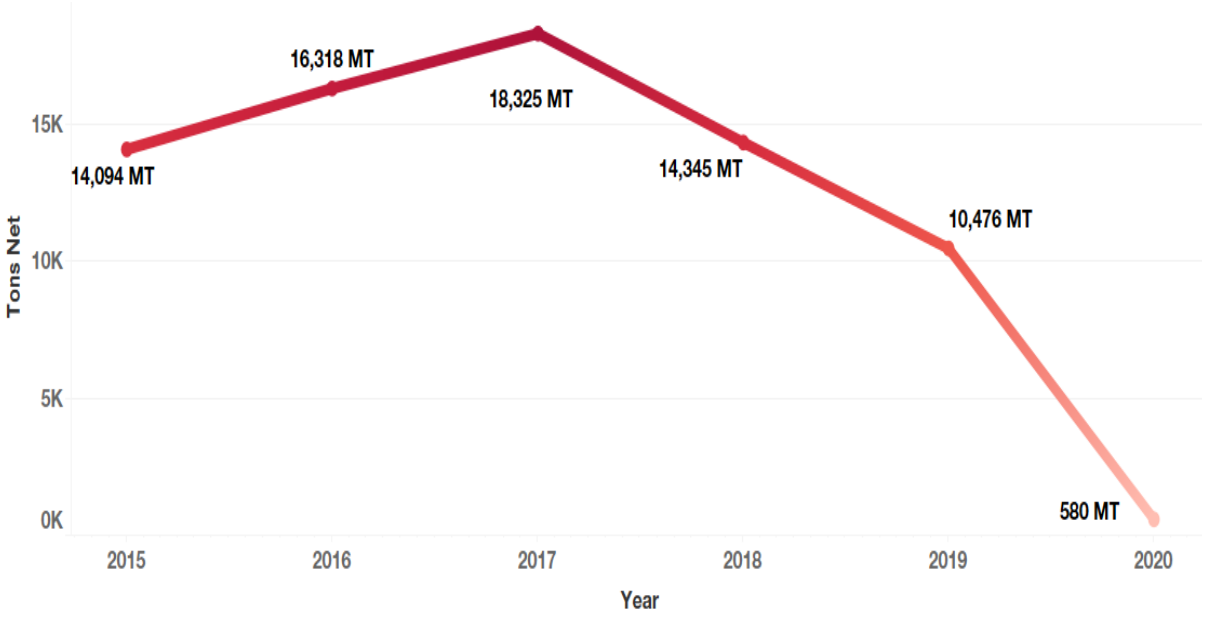


Figure 23: Annual Net Import of MDF to Lebanon[20]

Since almost all timber imports are handled at the Port of Tripoli, the Beirut Port Blast and the lower capacity of the Port of Beirut does not affect the timber/MDF market.

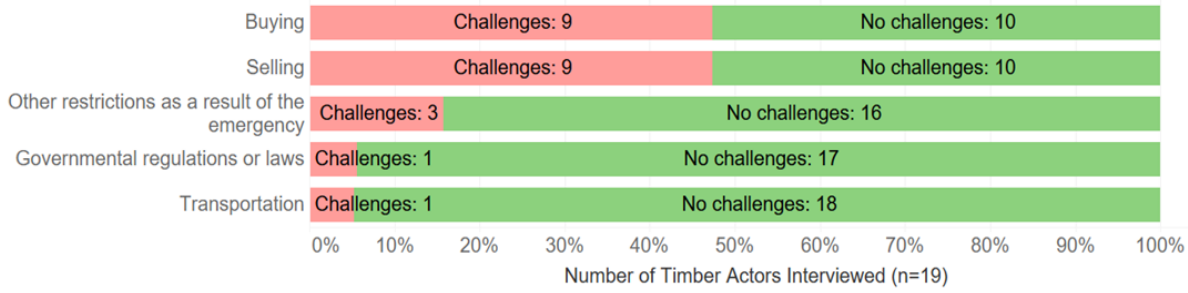


Figure 24: Reported Challenges by Timber Actors

[20]Lebanon Customs, http://customs.gov.lb (Last Accessed: 20.09.2020);
item selected based on Harmonized Commodity Description and Coding System: 4411.13.00

In line with the pervious findings, the majority of timer actors do not have access to USD credit, while access to LBP credit is available for half of the respondents.

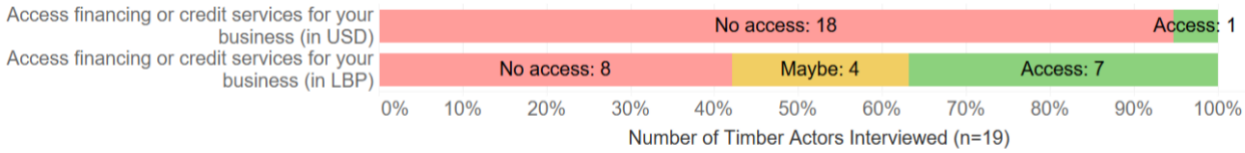


Figure 25: Reported Credit Access by Timber Actors

Future Forecast

According to *Jabwood*, the largest timber wholesaler / importer in Lebanon, the current stock will be sufficient for approximately 1 year. Medium-sized wholesalers have stock for up to 3 months.

The main challenge traders are facing is the exchange rate and access to USD. It is expected that this will remain an issue and potentially become more complex in the future.

7.2 MDF Market System Map (Baseline Situation)

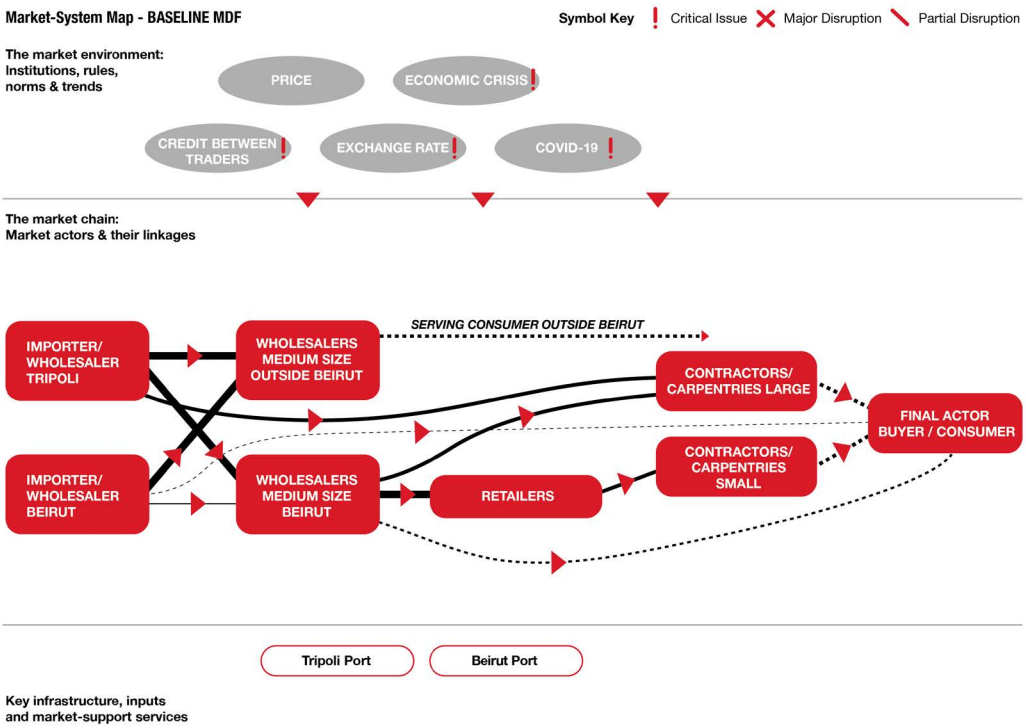


Figure 26: MDF Market System Map (Baseline Situation)

7.3 MDF Market System Map (Crisis Situation)

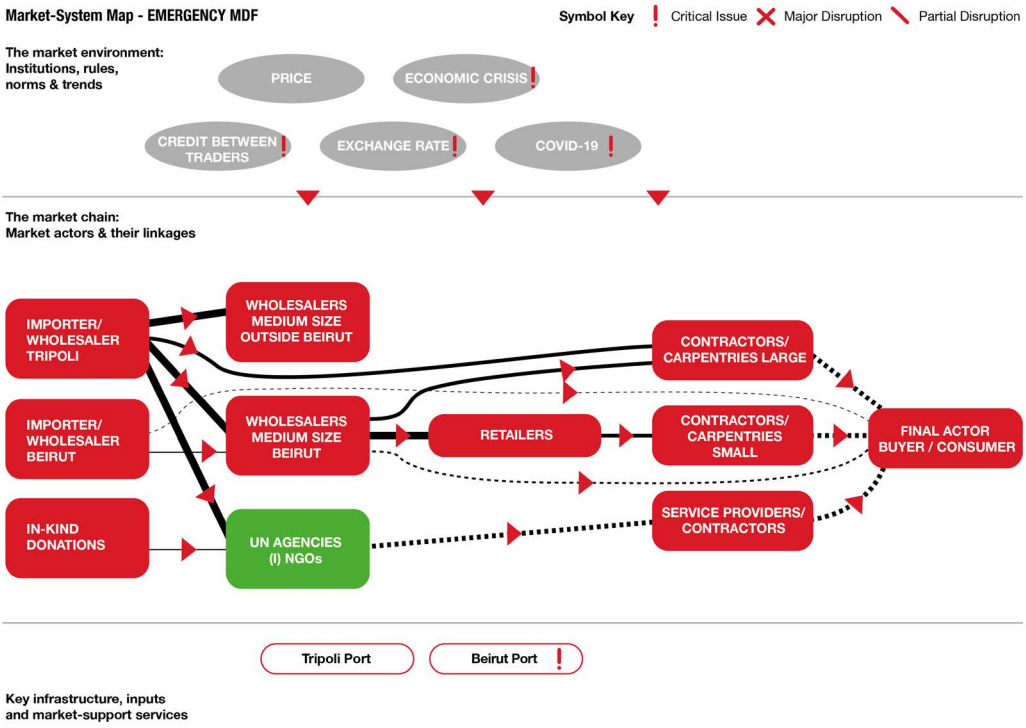


Figure 27: MDF Market System Map (Crisis Situation)

MDF Value Chain (Size: 2440 x 1220 x 8mm)			
Price (USD): Baseline & Crisis	**Import**	**Wholesaler**	**Retailer**
	4 to 5 USD	6 to 7 USD	7 to 9 USD

Figure 28: MDF Value Chain (note: the final price will depend on volume when traded between the above market actors)

SECTION 8: ALUMINIUM FRAMES MARKET SYSTEM

8.1 Aluminium Frames Market Analysis

Aluminium Frames Baseline Analysis

Aluminium frames are mostly imported by wholesalers after being sourced from across the world based on best price and opportunity. However, there is one large company, *SIDEM*, that imports raw material aluminium and manufactures aluminium frames mainly for the export market. They are more expensive than already manufactured frames being imported from outside Lebanon (i.e. Egypt and Jordan). Imported profiles / beams are considered cheaper than the ones produced locally (*SIDEM* 2000), with a difference of almost USD 20 per lot. As a result, frames used in Lebanon are mostly imported. Aluminium frame traders in Lebanon did not face any issues in purchasing goods prior to the Beirut Port Blast, and had sufficient stock to serve normal needs around the country. However, business was low because of the economic crisis and stopped completely during the COVID-19 lockdowns. In the event that they were to sell all of their stock, the following traders stated how long it would have taken to replenish it:

- Workshops: 3 days
- Retailers: 3 days
- Wholesalers: 14 days

Wholesalers / importers usually pay between 10.5% and 11% of VAT / taxes, as well as custom fees. Each lot of aluminium beams is composed of a set of 6 beams, each beam size is 6.60m, coming to a total measure per lot of 39.6m.

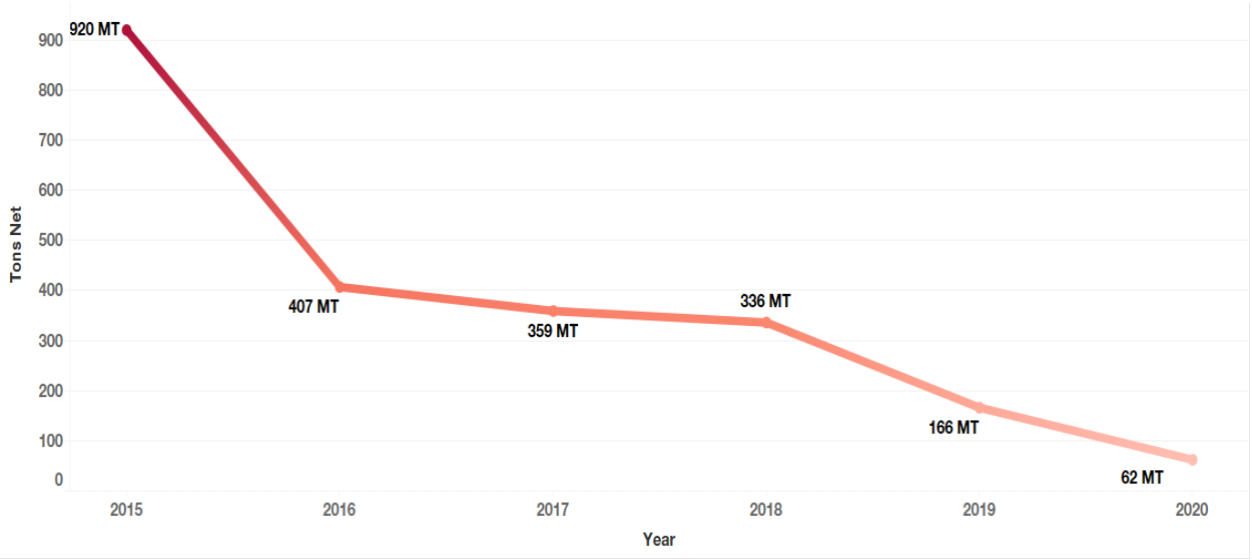


Figure 29: Annual Net Import Volume of Window/Door Frames Aluminium to Lebanon[21]

Aluminium Frames Emergency Analysis

All interviewed traders stated that customer demand has increased following the Beirut Port Blast, and that they sell their products in both currencies (LBP and USD) using black market exchange rate. Prices remain the same as before the blast.

[21]Lebanon Customs, http://customs.gov.lb (Last Accessed: 20.09.2020); item selected based on Harmonized Commodity Description and Coding System: 7610.10.00

Given the increased demand, the following traders need the following average number of days to replenish products as compared to before the crisis:

- Workshops: 6 days (increased from before crisis)
- Retailers: 4.5 days (increased from before crisis)
- Wholesalers: 14 days (unchanged from before crisis)

Like in the other assessed markets, the main challenge aluminium traders face is the exchange rate and access to USD. Wholesalers stated that they are expecting to purchase their products from the same areas and companies (locally and/or outside the country) for the next 3 months.

Workshops where aluminium frame windows get assembled and later installed in buildings are facing constraints in purchasing goods due to the high demand of the item and a drop in quality due to faster assembly and the employment of less skilled labour to meet the increased demand.

On August 17th, 2020 the Minister of Economy and Trade issued a joint decision related to controlling the prices of aluminium and glass for customers[22] in order to protect the interests of the citizens, and to prevent exploiting the need of the blast-affected population to restore their homes and interests. This decision stipulates the adoption of a maximum price of 500,000 LBP for one square meter of 6mm glass and a respective aluminium frame including the installation. Moreover, it is forbidden to oblige the consumer to pay the price in a foreign currency (e.g. USD), and to refuse to charge the price in Lebanese Pounds. Violating the provision of the decision exposes the trader to legal prosecution, including confiscation of goods and their subsequent free distribution to charitable actors. However, it remains open to which extend this regulation is enforced.

The assessed traders mentioned that they have enough stock to cover the needs of the customers since they are not facing any major issues during import.

Wholesalers mentioned that they have started facing some issues in providing the “Serie 2000 Silver Colour” since this is the aluminium type that has the highest demand.

The market actors do not seem to face major challenges, although few actors mentioned facing challenges selling and buying goods due to the economic crisis.

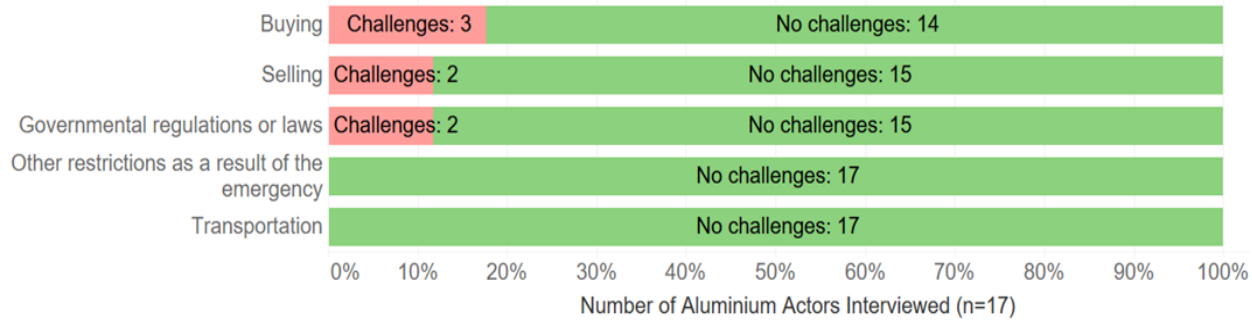


Figure 30: Reported Challenges by Aluminium Frames Traders

Only a minority of aluminium actors have access to USD or LBP credit.

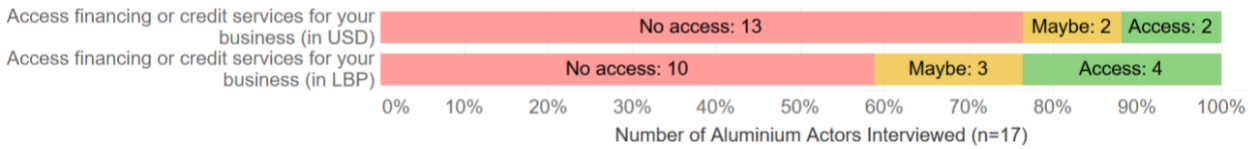


Figure 31: Reported Credit Access by Aluminium Frames Traders

[22] Lebanese Ministry of Industry, Decree 57/1, http://www.industry.gov.lb/getattachment/FormsApplications/57-1.pdf?lang=ar-LB and Decree 3/1, http://www.industry.gov.lb/getattachment/LawRegulations/3-1-(2).pdf?lang=ar-LB (Last Accessed: 06.10.2020)

8.2 Aluminium Frames Market System Map (Baseline Situation)

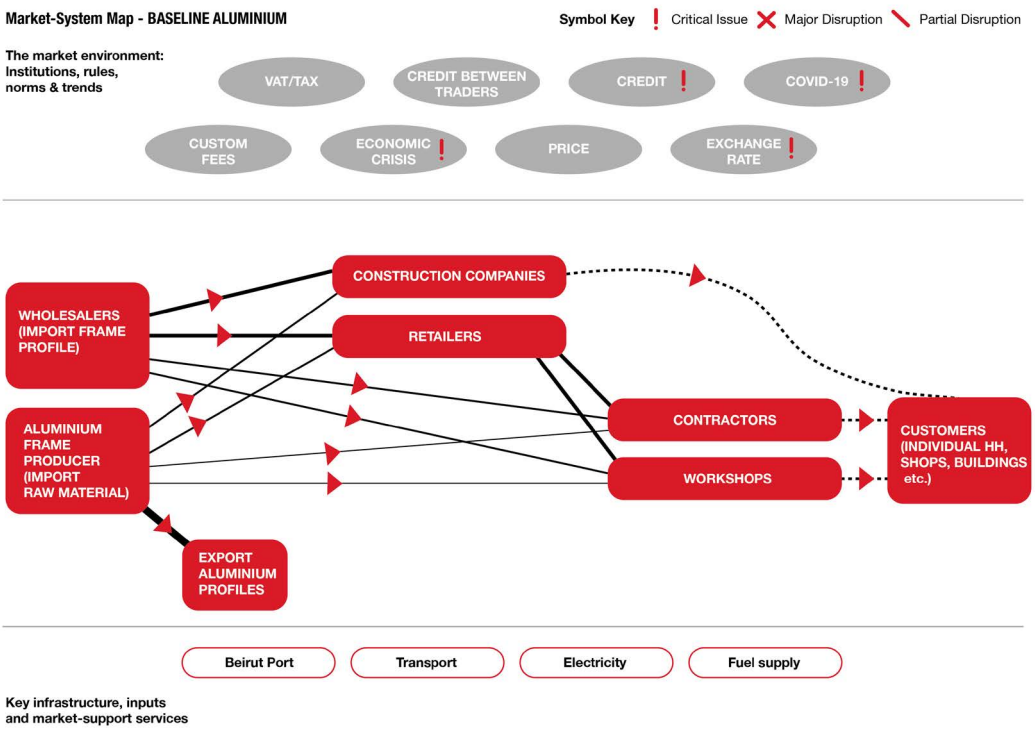


Figure 32: Aluminium Frames Market System Map (Baseline Situation)

8.3 Aluminium Frames Market System Map (Crisis Situation)

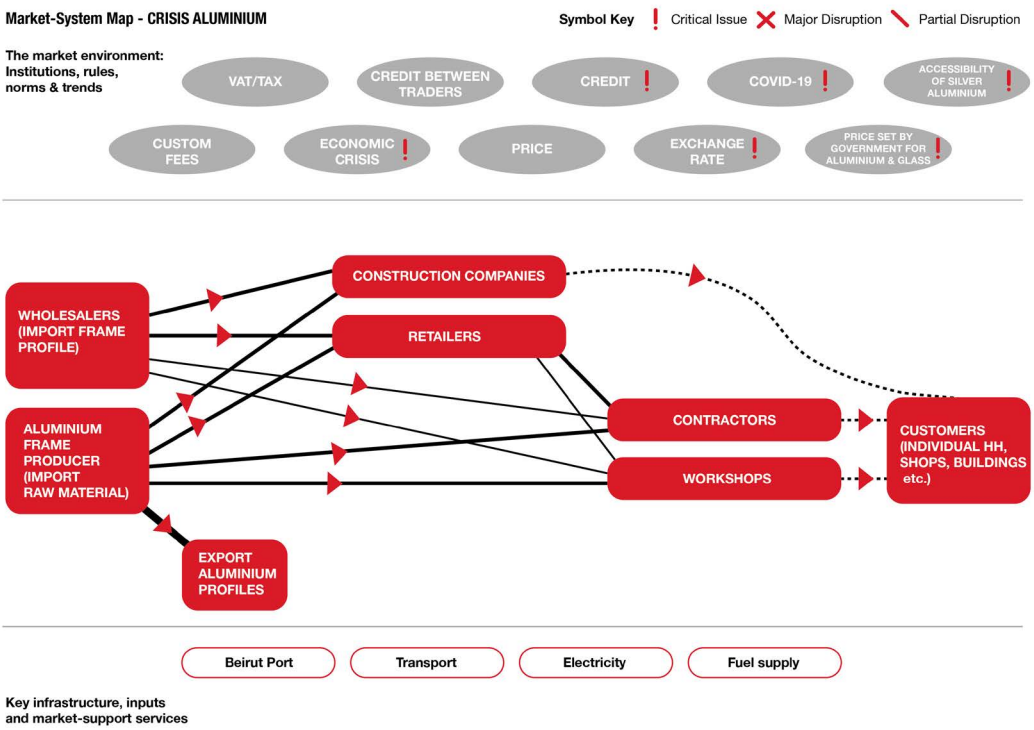


Figure 33: Aluminium Frames Market System Map (Crisis Situation)

Aluminium Frames Value Chain				
Price (USD): Baseline & Crisis	**Locally produced[23]**	**Wholesaler/import[24]**	**Retailer (beam)**	**Workshops (beam)**
	145 USD/lot (24 USD/beam)	135 USD/lot (22.50 USD/beam)	23 to 24 USD	27 USD

Figure 34: Aluminium Frames Value Chain

[23]SIDEM, lot of 6 beams
[24]Lot of 6 beams

SECTION 9: COMMON FEATURES ACROSS MARKETS

Overall, actors confirmed that the demand for construction material increased:

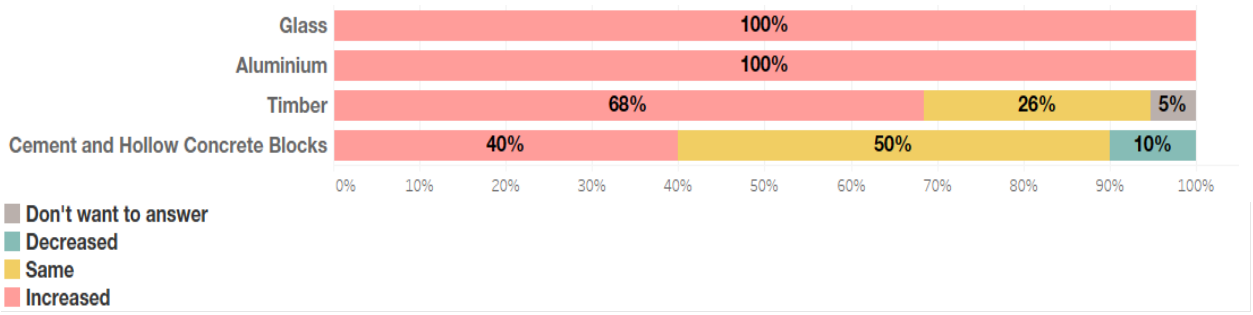


Figure 35: Reported increase of demand by traders

Notable is the lower increase for cement and hollow blocks, while glass and aluminium have the highest reported demand. This is expected given the large number of shattered windows when compared to a much lower number of repairs involving cement and hollow blocks.

9.1 Market Environment, Rules, Norms, Trends

Prices for glass, aluminium frames, and MDF are stable with negligible increase at wholesale level. The most critical issue mentioned by traders is the financial crisis and the exchange rate of the LBP.

Figure 36: Critical issues mentioned by traders[25]

Due to the fluctuation of the LBP - USD exchange rate, actors prefer payments in USD on delivery. This comes as exports are largely in USD, and most traders do not have access to finance and credit in USD from Lebanese banks.

Credit exchange between traders was available before October 2019, prior to the economic crisis, but this has been put on hold for most traders.

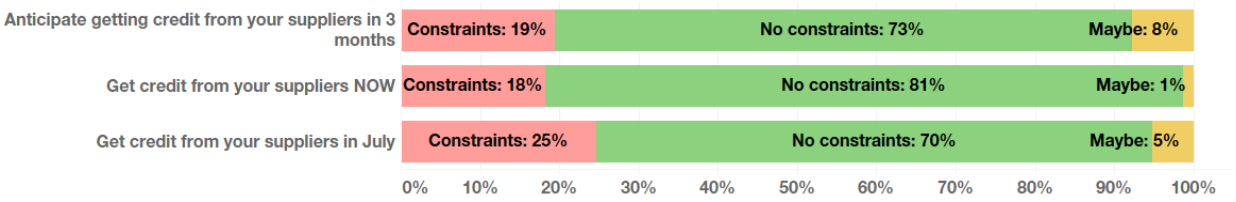


Figure 37: Credit exchange expectations between traders

Credit between traders is currently only used between well-trusted partners and with a reduced due payment timeframe.

Payments for goods at all levels across the supply chain are either done in USD, or based on the USD/LBP black market rate.

[25]Concerns about availability was mainly mentioned by cement market actors.

9.2 Market Chains

The market chains for the assessed markets appear functional and able to meet the higher current demand, as well as expected demand within the next 6 months.

9.3 Key Infrastructure, Services, Inputs

The Beirut Port Blast has not critically affected selected markets since 70% are still functioning and the construction material terminal at the port was not destroyed.

Moreover, the current import volume at the Port of Beirut is significantly lower than in previous years, which indicates that sufficient capacity to increase the import volume exists.

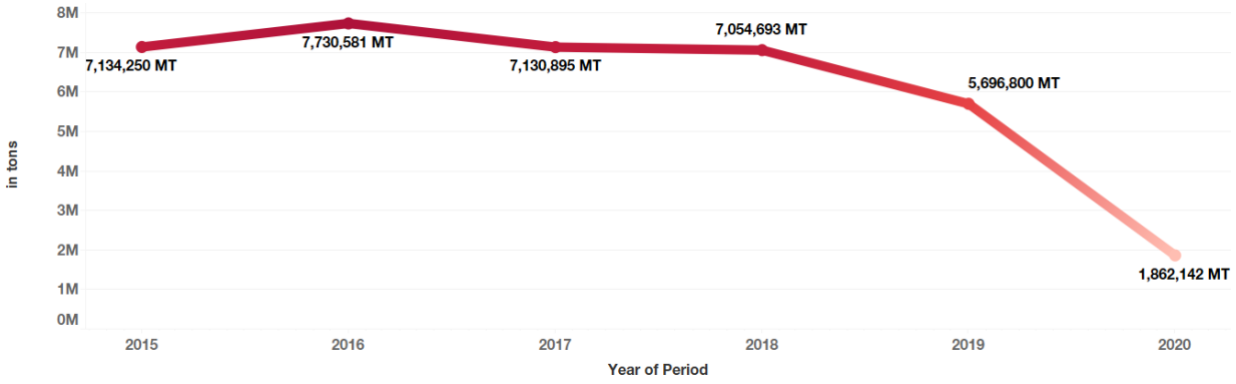


Figure 38: Annual Import Volume at Beirut Port[26]

[26]Lebanon Central Bank, Statistics, https://www.bdl.gov.lb/webroot/statistics/ (Last Accessed: 06.10.2020)

SECTION 10: CONSTRUCTION LABOUR MARKET

During the market assessment for construction material, partners expressed the need to gather information about potential shortages in labour force, accepted payment currencies, and availability of relevant equipment. While a thorough analysis of the labour market exceeds the scope of the construction material market assessment, questions related to labour supply have been added to the market survey to provide a first indication about whether labour supply will be a challenge in the reconstruction response. Hence, the analysis below is compiled entirely from data collected from traders and contractors.

Traditionally, Lebanon's labour force in the construction sector consists mainly of Syrians and other foreign nationals. Due to reduced construction volume and the economic crisis, the demand for construction labour has decreased, leaving abundant labour supply for the reconstruction. The majority of the interviewed construction companies, carpenters, and workshops stated that they would have sufficient skilled and un-skilled labour to manage a higher workload in the coming 3 months.

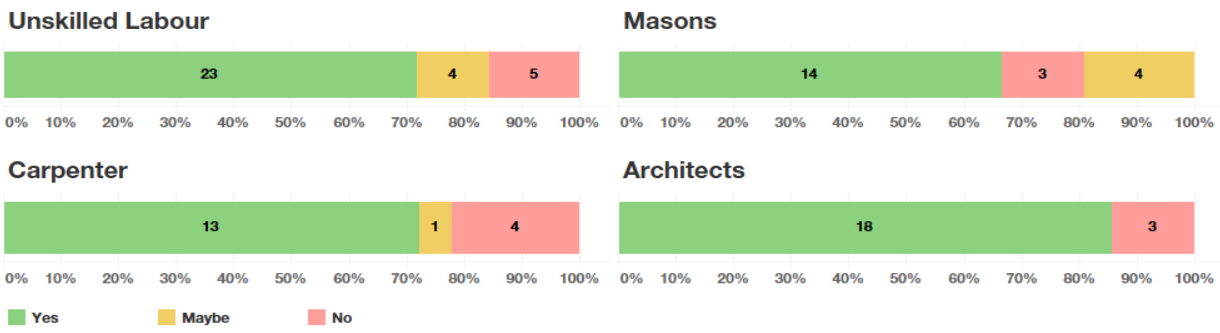


Figure 39: Sufficiency of Labour Supply in next 3 Months

The assessment could not find any significant representation of a female labour force in the construction sector, which is traditionally male-dominated.

When asked about the currency used for the payment of labour, the majority of employers stated they paid labourers in LBP.

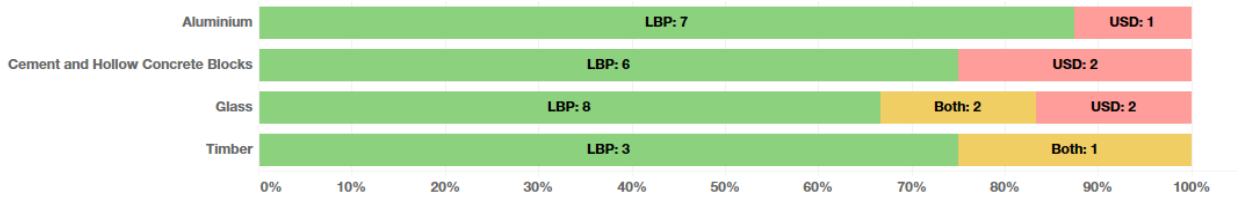


Figure 40: Currency used in payment of labourers from different markets

Finally, the assessment could not find indication of any sort of shortages of equipment related to construction.

SECTION 11: RESPONSE OPTION FRAMEWORK

The response option framework lays out some of the key considerations to inform selection of appropriate modalities, as identified by the lead consultant. The purpose of the framework is to help inform blast response programming of the EMMA partners and other actors, along with some market-based recommendations. They do not necessarily reflect the positions of the agencies who contributed to the EMMA analysis.

The following sections indicate possible contextual and market-based response options to consider for the Beirut Port Blast response.

11.1 Transfer Currencies

USD	
Advantages	**Disadvantages**
- Stable value / purchasing power - Increase USD circulation that may potentially ease pressure on exchange rate - Currency is aligned with UN and LRC shelter response (validated by HC) - No exchange rate losses at encashment - USD preferred by beneficiaries - High purchasing power since shelter materials are mainly traded in USD - In line with Beirut Port Blast shelter working group recommendations	- Possible risk (especially for undocumented migrants or refugees) when exchanging USD at black market - Strengthens and legitimizes black market - Not everyday currency as food and basic goods are purchased in LBP - Risk of tensions with MoSA and LAF if USD overused for short-term programming - Possible risk of social tensions (between cash beneficiaries and beneficiaries receiving LBP, as well as non-beneficiaries) - Misalignment within organisations with LBP-based cash programmes - Possible USD liquidity constraints in country and limited access to USD (not all FSP are able to disburse USD)

LBP	
Advantages	**Disadvantages**
- Used currency for every-day expenses (food, rent, health, water, hygiene items, etc.) - Aligned with MoSA and LAF regulations - Aligned with ongoing cash assistance interventions - Aligned with sector cash assistance programming under the LCRP - Conflict-sensitive (when compared to using USD) - Support local currency (avoid use of black market) - Adheres to protection-related concerns (risk at the black market and social tensions)	- Loss of USD value when deposited into the bank (low preferential exchange rate compared to the black market rate) - LBP value / purchasing power is unstable - Risk of increasing inflationary pressure if influx of LBP - Misalignment with largest organizations using USD (WFP, LRC, UNHCR, UNICEF) - Possible risk of social tensions if very high transfer value (if established from USD) or if other beneficiaries receive assistance in USD - Fluctuating transfer value if value linked to USD black market exchange rate - Limits access to goods and services relevant for shelter rehabilitation

11.2 Transfer Mechanisms

Cash over Counter[27]	
Advantages	**Disadvantages**

- Wide coverage across the country
- Limited beneficiary training required
- Easy program extension
- No distribution of physical cards for uploads
  - Reduces costs for beneficiaries and humanitarian organisations
  - Reduces risk of COVID-19 transmission
- Potentially more cost-efficient for one-off cash transfers unless beneficiaries already have ATM card from other programmes (e.g. LOUISE)
	- Physical encashment and contact with FSP staff pose risk of fraud and protection issues
	- Encashment linked to office hours of FSP
	- People without ID might face access challenges due to KYC regulations (e.g. host community who lost ID, refugees, migrants)
	- Procurement for FSP might be time-consuming

Pre-Paid Cards / ATM Cards	
Advantages	**Disadvantages**

- Humanitarian organisations might already have standing service contracts and experience with FSPs (esp. LOUISE platform)
- Beneficiaries might already have ATM cards from other cash assistance programmes and distributed cards could be included in long-term cash assistance programmes
- Wide coverage across country[28]
- After distribution of card, no physical contact required for uploads
  - Reduces costs for beneficiaries and humanitarian organisations
  - Reduces risk of COVID-19 transmission
- No ID not required for encashment
- Encashment not linked to working hours and contact with FSP staff
- Remote loading of assistance reduces risk of COVID-19 transmission
	- Limits on daily withdrawals
	- Liquidity issues of ATMs
	- People without ID might face access challenges due to KYC regulations (e.g. host community who lost ID, refugees, migrants)
	- ATM disfunction/destruction (protests damaged banks and ATMs)
	- Security risks at the ATM
	- Physical distribution of card creates costs for humanitarian agencies and beneficiaries
	- Risk of COVID-19 transmission during distribution

[27]Cash over the counter means the assistance is provided without ATM cards or other physical vouchers through a commercial FSP such as Bob Finance (https://www.bob-finance.com/), MoneyGram (http://moneygram.com.lb/) etc., or traditional banks.
[28]Banque du Liban, Geographical Distribution of ATMs, https://www.bdl.gov.lb/statistics/table.php?name=t515-1 (Accessed: 30.09.2020)

E-Vouchers / Paper Voucher	
Advantages	**Disadvantages**
- Ideal for conditional cash assistance - Clear understanding of trader's capability - Ability to reimburse contracted service providers in USD - Could be linked with credit / larger upfront payments to increase liquidity of contracted service providers - Low setup-costs for paper voucher system - No formal ID required which might reduce access barriers for vulnerable groups such as refugees and migrants - E-voucher systems allow granular tracking of purchases and patterns - Remote loading of assistance reduces risk of COVID-19 transmission - Some level of control over quality of service delivery	- Some level of literacy, numeracy, and ICD4E awareness required - Procurement of vendors and service providers can be time-consuming providers is time consuming - Traders need to accept voucher system - Scale is limited by trading capacity - Forgery and misappropriation - High setup costs for e-voucher system (hardware, fees, training, etc.) - Training required for beneficiaries and vendors - Risk of discrimination of beneficiaries as they are bound to certain contracted service providers - Restricts beneficiaries' purchasing options to construction items

In-Kind / Services[29]	
Advantages	**Disadvantages**
- Ability to procure in bulk using USD - Lower risk of social tensions - Facilitate access to services for most vulnerable - Could be linked with credit / larger upfront payments to increase liquidity of contracted service providers - Direct control over quality	- Diverse and unaligned needs - Complex procurement process - Limited choice and flexibility for beneficiaries

11.3 Market-Based Recommendations

Market-Based Recommendations
- Suspension of duty fees on basic construction materials - Preferential exchange rate for LBP payments - Provision of credit to construction actors engaged in the reconstruction - Facilitate direct access to producers (cement) - Ensure that social and environmental standards are adhered to by the construction sector - Ensure that construction works adheres to occupational health and safety standards - Ensure that humanitarian actors mainstream gender and protection considerations in programming and external service provision

[29]Humanitarian assistance provided in the form of physical goods or commodities along with construction / installation services.

SECTION 12: MONITORING AND UPDATING THE ANALYSIS

Continued monitoring of critical market systems is essential to ensure that shelter interventions based on this report's findings and recommendations remain relevant and able to achieve their objectives. Market monitoring should be a light and continuous process that is integrated into the routine operations of leading shelter organisations. Updating the analysis is a more involved process that should occur only in response to certain specified triggers.

The table on the following page provides context-specific recommendations for the ongoing monitoring of the critical market systems assessed in this study.

<table>
<tr><th rowspan="2">Market Actor</th><th rowspan="2">Indicators</th><th rowspan="2">Source</th><th colspan="3">Sample</th></tr>
<tr><th>Glass & Aluminium Frames[30]</th><th>Cement[32]</th><th>MDF[33]</th></tr>
<tr><td>Producer</td><td>Volume of production</td><td>--</td><td>--</td><td>3[34]</td><td>--</td></tr>
<tr><td>Importer</td><td>Volume of imports in MT</td><td>Customs</td><td>2</td><td>0</td><td>2[35]</td></tr>
<tr><td>Wholesalers</td><td rowspan="3">- Availability
- Selling prices in LBP and USD
- Volume of sales (last 30 days)</td><td rowspan="3">Market survey</td><td>2</td><td>3</td><td>--</td></tr>
<tr><td>Contractor</td><td>3</td><td>--</td><td>--</td></tr>
<tr><td>Carpenter</td><td>--</td><td>--</td><td>3</td></tr>
<tr><td rowspan="2">Beneficiary</td><td rowspan="2">- Safe and dignified access to marketplaces
- Protection concerns related to construction work etc.
- Transportation costs to marketplaces
- Availability of glass & aluminium frames, cement, and MDF
- Lead times for delivery and construction work
- Selling prices in LBP and USD</td><td>Focus Group Discussions</td><td colspan="3">Separate FGDs should be organised according to gender, age groups, and displacement status</td></tr>
<tr><td>Post-Distribution Monitoring</td><td colspan="3">Representative sample</td></tr>
</table>

[30]Glass – 6 mm transparent / Aluminium Window Frames – Standard Silver
[31]Cement – White Cement (Portland) per MT and per Bag
[32]MDF – 8mm standard size
[33]Holcim Lebanon (Chekka); Cimenterie Nationale (Al Sabeh); Ciment de Sibline S.A.L (Sibline)
[34]Tripoli (Jabwood and Anklis Timber)

Coordination	In coordination with the relevant working group, different agencies using market-based approaches in the shelter response to the Beirut Port Blast should ensure the regular collection of market data.
Data Collection	The first visit should occur in person so that the data collector can obtain feedback on the survey and incorporate it. Subsequently, data could be collected remotely, either via a phone call or an online form. Mobile data collection is encouraged to streamline data entry and analysis.
Frequency of Data Collection	Once per month, for 3 months, starting in November, ideally at the same time of the month (e.g., the first Monday of every month). Given that shelter market systems seem to be less volatile than other market systems, once per quarter in 2021 could be sufficient.
Data Analysis	Data should be analysed to allow: - comparison of the average price of each commodity over time - comparison of the average volume sold per month of each commodity per type of market actor over time
Triggers	If any of the following trends in the data are noted, more thorough investigation is needed: - ≥30% change (+/-) in the average price of a given commodity between one monitoring period and the next (adjusted for seasonality); or 50% increase in prices as compared to baseline (adjusted for seasonality) - ≥30% change (+/-) in average monthly volume traded at a single point in market chain between two consecutive monitoring periods (adjusted for seasonality) - major disruption at key point in market system (e.g., issues that restrict access to key markets or block key transport routes) If any such trends are expected to persist, the relevant cluster(s) should be informed, the baseline market maps should be updated, and the relevance of the recommendations re-confirmed.

ANNEX 1: Participants List of Training

Name	Position/Role	Organisation
Tania Saab	AME Monitor	ACTED
David Wehbe	Enumerator	ACTED
Cynthia Attallah	Enumerator	ACTED
Adla Abi Nader	Enumerator	ACTED
Manuella Naoum	Enumerator	ACTED
Nadiya Ibrahim	Relief and Livelihoods Programme Officer	Caritas Switzerland
Frederic Wiesenbach	Cash and Programme Quality Advisor	Caritas Switzerland
Sonia Ben Salem	Cash and Programme Quality Officer	Caritas Switzerland
Jamil Nohra	Volunteer	Caritas Lebanon
Rawad Bendouk	Volunteer	Caritas Lebanon
Javier Gil Elias	Program Advisor Humanitarian Aid	Caritas Germany
Bilal Hussein	Procurement and Logistics Officer	Concern Worldwide
Miriam Fayad	Enumerator	Concern Worldwide
Wael Malla	Enumerator	Concern Worldwide
Mohamad El Haj	Enumerator	Concern Worldwide
May Al Chaarani	Enumerator	NRC
Hassan Kahil	Enumerator	NRC
Karma Haidar	Field Research Team Leader	CAMEALEON/NRC
Chiara Genovese	MEAL Specialist	CAMEALEON/NRC
Rana Shouman	Field Research Officer	CAMEALEON/NRC
Jürgen Mika	CVA and Markets Expert	Independent Consultant

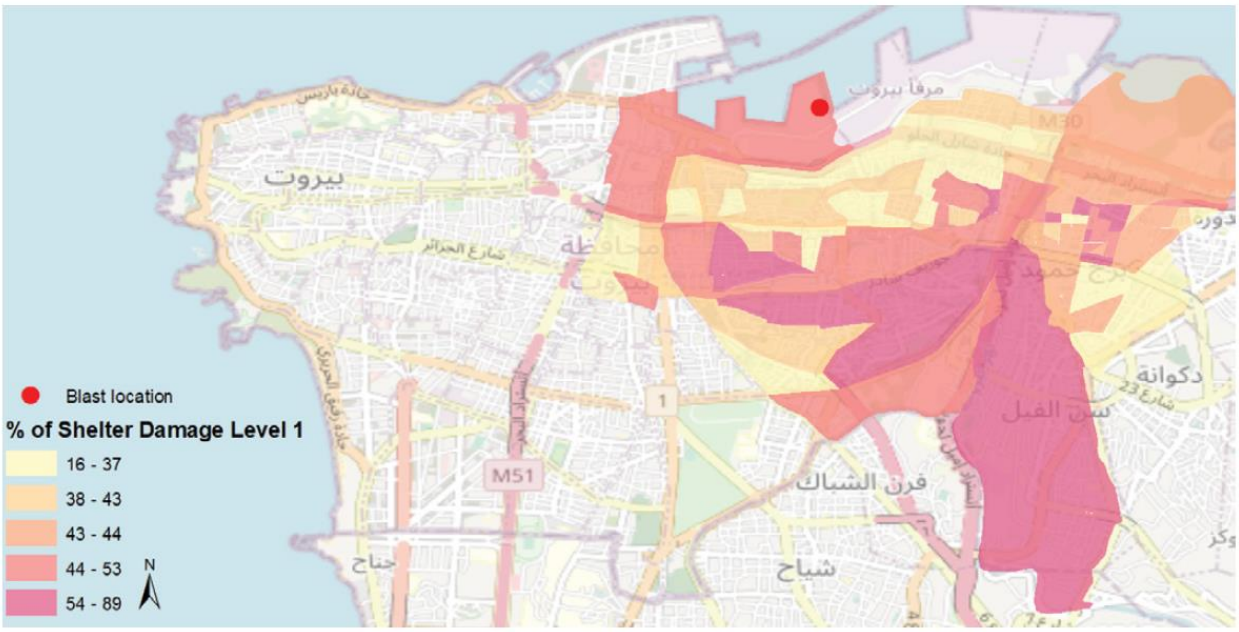
ANNEX 2: UNHCR BoQ for Immediate Cash for Minor Shelter Repairs[35]

Works Description	UNIT	QTY	Unit Rate (USD)	Subtotal in (USD)
Carpentry Works				
Repair wood doors (3) of any size and kind, work to include all required materials, lock, wood, glue, screws, hinges, nails, repair frame and architrave complete with painting with yalle lock or approved equal. The work includes providing all necessary accessories, manpower and equipment to complete the works.	lump sum	3	50	**150**
	Sub-Total / المجموع			**150.00**
Aluminum Works				
Provide and install (6 mm) smooth glass along with the silicon sealant for 2 aluminum windows (1.2m * 1.2 m). The work includes providing all necessary accessories, manpower and equipment to complete the works.	m²	2.88	45	**129.6**
Provide and install (6 mm) smooth glass along with the silicon sealant for 1 aluminum door (1.4 m * 2.2 m). The work includes providing all necessary accessories, manpower and equipment to complete the works.	m²	3.08	45	**138.6**
Repair of aluminum window, including readjustment of edges and frames, unfixing and re-fixing of glass panes and frames, repairing hinges, handles, locks and wheels. The work include providing all necessary accessories, manpower and equipment to complete the works.	no.	2	40	**80**
Repair of aluminum door, including readjustment of edges and frames, unfixing and re-fixing of glass panes and frames, replaing hinges, handles, locks and wheels.The work includes providing all necessary accessories, manpower and equipment to complete the works.	no.	1	40	**40**
	Sub-Total / المجموع			**388.20**
Steel Works				
Repair steel door of any kind and size, including readjustment of edges and frames by welding if needed, unfixing and re-fixing of glass panes and frames, replacing damaged steel sections, hinges or rails. Missing or broken glass panes to be replaced. including Tinol Anti-Rust Paint Total dry thickness 160 um. The work includes providing all necessary accessories, manpower and equipment to complete the works.	no.	1	60	**60**
	Sub-Total / المجموع			**60.00**
	Overall Total Cost			**$598.20**

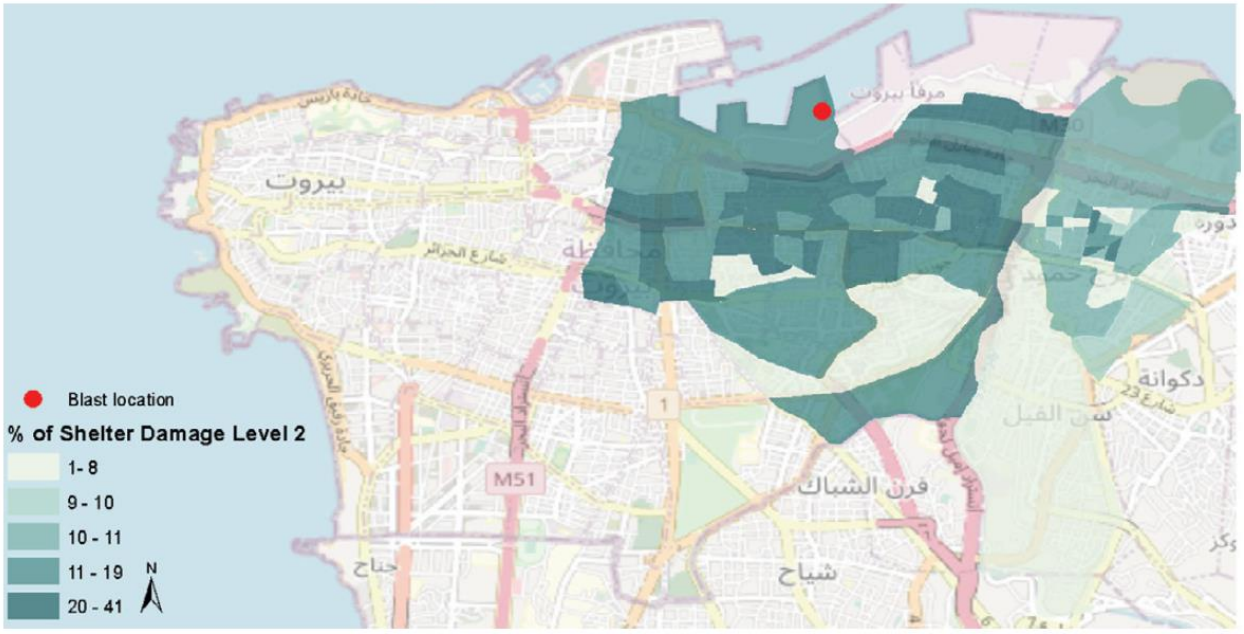
[35]See also Emergency Response to the Beirut Blast, Emergency Cash Taskforce - Mapping of Emergency Cash Assistance Programs, Annex IV - UNHCR BoQ for Immediate Cash for Minor Shelter Repairs, September 2020

ANNEX 3: Shelter Damages[36]

Level 1: minor damage to property (by zone)



Level 2: moderate damage to property (by zone)



[36]UNHCR, Flash Update on Lebanon: Beirut Port Explosions. 20 September 2020

Level 3: heavy damage to property (by zone)