Understanding the potential for territorial markets to promote healthy diets
Evidence from Lebanon
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1. Introduction

1.1 Leveraging territorial markets for reducing poverty and improving livelihoods

Despite progress made in the last few decades, over 2 billion people still live in poverty, with 736 million living in extreme poverty (World Bank, 2018). A large majority of poor people are smallholders and family farmers who depend on agriculture for their food and income (FAO, 2017b). Despite limited assets and capitalization, in Asia and sub-Saharan Africa, smallholders produce an estimated 80 percent of consumed food (IFAD, 2011) and the vast majority of food purchase transactions occur in domestic markets (Murphy, 2010). However, local and national markets in which smallholders mostly operate are systematically neglected in poverty reduction strategies and economic development plans. This is likely the result of an existing information gap resulting in an implicit assumption that poverty, especially rural poverty) is determined by questions of disconnection from markets. Virtually all smallholder farmers already produce and sell food on markets. Consequently, the issue is not market access in general, but rather access to inclusive and remunerative markets where smallholders can negotiate terms of access, sell at a fair price and where the value of output is not only determined by volumes, but also by other socio-cultural values and attributes that can foster more inclusivity (CFS, 2016).

Markets cannot be considered just as formal agribusiness value chains. To do so can lead to simplistic solutions such as ‘market integration’ as a one-size-fits-all approach to poverty reduction. Markets are ‘collective devices that allow compromises to be reached, not only on the nature of goods to produce and distribute but also on the value to be given to them’ (Callon and Muniesa, 2005). In other words, there are many different markets that work differently because different compromises can be achieved among market stakeholders. The power relations among stakeholders have an impact on the capacity to influence the negotiation. This determines the way the market works. Consequently, the different
types of markets and the terms of smallholders’ participation in markets have to be considered to understand the potential for markets to contribute to poverty reduction.

As recognized by the Committee on Food Security (CFS) and by the Food and Agriculture Organization of the United Nations (FAO), smallholder farmers are responsible for most of the food consumed in the world and receive most of the investments made in agriculture (CFS, 2016; FAO 2017a). Moreover, the vast majority of food transactions occur in domestic (local and national) markets (Murphy, 2010). Consequently, markets embedded within territorial food systems seem to be crucial not only to ensuring smallholder farmers’ access to markets, and to sustaining their livelihoods, but also for food security and nutrition in the territories in which they are embedded (FAO, 2015).

In October 2016, the CFS defined these ‘embedded markets’ as ‘territorial markets’ (CFS, 2016), and characterized them based on the following criteria:

► They are directly linked to local and/or national food systems (most products, producers, retailers and consumers are from the concerned territory).
► They are characterized by greater horizontal relations among their various stakeholders compared to other markets (i.e., non-hierarchical).
► They are inclusive and diverse in terms of stakeholders and products.
► They have multiple economic, social, cultural, and ecological functions in their respective territory, and they are not limited to food supply.
► They are the most remunerative for smallholder farmers who have greater bargaining power over prices.
► They contribute to structuring the territorial economy, creating wealth, and redistributing it within the territory.
► They are formal, informal, or a hybrid between the two.
► They can be located at different levels in particular territories (local, national or even cross-border).

Given their embedded nature in a particular territory, territorial markets have the potential to reduce distances (both geographical and socio-cultural) among supply chain actors, while shorter distribution channels can enable smallholders to acquire information more easily. This reduces information asymmetries and enables negotiation of improved participation terms to these markets. They also make them crucial to ensure food security and access to healthy diets for local consumers.

Nevertheless, not all markets embedded into a territory are inclusive to all and provide access to healthy and diversified food. Imbalances in power relations and access to productive resources can exist and these can hinder market inclusion and access, especially for the most vulnerable farmers. Consequently, mapping of territorial markets is important to identify those business and operational models that perform better, thus supporting the design of suitable policy and investment strategies that can make territorial markets more inclusive and nutrition-sensitive.

### 1.2 The role of territorial markets in shaping healthy diets

Globally, there has been a surge in dietary-related diseases such as obesity, diabetes, and heart disease. These are linked to an increasing consumption of processed, energy-dense food with low nutritional value and insufficient consumption of low-energy nutrient dense foods, such as fresh vegetables and fruits (as reported in a number of high-level publications; FAO, IFAD, UNICEF, WFP and WHO, 2019; WHO, 2016; EAT-Lancet commission, 2019). A growing number of studies show how individual dietary patterns are influenced by the three key dimensions of food availability, accessibility, and affordability (Meng...)

---

1. Sahelian territories in which livestock keeping is the main activity are an example of cross-border territories, in which economic and cultural connections between communities go beyond countries’ national borders.
et al. 2014; FAO, 2019b). As such, food retail outlets, including supermarkets, open-air wet markets (a type of territorial market) and hawkers play a significant role in influencing consumers’ diet-related health and nutrition, by the foods they sell and at what prices (Meng et al., 2014).

Since the 1980s, the progressive expansion of urban populations and the surge of an urban middle class with changing consumption patterns provided the necessary conditions for supermarket growth in developing countries (Abrahams, 2009; Del Pozo-Vergnes & Vorley, 2015; Hawkes et al., 2017, Reardon et al., 2014). Besides the increasing market share that has been obtained by supermarkets, open-air wet markets and hawkers are still fundamental for the food retail system. In Ghana for example, open-air markets continue to dominate the food retail system with 70 percent of households reporting to use them “once a week” or “more than once a week” (Meng et al., 2014). In Nairobi, Kenya, only 10 percent of urban households’ income is spent at supermarkets (Abrahams, 2009). Similarly, the Zambian Central Statistic Office (CSO) recognizes that open-air wet markets are the preferred retail outlets for urban residents (Abrahams, 2009).

In many developing countries, territorial markets (both formal and informal) and hawkers continue to be the main choice for urban consumers. A large percentage of these consumers continue to have low disposable incomes and their shopping patterns are tied to low-value-added goods, with minimal processing and packaging (Abrahams, 2009).

Table 1: The most frequented food retail outlets and their influence on healthy diets in developing countries

<table>
<thead>
<tr>
<th>Consumers</th>
<th>Benefits in terms of healthy diets</th>
<th>Costs in terms of healthy diets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermarkets</td>
<td>Preferred by high-income and well-educated households.</td>
<td>Exposure to several healthy food products including non-traditional that increase diet diversity.</td>
</tr>
<tr>
<td>Territorial markets</td>
<td>Preferred by non-college educated households and large households.</td>
<td>Mostly offer locally supplied foods including in-season vegetables and fruits, live poultry, and fish.</td>
</tr>
<tr>
<td>Hawkers</td>
<td>Preferred by low-income and less-educated large households especially those having small children.</td>
<td>Make foods widely available where the infrastructure is poor (including lack of storage facilities at home) and where consumers have variable income flows.</td>
</tr>
</tbody>
</table>

As shown in Table 1, different food retail outlets not only have different consumers but also have different benefits and costs in terms of healthy diets. Territorial markets remain essential food retail outlets where households can access most locally produced foods including in-season fresh vegetables and fruits.

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1 Table 1 summarizes the results of different studies conducted in several developing countries (Meng et al., 2014; IDS, 2015; del Pozo-Vergnes and Vorley, 2015).
1.3 The importance of territorial markets in Lebanon

In Lebanon, the importance of territorial markets as an essential food retail outlet was studied using a survey conducted in nine territorial markets, taking into consideration the effects of the multiple crises that hit the country.

Lebanon has been facing an unprecedented crisis in respect of political, economic, financial and health matters affecting all sectors of the economy since October 2019. This has driven a large proportion of the population into poverty and vulnerability to food insecurity. The deterioration of the economic situation along with the depreciation of the Lebanese pound, rising inflation and soaring of international prices have all contributed to undermining the food security situation in the country. Based on recent figures, it was estimated that about 46 percent of Lebanese households are food insecure (WFP, 2021), and 82 percent of the Lebanese population are living in multidimensional poverty (ESCWA, 2021). Food inflation on an annual basis was estimated at 143 percent in December 2022, while the overall consumer price index reached 122 percent (Central Administration of Statistics, 2022). Lebanon’s currency has lost more than 97 percent of its value compared to the start of the crisis.

On the supply side, the crisis has significantly impacted the availability of a variety of food products at market level. This includes territorial markets. The crisis has led to the disruption of the agrifood value and supply chains. On the demand side, it has led to a decrease in the purchasing power of consumers that deteriorated further following the removal of food subsidies in 2021. This affected access to, and utilization of, food mostly for the most vulnerable. This has resulted in a change in the food consumption patterns of Lebanese households, with more consumers shifting to cheaper food items, focusing on staple foods, and reducing their consumption of animal-based protein (fish, meat, poultry and eggs). This has had major consequences in respect of healthy, safe, and diverse nutrition.

In this context, the present study on mapping territorial markets aims to better understand the functioning of these markets via sound data and evidence generation, with an emphasis on market inclusivity and access to healthy and diversified diets, taking into consideration the impact of the economic and financial crisis on these markets.

More specifically, the study answers the following questions:

- What are the food product categories available at the level of territorial markets (types, diversity, and origin)?
- What kind of food groups are directly supplied by producers and to what extent are producers, including small producers, linked to territorial markets?
- What are the socio-economic characteristics of food retailers operating in these markets?
- What are the main challenges affecting the business environment in terms of access to financial services and markets infrastructure?
- What is the gender gap in relation to income, access to credit, and business services among men and women food retailers in territorial markets?
- What is the contribution of these markets to consumers’ daily food consumption and healthy food baskets (including consumers with children under 5 years of age)?
- How does consumers’ purchasing power affect food purchases and consumption diversity at the level of these markets?
- What are the most effective strategies for developing territorial markets so as to promote healthy diets, taking into consideration the impact of the financial and economic crisis on the availability and affordability of the various food groups?
The study findings will support the planning and implementation of targeted interventions aimed at improving the food security and nutrition situation at the level of the territories in alignment with the related national strategies. These are the Lebanon National Agriculture Strategy (2020-2025) and the National Nutrition Strategy and Action Plan (2021-2026).

The Lebanon National Agriculture Strategy (2020-2025), formulated by the Lebanese Ministry of Agriculture, aims at making the agrifood system a main contributor to the achievement of food security and a key driver of resilience and transformation of the Lebanese economy into a productive economy. It includes five strategic pillars, namely:

- **Pillar 1**: Restoring the livelihood and productive capacities of farmers and producers;
- **Pillar 2**: Increasing agricultural production and productivity;
- **Pillar 3**: Enhancing efficiency and competitiveness of agrifood value chains;
- **Pillar 4**: Improving climate change adaptation and sustainable management of agrifood systems and natural resources;
- **Pillar 5**: Strengthening the enabling institutional environment.

The National Nutrition Strategy and Action Plan (2021-2026), developed by the Lebanese Ministry of Health, aims to improve outcomes in maternal, infant, and young child nutrition. It includes reduction in the prevalence of micronutrients deficiency and stunted growth, and to reduce morbidity and mortality from non-communicable diseases by improving dietary and feeding habits, and improve food security and food safety. It focuses on five strategic areas, namely:

- **Strategic area 1**: Strengthened multisectoral nutrition governance, accountability, and information management;
- **Strategic area 2**: Aligned health systems providing universal coverage of essential nutrition services; Strategic Area 3: Sustainable resilient food systems for healthy diets;
- **Strategic area 4**: Safe and supportive environment for nutrition at all ages;
- **Strategic area 5**: Social protection for nutrition to ensure economic availability of safe food.

The results of territorial market mapping can inform the implementation of these national strategies and plans at local level. Given that data on the nutritional status and needs of the population, and the status of the overall agrifood system in the country are needed to align the food supply strategy with resilience of the agrifood system. They can also assist with understanding which food products consumers buy and why, as well what is available and accessible at local level. This is essential information that can provide recommendations on how to implement these national strategies at territorial level in the most effective way.
2. The data collection process

The study applies the methodology, Mapping of territorial markets - Methodology and guidelines for participatory data collection (FAO, 2021b). This consists of three questionnaires: a preliminary market analysis, a retailer-focused questionnaire, and a consumer-focused questionnaire. The data collection process commenced in September 2022 with a virtual training session addressing the use of data collection tools (questionnaires) to the staff of the Lebanese Ministry of Agriculture (MoA). This was delivered by the FAO team in charge of the project. After the training, the MoA undertook pilot surveying to refine the tools, check the flow of questions and identify potential challenges.

FAO and the MoA selected nine markets located in six different districts across five governorates (North, Bekaa, Baalbeck Hermel, South and Nabatiyeh) to conduct the mapping exercise (Figure 1). The selection of the nine markets in the designated territories (Table 2) was based on the following main criteria:

1. Diversity of food items available at market level;
2. Number of consumers that visit the markets due to easy access;
3. Competitive prices, location of the markets;
4. Markets that are open at least two days per week;
5. Number of food retailers at the level of the market; and
6. Comparability of markets among the various designated territories.

Figure 1: Locality of selected territorial markets

By conducting the preliminary market analysis, the following information was collected (see Table 2):

- Market identification: name; governorate; district; market frequency; typology of market and GPS coordinates;
- Retailer distribution within the markets: number of retailers based on sex (men or women), age and categories of food products sold.

**Table 2: Selected territorial markets**

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Market</th>
<th>Average number of retailers selling at the market</th>
<th>Number of retailers sampled (339)</th>
<th>Number of consumers sampled (337)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baalbeck-Hermel</td>
<td>Baalbeck-Commercial souk of the city</td>
<td>100</td>
<td>33</td>
<td>32</td>
</tr>
<tr>
<td>Baalbeck-Hermel</td>
<td>Baalbeck-fruit and vegetable wholesale and retail market</td>
<td>24</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Bekaa</td>
<td>Ferzol wholesale market</td>
<td>79</td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>Nabatiyeh</td>
<td>Nabatiyeh commercial souk</td>
<td>205</td>
<td>55</td>
<td>44</td>
</tr>
<tr>
<td>South</td>
<td>Saida old souk market</td>
<td>151</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>South</td>
<td>Sour commercial souk</td>
<td>133</td>
<td>38</td>
<td>45</td>
</tr>
<tr>
<td>North</td>
<td>Tripoli fruit and vegetable souk/souk el kameh</td>
<td>130</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>North</td>
<td>Tripoli Taalet el Rifahiyeh</td>
<td>240</td>
<td>65</td>
<td>52</td>
</tr>
<tr>
<td>Bekaa</td>
<td>Zahleh commercial market</td>
<td>37</td>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>

**Source:** Author’s own elaboration.

The preliminary market analysis revealed that 1,099 food retailers operate in the nine selected markets. These markets vary from old ‘souks’, to commercial markets, and wholesale and retail fruit and vegetables markets. Old ‘souks’ are old markets filled with small local shops that sell artisanal items, local crafts and various other merchandise including food items. Commercial markets are markets in the commercial districts of the main cities. They have a variety of shops selling all types of merchandise, such as clothing, electronics, and food items. They also include mini-markets, specialist grocers, butcher shops, pastry shops and fruit juices shops amongst others. All the commercial markets or souks surveyed are located in the main cities of the selected territories. Wholesale and retail fruit and vegetables markets are markets with mostly wholesalers selling various types of fresh fruit and vegetables (imported as well as locally produced) to shops, restaurants or directly to consumers.

Ferzol market was the only mainly wholesale fruit and vegetables market included in the survey. Since the start of the crisis, a growing number of consumers have been opting to purchase their fruit and vegetables from wholesale markets in large quantities due to
their competitive prices as compared to retail grocery shops. Furthermore, wholesalers have also started to sell fruit and vegetables in smaller quantities to consumers. Ferzol market meets the criteria for the mapping and was included in order to better understand this role of a primarily wholesale market selling to end-consumers.

Out of the total number of food retailers operating in the nine markets (1,099), a sample of 339 retailers has been retained for the mapping exercise. The sample has been designed in order to represent the overall retailers’ distribution in terms of their sex, their age and the category of products sold. While the sample of retailers has been designed in order to represent the overall distribution, the sample of consumers has been randomly selected, given it was not possible to pre-define the overall distribution of consumers against selected variables. However, the sample of consumers randomly selected has been kept big enough so as to capture the existing diversity among consumers as accurately as possible.
Understanding the potential for territorial markets to promote healthy diets – Evidence from Lebanon
3. Evidence from retailers’ survey

More than 40 variables were collected on a sample of 339 food retailers operating in nine different territorial markets. The next paragraphs show the main evidence and trends identified through the survey.

3.1 Availability, diversity, and origin of the products

The product category most frequently offered by food retailers is grains, white roots and tubers, followed by Other vegetables, vitamin A-rich fruits and vegetables, and other fruits. Processed foods and beverages, pulses, nuts and seeds, meat, dairy products, artisanal processed foods and beverages, eggs, poultry, and fish and seafood are the food categories least offered by retailers (Figure 2).

**Figure 2: Availability of products, total**

<table>
<thead>
<tr>
<th>Category</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrially processed foods and beverages</td>
<td>Yes</td>
</tr>
<tr>
<td>Artisanal processed foods and beverages</td>
<td>Yes</td>
</tr>
<tr>
<td>Other fruits</td>
<td>Yes</td>
</tr>
<tr>
<td>Other vegetables</td>
<td>Yes</td>
</tr>
<tr>
<td>Vitamin A-rich fruits and vegetables</td>
<td>Yes</td>
</tr>
<tr>
<td>Fish and seafood</td>
<td>Yes</td>
</tr>
<tr>
<td>Eggs</td>
<td>Yes</td>
</tr>
<tr>
<td>Poultry</td>
<td>Yes</td>
</tr>
<tr>
<td>Meat</td>
<td>Yes</td>
</tr>
<tr>
<td>Dairy products</td>
<td>Yes</td>
</tr>
<tr>
<td>Nuts and seeds</td>
<td>Yes</td>
</tr>
<tr>
<td>Pulses</td>
<td>Yes</td>
</tr>
<tr>
<td>Grains, white roots and tubers, and plantains</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Source: Author’s own elaboration of collected data.*
The food group grains, white roots and tubers has the highest volumes of sales across all nine markets, with an estimate of more than 15,000 tonnes sold per month. This was followed by other fruits, other vegetables, vitamin A-rich fruits and vegetables making up a total volume of monthly sales of 11,800 tonnes, 8,500 tonnes and 5,700 tonnes respectively. Conversely, artisanal processed foods and beverages, eggs, dairy products, and nuts and seeds are the food groups least sold at the level of the markets with 16 tonnes, 21 tonnes, 22 tonnes, and 31 tonnes sold respectively (Figure 3).

**Figure 3:** Estimate of the total volume of products sold in a typical month, all markets (tonnes/month)

![Bar chart showing volumes of various food groups](chart.png)

*Source: Author’s own elaboration.*

Figure 4 shows that more than half of the products offered by retailers under the food groups meat (85 percent), eggs (78 percent), poultry (65 percent), artisanal processed foods and beverages (55 percent), other vegetables (54 percent) and dairy products (54 percent) originate from the same district. The food groups that mostly originate from elsewhere in the same governorate in which the markets are located include vitamin-A rich fruits and vegetables, other fruits, artisanal processed foods and beverages, poultry, and other vegetables. Food groups that originate mostly from elsewhere in the country include other fruits, industrially processed foods and beverages, grains, white roots and tubers and plantains, and other vegetables. In addition, more than one third of the products offered under the food groups of fish and sea food, pulses, and nuts and seeds are imported (39, 37 and 35 percent respectively) followed by industrially processed foods and beverages and dairy products (26 and 24 percent, respectively). When comparing the estimated volumes of products sold per category with the availability of each category, it is to be noted that the most available food categories are those mostly sold in terms of volumes.

The Lebanese diet is a Mediterranean diet relying mostly on the consumption of fruit and vegetables, pulses, grains, and tubers (including potatoes). Recent food security assessments have shown that the economic and financial crisis has led to the erosion of the purchasing power among most of the low and middle-income Lebanese households. This has led to a reduction in the consumption of fish, meat, poultry, eggs and dairy products and an increase in the consumption of potatoes and vegetables.
Excluding the food group artisanal processed foods and beverages, more than 95 percent of the products offered by retailers for all other food groups across all nine markets are exclusively purchased from other producers or traders. Almost 30 percent of the products sold under artisanal processed foods and beverages are either exclusively or partly produced by the retailers themselves (Figure 5). Figure 6 shows that the percentage of retailers buying their products directly from farmers is low, reaching a maximum of only 13 percent for artisanal processed foods and beverages, followed by other fruits (10 percent), other vegetables (9 percent), vitamin A-rich fruits and vegetables (9 percent) and grains, white roots, and tubers (7 percent).

At the level of the selected commercial markets, most of the retailers are not producers, while in the selected wholesale and retail fruit and vegetable markets there are a considerable number of retailers that are also producers themselves. The primary way for farmers to sell fresh produce is to go through the wholesale market system (Saade et al., 2021). As such, the most preferred market outlets for producers of fruit and vegetable are wholesale markets. A limited number of medium to large-scale producers sell directly to retailers. Ferzol market is the main wholesale market for commercial trade in the Bekaa, while the Baalbeck wholesale and retail fruit and vegetable market is mainly a market servicing household consumption, and traders do not have strong links with other larger markets (Mercy Corps, 2014). Distributors buy from wholesale markets and importers, and then distribute to local retail markets and other retail outlets (CBI, 2018).

With regard to dairy products, poultry and eggs, there are a small number of large agro-processing industries that distribute to retail outlets. With respect to the mostly imported products (including nuts and seeds, pulses, meat, fish, and industrially processed products), local production is limited and most of the imported products are thus directly purchased by retailers either from traders or distributors.
Figure 5: Source of supply, by food category

Source: Author's own elaboration

Figure 6: Purchase of products directly from producers or traders

Source: Author's own elaboration
In Figure 7, with the exception of eggs, most of the products sold by the retailers are produced in a conventional manner, with a small percentage of organic products available in these markets. These are mainly pulses (6 percent), followed by artisanal processed foods and beverages (5 percent) and dairy products (5 percent).

This is in line with available data and studies conducted on the agricultural sector in Lebanon. For example, URGENCI (2016) stated that out of a total cultivated area of 280,000 hectares, only 9,443 hectares are organically cultivated (i.e. about 3 percent).

**Figure 7: Production methods, by food category production**

![Production methods, by food category production](source)

**Source:** Author’s own elaboration.

**Figure 8: Product margins by source of products for different food groups**

![Product margins by source of products for different food groups](source)

**Source:** Author’s own elaboration.
As per Figure 8, about 63 percent of retailers offering dairy have a product margin of less than 10 percent while 37 percent of the retailers have a product margin between 10 and 20 percent.

About 65 percent of retailers offering grains, white roots, and tubers have a product margin of less than 10 percent, while 35 percent of the retailers have a product margin between 10 and 20 percent.

About 34 percent of retailers offering meat have a product margin of less than 10 percent, while 52 percent of the retailers have a product margin between 10 and 20 percent, and 14 percent of the retailers have a product margin between 20 and 50 percent.

About 34 percent of retailers offering other vegetables have a product margin of less than 10 percent, while 57 percent of the retailers have a product margin between 10 and 20 percent, and 9 percent of the retailers have a product margin between 20 and 50 percent.

For dairy, meat and other vegetables, retailers have a higher product margin when products originate from farmers only or both farmers and traders. This is due to the fact that retailers are purchasing the products from farmers at competitive prices as compared to the products purchased from traders. As for grains, white roots, and tubers, retailers have a higher product margin when products originate from traders only. It has to be noted that under this food category, most of the food items (e.g., wheat, rice, pasta, amongst others) but with the exception of potatoes, are not produced locally by farmers but are mainly imported and sold by traders (rice or pasta). Consequently, the product margin may differ between items under the same food group.

### 3.1.1. Products sourced directly from small farmers

Figures 9 and 10 show that when retailers are purchasing their products from farmers only or from both farmers and traders, the percentage of small farmers reaches 70 percent for dairy products, followed by 51 percent for artisanal processed foods and beverages, 47 percent for other fruits and vitamin A-rich fruits and vegetables, 46 percent for other vegetables (40 percent for both farmers and traders and 60 percent when farmers only), 45 percent for grains, white roots and tubers (36 percent for both farmers and traders and 67 percent when farmers only) and 43 percent for meat (38 percent for both farmers and traders and 100 percent when farmers only). The percentage of small farmers is lowest for industrially processed foods and beverages with 19 percent, eggs (20 percent), poultry and fish and seafood (35 percent), and nuts and seeds (37 percent).

It has to be noted that the majority of farmers in Lebanon engaged in the fruit and vegetable sector are small farmers. Small producers are also engaged in the livestock sector, mainly in dairy cattle. Although backyard poultry is widely available, the majority of poultry farms are medium to large-sized farms. Following the economic crisis of 2019, some medium-sized poultry farms had to cease activities due to the high costs of inputs, mainly feed.
Figure 9: Share of products coming from small farmers only, by food group.

Source: Author’s own elaboration.

Figure 10: Products sourced from small farmers by type of purchase for different food group

Source: Author’s own elaboration.
3.2 Socio-economic characteristics of retailers

3.2.1. Income and sex

The first aspect to be considered in the socio-economic characterization of retailers is the disaggregation of retailers’ net take-home income by product and by retailer sex. Net take-home income is a measure of the profitability of retailers’ businesses and by disaggregating this variable by sex, existing gender gaps can be made visible.

**Figure 11:** Average net take-home income, by product (LBP)

<table>
<thead>
<tr>
<th>Product</th>
<th>Net Take-home Income (LBP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrially processed foods and beverages</td>
<td>22.5 million</td>
</tr>
<tr>
<td>Artisanal processed foods and beverages</td>
<td>21 million</td>
</tr>
<tr>
<td>Other fruits</td>
<td>20 million</td>
</tr>
<tr>
<td>Other vegetables</td>
<td>19 million</td>
</tr>
<tr>
<td>Vitamin A-rich fruits and vegetables</td>
<td>18 million</td>
</tr>
<tr>
<td>Fish and seafood</td>
<td>17 million</td>
</tr>
<tr>
<td>Eggs</td>
<td>16 million</td>
</tr>
<tr>
<td>Poultry</td>
<td>15 million</td>
</tr>
<tr>
<td>Meat</td>
<td>14 million</td>
</tr>
<tr>
<td>Dairy products</td>
<td>13 million</td>
</tr>
<tr>
<td>Nuts and seeds</td>
<td>12 million</td>
</tr>
<tr>
<td>Pulses</td>
<td>11 million</td>
</tr>
<tr>
<td>Grains, white roots and tubers, and plantains</td>
<td>10 million</td>
</tr>
</tbody>
</table>

The monthly average net take home income is the highest for retailers selling animal products (ranging from LBP 20 to 27 million) including fish and seafood, poultry, meat, dairy products and eggs, followed by pulses, nuts and seeds, artisanal processed foods and beverages and industrially processed foods and beverages (between LBP 20.5 to 22.5 million). Food products including grains, white roots, and tubers, vitamin A-rich fruit and vegetables, other fruit and other vegetables provide the lowest net-take home income, ranging between LBP 14.7 to 17.7 million (Figure 11).

Figures 12 and 13 show that men retailers represent about 86 percent of the total number of retailers at the level of the surveyed markets, with only 14 percent being women retailers. The preliminary analysis survey confirmed that women are less present in the food retail business in the selected territorial markets, due to socio-economic, legal, and cultural barriers hindering their full participation. It is to be noted that there are no women retailers operating in the markets of Tripoli Taalef Rifaiyeh, Ferzol, and Baalbeck.

Figure 13 shows large disparities in terms of net take-home income between men and women, the
difference reaching more than 40 percent (LBP 12 million for women and LBP 17 million for men). There are variations at the level of the different markets with the highest income disparities in Zahleh commercial market (163 percent) followed by Nabatiyeh commercial souk (121 percent), then Baalbeck commercial souk (62 percent). The income disparities are lowest in Sour commercial market (17 percent) and Saida old souk market (16 percent) (Figure 14). Equal net take-home income between men and women retailers was recorded in Tripoli fruits and vegetables souk/souk el kameh. The food groups most offered by women include dairy products, eggs and artisanal processed foods and beverages, while those least offered by women retailers include fish and seafood and meat (Figure 15). These are among the products with the highest net take-home income. Figure 16 shows that volumes of products sold by women retailers in a typical month are far lower than those sold by men retailers, with the exception of artisanal processed foods and beverages (with a 93 percent greater volume sold by women). As for dairy products, women retailers sold 15 percent less by volume than men retailers, and in poultry, 42 percent less. Women retailers are almost absent in wholesale and retail fruit and vegetable markets (Ferzol, Baalbeck and Tripoli Taalet Rifaiyeh) and thus the volumes of fruit, vegetables, vitamin A-rich fruit and vegetables sold by women are by far lower than those sold by men.

There are large income disparities between men and women across various sectors. The disparity in terms of average net income can be explained by the fact that women retailers sell food products that generate a lower income and tend to sell lower volumes of these products compared to their male counterparts. Based on a recent FAO gender assessment of the agriculture and rural sector in Lebanon, women still face significant barriers to their full participation in the selected markets. Examples include: limited access to finance; formal financial services and credit facilities; limited access to marketing services; socio-cultural and legal barriers (FAO, 2021c). Women retailers mostly own small businesses. Since rural women are also mostly engaged in small dairy and agro-processing activities, more women retailers offer dairy products and artisanal processed foods and beverages at the level of the markets.

**Figure 12:** Distribution of women and men retailers

![Diagram showing distribution of women and men retailers](source)

**Source:** Author’s own elaboration.
Figure 13: Average net take-home income, by sex

Source: Author’s own elaboration.

Figure 14: Average net take-home income, by sex and by market

Source: Author’s own elaboration.
Figure 15: Products offered, by sex

Source: Author’s own elaboration.

Figure 16: Volumes of products sold in a typical month (kg), by sex

Source: Author’s own elaboration.
3.2.2. Poverty

In order to fully understand the socio-economic status of retailers operating in the selected territorial markets, their household income has been analysed. The reported monthly household income has been divided by the number of household members, thus providing a measure of the monthly income per capita.

Across all surveyed markets, a majority of retailers have an average monthly income per capita of less than LBP 5 million, with only a limited number having a higher income (Figure 17). There are large variations in the value of retailers’ income for the different markets, with the greatest difference (255 percent) between the highest average monthly income per capita in Ferzol Market and the lowest in Tripoli Talet el Rifahiye market. The highest per capita income recorded was at Ferzol (LBP 5.6 million) being one of the main wholesale fruit and vegetable markets in the Bekaa area selling large volumes, followed by Nabatiyeh commercial souk (LBP 5.4 million), Zahle commercial market (LBP 4.7 million) and Baalbek commercial souk (LBP 4.2 million) which are considered as important central markets serving the main cities where they are located. They also serve their neighbouring villages. Retailers with lower per capita income were recorded in Saida old market (LBP 2.9 million), Sour commercial market (LBP 2.7 million) and Tripoli fruit and vegetable souk/soul el kameh (LBP 2.5 million), followed by Baalbeck fruit and vegetable wholesale and retail market (LBP 1.9 million), and Tripoli talet el Rifahiye (LBP 1.6 million) (Figure 18).

Figure 17: Distribution of income per capita (LPB)

Source: Author’s own elaboration.
Considering the national poverty line of LBP 3.3 million monthly per capita income (based on the World Bank international poverty line for low-middle income countries - 3.65 USD per day and calculated based on an exchange rate of 30 300 LBP per one USD dollar - Sayrafa rate of the Central Bank of Lebanon as of December, 2022), about 64 percent of the retailers operating in the surveyed markets have a monthly income per capita that falls below this poverty line (Figure 19). The share of women retailers that fall under the poverty line is lower than that of men retailers (57 percent for women and 65.5 percent for men) (Figure 20). This may be due to the fact that women retailers surveyed contribute a portion to their household income and are not the sole breadwinner. The net take-home income generated by women, despite being lower than men, is added to that generated by other members of the household resulting in a slightly higher household income as compared to those households where women are not engaged in any economic activity.

Based on the Economic and Social Commission for Western Asia (ESCWA) policy brief on poverty in Lebanon (2021), poverty in Lebanon has drastically increased and now affects 74 percent of the total population. Considering factors other than income such as access to health, education and public utilities, increases the rate to 82 percent of the population actually living in multidimensional poverty.

Note: exchange rate 30 300 LBP/$ - poverty line 3.65$ per day (international poverty line for low-middle income countries by World Bank)
**Figure 19:** Share of retailers living above and below the poverty line (3 317 850 LBP)

![Pie chart showing the share of retailers living above and below the poverty line.](image)

*Source:* Author’s own elaboration.

**Figure 20:** Share of retailers living above and below the poverty line, by sex

![Bar chart showing the share of retailers living above and below the poverty line by sex.](image)

*Source:* Author’s own elaboration.
3.2.3. Business environment

The second set of variables to be considered to characterize the socio-economic status of retailers’ concerns access to credit services and to infrastructure. These variables can provide insight about the business environment in which food retailers operate, and can help in identifying entry points to scale-up retailers’ businesses.

Only 6 percent of retailers operating across all markets have a credit or loan (Figure 21). Among those utilising credit or loans, over 38 percent have informal credit, 28 percent use credit granted from a non-bank financial institution, 24 percent from a private commercial bank, 5 percent from a government agency and 5 percent from a cooperative or business association (Figure 22). The remaining 94 percent of the retailers do not have access to credits or loans, with half declaring lack of opportunity and capacity to request credit as the major reason for not having an existing line of credit.

42 percent of respondents stated they do not need credits, 4 percent have access to informal credit and 4 percent have access to formal credit. (Figure 23).

Due to the financial and economic crisis, access to finance through private commercial banks has been extremely limited across all sectors. The microfinance sector has also been affected by the crisis. However, clients have also been reluctant in applying for credit (especially loans in foreign currencies) because of the high risk of non-settlement of the loans, high business uncertainties, fluctuations of the exchange rate and further devaluation of the LBP.

Figure 21: The ownership of credit or loan, total

Source: Author’s own elaboration.
**Figure 22:** Main institutions granting the loan

- Private commercial bank: 38%
- State-owned bank or government agency: 24%
- Non-bank financial institution: 28%
- Cooperative/business association: 5%
- Other informal: 5%

*Source: Author’s own elaboration.*

**Figure 23:** Reasons for not having an existing line of credit or a loan

- No, because of a lack of opportunities or capacities: 50%
- No, I don't need credit: 42%
- Yes, I have access to formal credit: 4%
- Yes, I have access to informal credit: 4%

*Source: Author’s own elaboration.*
The main problems affecting the retailers’ businesses include: the low prices of products sold (78 percent of retailers); the absence of cold chain (67 percent); limited demand for the products offered (61 percent); and poor storage infrastructure (55 percent). Additional problems include high food losses (30 percent) and poor quality of raw materials (28 percent) (Figure 24).

Figure 24: Main problems affecting the business

As Figure 25 demonstrates, retailers reported having access to water (91 percent), electricity (87 percent), toilets (60 percent) and retailers’ booths (51 percent), while retailers declared having poor access to warehouses (21 percent). Almost all the markets surveyed have no access to cold warehouses or access to facilities for the collection or transformation of organic waste.

Results show that market infrastructure, business services and credit services should be further developed. Emphasis should be on cold chain (largely affected by power outages and high fuel costs), storage infrastructure and cold warehouses, safe disposal of animal wastes and facilities for the collection or transformation of organic waste at market-level.
3.3 Synthetic Indicators

As seen in the previous section, socio-economic characteristics of retailers vary significantly depending on their sex or the products they sell. However, significant differences also exist among markets, with some of these ensuring a higher net take-home income to both women and men. Consequently, the overall markets’ performance has been evaluated according to four synthetic indicators. Synthetic indicators are composite measures that combine (synthesise) mathematical information into one single measure, allowing comparisons and evaluation of multidimensional phenomena. Through the analysis of synthetic indicators, it is possible to identify those markets that perform better enabling an exchange of experiences between retailers and policymakers responsible for the market functioning.

3.3.1 Economic gender gap indicator

The economic gender gap indicator refers to the gap of men and women in financial benefits and opportunities from their operation in the market. It is calculated considering the gender income gap (calculated as the ratio between women’s and men’s net take-home income) and the gap between men and women retailers who do not have access to financial (credit) services. The synthetic indicator is expressed by a value between 0 and +1, where a value equal to 1 means equal financial benefits and opportunities between men and women, whereas a value close to zero means that women benefit less. A value higher than 1 means that men benefit less in terms of income and access to financial services.

Consequently, considering the gender income gap and access to credit, the economic gender gap indicator is highest in Sour commercial market (with a value higher than 1) and Saida old souk market (with a value of 0.8) where a difference of 17 percent was recorded in the net take-home income between men and women retailers in these markets (Figure 26). Despite men’s net take-home income being more
than 62.5 percent higher than women retailers in Baalbeck commercial souk, the economic gender gap indicator higher than 0.9 was recorded. In the case of Baalbeck commercial souk and Sour commercial market, the value of the indicator is high because, as can be seen from Figure 27, although the income gap in these markets favours men, the men retailers in this market have also less access to formal financial services than women. However, it has to be noted that sampling error plays a role in these results, because only eight women were surveyed at Sour commercial souk, as that was the representative sample of women at that market, while the representative sample for men retailers was 27. As the representative sample of women at Sour market was exceedingly small, this also means that the answers have a much higher chance of not accurately representing the true overall differences between women and men retailers.

The lowest economic gender gap indicator was observed at Nabatiyeh commercial souk. The markets of Ferzol, Baalbeck wholesale and retail fruit and vegetable, and Tripoli Taalet Rifayeh were not included under Figure 26 as there are no women retailers in these markets.

While net take home income is greater for men compared to women retailers in all the markets surveyed, the economic gender gap indicator (Figure 28) showed that in Sour commercial market, women have a slightly higher advantage than men with the highest score of the indicator in the market (1.056). These advantages may be due to opportunities of women retailers to access formal credits or loans by microfinance institutions and/or development partners with loan products specifically targeting women for better integration in the different sectors of the economy.

Figure 26: Average net take-home income in markets, by sex

Source: Author’s own elaboration.
**Figure 27:** Lack of access to formal financial services in markets, by sex

![Graph showing lack of access to formal financial services by sex in various markets.](image)

*Source: Author’s own elaboration.*

**Figure 28:** Economic gender gap indicator, by market

![Bar chart showing economic gender gap indicator across different markets.](image)

*Source: Author’s own elaboration.*
3.3.2 Food diversity indicator

The food diversity indicator (see Figure 29) has been calculated taking into consideration the number of varieties of each product category offered at each of the surveyed markets. The indicator is expressed using a value between 0 and 1, where 0 shows the lowest food diversity (i.e., none of the food products is offered at the market), and 1 shows the maximum food diversity (i.e., four or more varieties for each product category is available at the market).

The highest food diversity indicator was recorded at the level of all commercial markets including Baalbeck commercial souk, followed by Saida old souk, Nabatiyeh and Sour commercial markets, then Tripoli Taalet el Rifahiyeh, Zahleh commercial market and Tripoli fruit and vegetable/souk el kameh. This indicator is lowest for the Ferzol fruit and vegetable wholesale market and Baalbeck fruit and vegetable wholesale and retail market where mostly fresh fruit and vegetables are available and sold.

Figure 29: Food diversity indicator

Source: Author’s own elaboration.

3.3.3 Business environment indicator

The business environment indicator considers the existing infrastructure in the markets and the level of access for retailers to formal financial services. The indicator ranges from 0 to 1, where 0 means that the business environment is not favourable to food retailers, and 1 means that the environment is advantageous for retailers.

The business environment indicator of all the surveyed markets was less than 0.5, mostly due to the lack of access for retailers in all markets to formal financial services. Ferzol market scored highest (0.427), followed by Nabatiyeh commercial souk (0.41). The lowest score was recorded at the level of Tripoli fruit and vegetable souk/souk El kameh (0.088) which has poor market infrastructure facilities as well as no access to formal credit (Figure 30).
3.3.4 Producer-consumer link indicator

The producer-consumer link indicator takes into account the proportion of retailers who are also producers themselves and the share of retailers who purchase directly from farmers those products that they themselves do not produce. It ranges from 0 to 1, where 1 means that the supply chain is short, and farmers are directly linked to market without intermediaries.

The producer-consumer link indicator is low at the level of all the markets surveyed. Ferzol market has a relatively high score (0.45) since it is one of the main fruit and vegetable wholesale markets in the Bekaa region where the farmers supply their products without intermediaries. In all other markets surveyed, retailers mostly purchase their products from intermediaries (traders/intermediaries) and less from farmers. At the same time, an exceedingly small number of retailers in the surveyed markets are producers themselves (Figure 31).

Source: Author’s own elaboration.
4. Evidence from the consumer survey

Through the consumer survey, it has been possible to collect 18 separate variables related to a sample of 337 consumers making their food purchase in nine different territorial markets. The next paragraphs outline the main evidence and trends identified.

4.1 Consumer profiles

In order to understand who are the consumers that are making their food purchases in the nine selected markets, their socio-demographic and socio-economic characteristics have been analysed in this section.

Out of the 337 consumers randomly selected, half of them (48 percent) live in urban areas, 39 percent in peri-urban areas and 13 percent in rural areas (Figure 32). Considering the markets' locations, the average distance from the consumers' living areas to market varies between three and nine kilometres, showing that these markets cover a large food supply area. Saida old souk market is visited by consumers who have to travel 8.6 kilometres to reach the market, while Zahleh commercial souk and Baalbeck commercial souk are visited by consumers travelling less than 4 kilometres (Figure 33).
The majority of the consumers interviewed have an average income per capita of less than LBP 4 million, with only a few consumers having income per capita higher than LBP 6 million (Figure 34).

Considering the national poverty line of LBP 3.3 million per capita monthly income based on the World Bank international poverty line for low-middle income countries (3.65 USD per day per person) and calculated on the basis of an exchange rate of 30 300 LBP per one USD dollar (Sayrafa rate of the Central Bank of Lebanon as at December 2022), about 75 percent of the consumers interviewed have a monthly income per capita that falls below the poverty line and only 25 percent have a monthly income per capita above the poverty line (Figure 35).
**Figure 34**: Average income per capita (LBP)

Source: Author’s own elaboration.

**Figure 35**: Quota of consumers living below and above the national poverty line (3 317 850 LBP)

Source: Author’s own elaboration.
4.2 Consumers’ purchasing preferences

Consumers interviewed purchase most of the food consumed during a week from several food outlets, with the highest percentage (39 percent) purchasing from specialized grocers (i.e., fruit and vegetable specialists or butchers...), followed by fresh market (26 percent), hypermarkets/supermarkets (19 percent), and convenience store/minimarket (12 percent). The smallest share of consumers purchase from street food vendors (1 percent), or produce food within their household (2 percent) or purchase from farmers nearby the house (1 percent) (Figure 36).

About 74 percent of consumers interviewed are concerned about the food safety of the products when purchased from street food vendors and 80 percent of them are more confident that the food is safe when these products are purchased from supermarkets. 72 percent consider the same factors when it comes to fresh markets (Figure 37).

In the context of Lebanon, traditional formats like grocery stores and minimarkets are observed to co-exist with modern retail formats. Lebanese consumers continued to rely on traditional food retail shops as sources of affordable and acceptable quality food. Local horticultural producers generally supply their produce to fruit and vegetable wholesalers. These are the primary supply source for supermarkets, other retailers, and some restaurants (Mukahhal et al., 2022).

Figure 36: Preferred food outlet to purchase most of the food consumed during a week

Source: Author’s own elaboration.
Figure 37: Perception of food safety in different outlets (1 = very concerned about food safety; 5 = not at all concerned about food safety)

The convenience of the working/opening hours of the mapped markets and the wide assortment of food offered are the main reasons that consumers interviewed gave for buying from these markets. This was followed by the wide assortment of healthy food, safety of food offered for consumption, and market location on the way from home (Figure 38).

Figure 38: Ranking from 1 to 10 (1 = strongly disagree and 10 = strongly agree) of reasons for buying in the mapped markets

Source: Author’s own elaboration.
4.3 Frequency of consumers’ purchase to markets

The importance of territorial markets as central food supply points can be perceived by the regularity with which consumers attend them. About 66 percent of the interviewed consumers visit the markets covered by the study at least once a week (9 percent every day, 28 percent more than once a week, 29 percent once per week). About 30 percent of the consumers visit the markets monthly (22 percent several days per month, 8 percent once per month) and the remaining 4 percent visit the market once every few months (Figure 39).

Consumers with lower average monthly income (less than LBP 2.3 million) tend to visit the markets less than once per week compared to consumers with higher average monthly income (above LBP 2.6 million) who tend to visit the market less frequently (Figure 40). Consumers with higher income can afford to buy more products and larger volumes to be consumed during the month while lower income consumers purchase the products based on their daily needs. In addition, since the surveyed markets are located in the major cities of the selected territories, there is a number of consumers who do not live close to the market areas but visit the markets once per month or once every few months to purchase specific food items which might not be available at the level of their villages and sold at competitive prices. These might considered as occasional consumers using other markets as main food supply points.

Figure 39: Frequency of consumers’ purchase to markets

Source: Author’s own elaboration.
As per Figure 41, fruit, vegetables, and grains (including bread, potatoes, rice, and pasta amongst others) are the products most frequently purchased by interviewed consumers. Pulses, followed by dairy products, meat, poultry, and eggs are purchased in much lower quantities. Artisanal processed foods and beverages, fish and seafood, industrially processed foods and beverages, nuts, and seeds, are the food groups that most of the consumers declared they did not purchase from the markets surveyed. The reasons given were that such produce might not be available at the level of the market, or that their prices were too high, or that consumers prefer to buy them from convenience or specialized grocery stores or other markets.

Consumers tend to purchase the most consumed food groups, namely grains and tubers (bread or potatoes), and fruit and vegetables more frequently. These constitute an important part of the Lebanese diet. Another reason for the more frequent purchases of these products is their perishability and the desire to avoid any food waste. Conversely, food items that could be stored and/or produced at household level are less frequently purchased from the markets. These include artisanal processed foods and beverages such as mouneh product, industrially processed foods and beverages; pulses; and some types of dairy products (such as labneh or kescheck).
Figure 41: Frequency of consumers’ purchases from markets, by product category

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Every time I come to the market</th>
<th>Most of the time when I come to the market</th>
<th>Sometimes when I come to the market</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrially processed foods and beverages</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>Grains, white roots and tubers, and plantains</td>
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Source: Author’s own elaboration.

Figure 42 shows the average distance travelled to markets by frequency of consumer purchase. The frequency of visits to the markets is higher for consumers living closer to them from every day visits by consumers living within 3.5 km, to only once monthly or once every few months for consumers living more than 10.5 km from them. Figure 43 shows the average monthly volume of products by food group purchased by the consumers. The main products purchased at the level of these markets are grains, roots and tubers (42.1 kg/month) followed by other vegetables, other fruit and Vitamin A-rich fruit and vegetables (26.1 kg/month, 24.7 kg/month and 17.5 kg/month respectively). Dairy products, poultry and pulses are purchased in much lower quantities (7.4 kg/month, 6.6 kg/month and 6.3 kg/month respectively).

Lebanese dietary habits have been severely impacted by the economic and financial crisis. Consumers tend to consume less fish, meat and poultry, and dairy products, and have increased their consumption of grains and tubers (mainly potatoes), pulses and vegetables.
4.4 Consumers consumption diversity

Dietary diversity is one essential dimension of diet quality, especially associated with the micronutrient adequacy of diets (FAO, 2021a). To assess the consumption diversity of survey participants, they were asked to recall whether they had consumed items belonging to 13 separate food groups during the previous 24 hours (see Figure 44). These food groups are the same in the Household Dietary Diversity Score (HDDS), an indicator meant to reflect, in a snapshot form, the economic ability of a household to access a variety of foods (FAO, 2010; FAO, 2021a).
The most important foods consumed during the previous 24 hours (see Figure 44) belong to the food groups of other vegetables (94 percent), followed by dairy products (88 percent), grains, white roots, and tubers (85 percent) and ‘Other fruits’ (78 percent). Less than 50 percent of interviewed consumers had consumed eggs, pulses, meat (47 percent, 42 percent, and 41 percent respectively). About 33 percent of interviewed consumers had consumed artisanal processed foods and beverages, industrially processed foods and beverages and poultry during the previous 24 hours (38 percent, 37 percent, and 34 percent respectively). fish and seafood and nuts and seeds were the least consumed groups, (4 percent and 12 percent respectively).

**Figure 44: Food consumption (last 24 hours)**

![Food consumption chart](image)

Based on the products consumed from each food group by each respondent, an indicative score for household dietary diversity was calculated (Figure 45). The score has a value ranging from 0 (no food category consumed in the last 24 hours) and 13 (all food groups consumed in the last 24 hours).

Items from 7 food groups were consumed by 27 percent of the surveyed households, while items from 6 food groups were consumed by 25 percent. Items of 5 food groups and 8 food groups were consumed by 15 percent of the households for each within the previous 24 hours. This indicative score is higher for consumers with higher incomes, and shows that their diet is more diversified than those of consumers with lower incomes. About 40 percent of the surveyed consumers who are within the low-income bracket (LBP 2-2.5 million per month) consumed between five and six products within the previous 24 hours (Figure 46).

The household dietary diversity score is high for most types of market, with consumers purchasing their products from hypermarket/supermarket (6.9) followed by farmers nearby the house (6.8) and then specialized grocery stores (6.7). The lowest score is recorded at the level of the street food vendor market with a score of 4.7 (Figure 47).
**Figure 45:** Distribution of the indicative score for dietary diversity

![Distribution of the indicative score for dietary diversity](image)

*Source:* Author’s own elaboration.

**Figure 46:** Indicative score for dietary diversity, by individual income (LBP)

![Indicative score for dietary diversity, by individual income (LBP)](image)

*Source:* Author’s own elaboration.
4.5 Purchasing patterns for consumers with children under five years

Examining market segmentation in greater depth to obtain a better understanding of the potential for local markets to promote healthy and diversified diets and nutrition, especially for more vulnerable sections of the population, a number of variables have been collected for consumers with children aged under five.

The main products purchased by consumers with children under 5 every time they visited the market include other vegetables, ‘Other fruits’, grains, white roots, and tubers and vitamin A-rich fruit and vegetables (65 percent, 54 percent, 39 percent and 33 percent respectively). Products not purchased by this consumer category include nuts and seeds, industrially processed foods and beverages, artisanal processed foods and beverages, dairy products and fish and seafood (Figure 48). The purchasing patterns appear to be comparable between consumers with children under 5 years of age and other consumers.

For those consumers reporting that they rarely or never buy a given product category for their children under 5 years, the reason most often cited was the expense involved. The products most affected by the increase in prices include high-protein foods (vegetable and animal) such as poultry, meat, pulses, as well as fruit and vegetables including Vitamin A-rich fruit and vegetables, grains, and tubers (Figure 49).
Figure 48: Frequency of products purchased for consumers with children under 5 years

Source: Author’s own elaboration.

Figure 49: Reasons for not buying food products for children under 5 years more frequently

Source: Author’s own elaboration.
Figure 50: Change of purchasing power over the course of previous year

Source: Author’s own elaboration.

Purchasing power

As Figure 50 demonstrates, about 85 percent of the consumers interviewed declared a decrease in their purchasing power over the previous year. Figure 51 shows that the proportion of consumers who declared a decrease have a lower income (average LBP 2.5 million) compared to those not experiencing any change in their purchasing power (average income between LBP 3-3.5 million). Figure 52 shows that the food products most affected by the decrease in consumers’ purchasing power included: nuts and seeds; fish and seafood; meat; poultry; industrially processed foods and beverages and artisanal processed foods and beverages. Animal protein foods are among the food products witnessing the highest decrease, as these have increased in price due to the high production costs for locally produced food items (poultry and eggs) or due to the increase in the cost of imported products as a consequence of the devaluation of the LBP (meat and fish).

Figure 51: Average individual income according to the change in purchasing power over the course of previous year (LBP)

Source: Author’s own elaboration.
Figure 52: Decrease in food purchase for each category due to change in purchasing power

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Industrially processed foods and beverages</td>
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<tr>
<td>Artisanal processed foods and beverages</td>
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<td>Other fruits</td>
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<tr>
<td>Other vegetables</td>
<td>30%</td>
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<tr>
<td>Vitamin A-rich fruits and vegetables</td>
<td>20%</td>
</tr>
<tr>
<td>Fish and seafood</td>
<td>10%</td>
</tr>
<tr>
<td>Eggs</td>
<td>5%</td>
</tr>
<tr>
<td>Poultry</td>
<td>3%</td>
</tr>
<tr>
<td>Meat</td>
<td>2%</td>
</tr>
<tr>
<td>Dairy products</td>
<td>1%</td>
</tr>
<tr>
<td>Nuts and seeds</td>
<td>1%</td>
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<tr>
<td>Artisanal processed foods and beverages</td>
<td>1%</td>
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<tr>
<td>Grains, white roots and tubers, and plantains</td>
<td>1%</td>
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</tbody>
</table>

Source: Author’s own elaboration.

4.7 Markets contribution to daily food consumption

Figure 53 presents the minimum contribution of territorial markets to daily food consumption for each product category. This indicator estimates how much of the food consumed by the interviewed consumers comes from the markets. It is calculated as the average share (expressed as a percentage) of consumers reporting that they consumed food products the day before, reporting that they buy the food products every time or most of the time they visit the market, and reporting that they visit the market every day or many days per week, over the total number of consumers consuming the product. The values obtained express the minimum contribution of the market to daily food consumption.

The contribution exceeds 20 percent for the following food categories: 36 percent for ‘other fruit and other vegetables, 27 percent for grains and tubers and 26 percent for vitamin A-rich fruit and vegetables, fish and seafood, nuts and seeds, artisanal processed foods and beverages, and poultry are the categories for which the market contribution to consumers’ daily consumption is very small to negligible (Figure 53). These findings are in line with the figures previously displayed showing that these categories are among the least consumed within the previous 24 hours (Figure 44) and the least frequently purchased from the markets (Figure 41).
Figure 53: Territorial markets contribution to daily food consumption, by food product

![Bar chart showing the contribution of different food products to daily food consumption.](image)

Source: Author's own elaboration.

### 4.8 Contribution to the purchase of healthy food baskets

Further analysis investigated the contribution of the markets surveyed to the purchase of healthy food baskets. This indicator provides an estimation of the number of consumers who purchase their entire healthy food basket in a specific territorial market. It is calculated as the share (expressed as a percentage) of consumers reporting to have consumed at least five different food groups (of which three must be a source of carbohydrates, a source of protein and a source of vitamins and fibre) and to have purchased all these food groups at the territorial markets over the total of consumers. The values obtained express the minimum contribution of the market to the purchase of healthy food baskets (Figure 54).

The findings show that the markets with the highest contribution to consumers’ purchase of healthy food baskets are Zahleh commercial market (44 percent), Baalbeck commercial souk (34 percent) and Tripoli Taalet el Rifaiyeh (25 percent). Based on the proposed indicator outlined previously, the fruit and vegetable markets of Ferzol, Baalbeck and Tripoli/souk el kameh do not contribute to the interviewed consumers’ healthy food baskets as the food groups available and purchased by consumers at the level of these markets belong to only three different food groups (which are a source of carbohydrates and vitamins and fibres).

Figure 54: Contribution to the purchase of healthy food baskets, by market
4.9 Synthetic Indicator

A synthetic indicator was created to demonstrate the importance of fresh food retail markets for local consumers’ dietary patterns. This information is crucial for developing informed recommendations for policymakers and for planning effective strategies to improve the availability of, and accessibility to, healthy and diversified diets at territorial level including cities. As mentioned in the previous chapter, synthetic indicators are composite measures that combine mathematically different information into one single measure, allowing comparisons and evaluation of multidimensional phenomena. In this case, the indicator was calculated as the minimum contribution of the market to healthy and diversified diets. In reality therefore, it can be assumed to be more.

4.9.1 Minimum contribution to healthy and diversified diets indicator

The minimum contribution to healthy and diversified diets indicator was calculated as the sum (consequently divided by two) of the markets contribution to daily food consumption indicator and the contribution to the purchase of healthy food baskets indicator. It ranges from 0 to 1, where 1 means that the market contributes to ensuring access to healthy and diversified diets to all consumers. Figure 53 shows the different scores of the minimum contribution of the markets to healthy and diversified diets indicator. Only three markets (Zahleh commercial souk, Baalbeck commercial souk and Taalat el Rifahiyeh) have a score higher than 0.25. This means that these markets are crucial for ensuring access to healthy and diversified diets to at least 25 percent of the consumers making their purchases at the level of these markets.
Figure 55: Minimum contribution to healthy and diversified diets indicator, by market

Source: Author’s own elaboration.
5. Discussion

Nine territorial markets located in five governorates of Lebanon have been analysed in this report in order to unveil their potential for promoting healthy diets. The report additionally aims to investigate the contribution of territorial markets within a broader framework of action on preventing and managing child wasting and the achievement of the Sustainable Development Goals (2020 Global Action Plan (GAP) on Child Wasting: A framework for action by UNICEF, WFP, WHO, UNHCR and FAO).

The Lebanon National Agriculture Strategy (2020-2025) and the National Nutrition Strategy and Action Plan (2021-2026) identified a number of challenges in the agrifood, and nutrition sectors which have been summarized in the following paragraphs.

Increasing food and nutrition insecurity and poor food safety and quality infrastructure. The Lebanese household food security situation has worsened following the 2019 economic crisis. It has been caused by a sharp decline in consumers’ purchasing power due to inflation, soaring food prices due to high reliance on food imports, and depreciation in the value of the LBP. This has led to: reduced economic access to food; inadequate food consumption and reduced food intake; limited stability of access to food; limited awareness of food safety, food quality and improper storage and hygiene practices; as well as high levels of food losses and waste. According to a food security review mVAM (WFP, 2021), 49 percent of the population were worried about being able to access sufficient food to meet their dietary needs, and 31 percent reported being unable to eat healthy and nutritious food. Particularly amongst children, food insecurity was linked to the worsening of nutritional status including stunting, obesity and eating habits (dietary diversity).

Food systems challenges. These include a lack of self-sufficiency and high dependency on imports as well as gaps in agricultural production and diversification. These include: high input use; poor linkages between production, distribution, and market; poor marketing functioning; limited resources to increase production; limited availability of, and limited access to, financial services; water scarcity and poor water management as well as a lack of adequate post-harvest cold storage facilities. Additional challenges include the lack of efficient cooperatives and farmers’ associations, a lack of standards in relation to nutritional content and composition including labelling, and consumption of food with low nutritional value.
A double burden of malnutrition. There is a prevalence of over-nutrition and under-nutrition evidenced by stunting, wasting, micronutrient deficiencies, overweightness, and obesity amongst different age groups (children under 5 years of age, children and adolescents, and adults). The prevalence of stunting and overweightness among children under 5 years of age was 16.5 percent and 16.7 percent respectively based on a family health survey (Tutelian et al., 2006). Amongst adults, rates of overweightness and obesity have been increasing over the past decade, with almost 38 percent of adults reported to be overweight and 27 percent obese.

Poor feeding habits amongst infants and young children, school-aged children, and adults. There is a nutrition transition occurring, with low consumption of fruit and vegetables and high consumption of salt, sugar and fat amongst adults and children. A recent household survey reported poor complementary feeding practices, with only 13 percent of children aged 0-23 months meeting the Minimum Acceptable Diet and 25.5 percent reaching Minimum Dietary Diversity (CAS, 2019). A recent mobile Vulnerability Analysis and Mapping (m-VAM) conducted by the World Food Programme and the World Bank (2021) showed that 19 percent of households consumed inadequate diets.

Weak institutions and governance and lack of effective tools enabling coordination among the concerned actors. There is a lack of a comprehensive and coherent agrifood policy framework, with limited public investment in infrastructure, research and development, extension, and poor organization of the agrifood value chain. This has led to inefficiencies. In addition, there are limited nutrition programmes including maternal and child nutrition, school health nutrition, food safety initiatives, and obesity prevention. There is also a lack of statistical data related to nutritional status in Lebanon.

Interventions aimed at improving the quality of the diets tend to focus on the individual level, especially in promoting nutrition awareness and education. However, diets are not determined exclusively by individual behaviours and choices, but are influenced significantly by food environments within which people make their food purchases (HLPE, 2017). This is why this report explores the pathways towards nutrition and healthy diets that focus on food markets.

The remainder of this chapter discusses these pathways and potential interventions within each, while Annex 1 provides a summary, along with proposed timeline and level of priority in accordance with the Lebanon National Agricultural Strategy Pillars (2020-2025) and the National Nutrition Strategy and Action Plan (2021-2026).

5.1 The income pathway (producers and retailers)

As shown in Chapter Three, about 64 percent of the retailer households interviewed live below the poverty line. Consequently, it is important to increase the income of retailers as well as producers to contribute to improving their food security and nutrition. In the current Lebanese context, and with the multiple crises affecting the country, operating costs for both retailers and producers have increased significantly since 2019 due to the high cost of electricity, electricity shortages, the high cost of fuel after the cancellation of fuel subsidies and more retailers and producers forced to rely on generators. There is thus a need to design and implement policies to support producers and retailers with their energy costs as well as provide to financial support to them enabling them to adopt alternative energy sources. This includes renewable energy (when applicable) with the aim of decreasing costs and increasing retailers and producers’ income. This is in line with Pillar 4 of the Lebanon National Agricultural Strategy NAS (2020-2025), on “Improving climate change adaptation and sustainable management of agrifood systems and natural resources”, and more specifically, Programme 4.4, “Encouraging and supporting the use of renewable energy in the agricultural sector”.

The proportion of women retailers is low in the territorial markets (less than 15 percent) with a net take-home income gap of more than 40 percent between men and women retailers and lower sales
volumes for almost all food items (with the exception of artisanal products). Women retailers generally operate smaller businesses and sell less profitable products. Interventions that aim at increasing accessibility for food retailers and producers to gender-responsive business development services and formal credit services would help in developing women and men retailers as well as producers’ businesses. It would increase the scale of women businesses, improve their net take-home income, and reduce poverty among food retailers and producers. This is linked to NAS Pillar 3, “Enhancing efficiency and competitiveness of agrifood value chains”, and particularly Programme 3.2, on “Encouraging private investments along the agrifood value chains”.

The source of supply for most of the food items offered by retailers is mainly traders, with fewer producers across all food categories. One important intervention would be to support linkages between producers and retailers by helping small individual producers/cooperatives producing fresh agricultural products and agro-processed artisanal or industrially processed products, dairy and poultry) to link with food retailers in the territorial markets. The aim would be to shorten the supply chain, help producers directly market their crops, reduce market intermediaries, and thus lower food costs. This can be achieved by providing support and training to smallholders to enhance their access to territorial markets by conducting collective bargaining. There should also be support and training to increase access to price information, and platforms should be developed that would facilitate linkages between retailers and producers. Furthermore, supporting the creation and development of new or existing permanent or seasonal farmers’ markets at the level of the territories would also contribute to increasing supply directly from producers in those territories. These interventions are linked to NAS Pillar 3, particularly Programme 3.1, “Supporting the modernization of value chain infrastructure and post-harvest handling systems, wholesale and local markets”, and Programme 3.5, “Promoting and organizing cooperative work and farmers’ associations and groups at the level of the value chains” (targeting smallholders).

5.2 The availability pathway

Availability of safe and nutritious food in territorial markets is not only determined by increased production, but also by a reduction of food losses and improvement of food safety measures.

Poor storage infrastructure, including limited availability of cold storage and warehouses (only 3 percent of retailers having access to cold warehouses) was among the problems most cited by the retailers interviewed. This limits the ability to preserve perishable food and negatively affects food safety. Interventions designed to develop the market infrastructure by improving cold chain infrastructure and warehouses (including supporting the creation of cold facilities at the level of the fruit and vegetable markets) will extend the shelf life of perishable food such as fruit and vegetables. This will not only contribute to increasing their availability but will also increase retailer profitability. Similarly, technical assistance and direct support to producers are required to develop post-harvest technologies. These interventions relate to NAS Pillar 3, particularly Programme 3.1, “Supporting the modernization of value chain infrastructure and post-harvest handling systems, wholesale and local markets”.

In addition, and in order to reduce food wastage and losses (almost one third of retailers declared their businesses affected by food losses) and to improve product safety, a priority intervention would be to develop and deliver training programmes aimed at retailers themed on storage to reduce spoilage and contamination of food. Retailers could also be provided with small equipment or tools, such as refrigerators, to reduce food losses. Simultaneously, there is a need to
develop the capacity of producers and cooperatives to improve product quality and safety (storage, processing, packaging, labelling/branding and better certification amongst others) with the aim to reduce food losses and wastage and to improve products marketability. In addition, there is also a need to conduct awareness sessions to consumers on food safety, food losses and wastage. These interventions are in line with NAS Pillar 2, “Increasing agricultural production and productivity”, Programme 2.4, “Improve the quality and safety of agricultural and food products”, and the National Nutrition Strategy and Action Plan (2021-2026) Strategy Area 3, particularly Action 3.2, “Improving food production via the food industry and ensure food is of high nutritional value, safe, and accessible to the people residing in Lebanon”.

5.2.1 Pathway for improving nutritionally important food groups for local diets

Relevant literature describes the Lebanese diet as exhibiting the following broad characteristics: an abundance of plant food (e.g., fruit, vegetables, breads, other forms of cereals, potatoes, legumes, nuts and seeds); minimally processed fresh fruit as a typical daily dessert with sweets containing concentrated sugar or honey consumed a few times per week; olive oil as the principal source of fat replacing other oils, butter and margarines; dairy products (mainly cheese and yoghurt) consumed daily in low to moderate amounts; wild edible plants used in many of the traditional dishes; fish, poultry and red meat consumed in low amounts (Hwalla et al., 2008).

The role of markets as essential suppliers was evident when examining the high monthly purchases of grains, white roots and tubers, fruit, and vegetables (including Vitamin A-rich fruit and vegetables). These are an important source of micronutrients and bioactive components and were purchased in large quantities, and a higher frequency, from the selected markets. Based on this, gender-responsive activities for businesses expansion and products diversification could be explored towards local foods or “mouneh” in these markets. Rural women who are mostly engaged in processing of traditional food products could be supported to market their products in the territorial markets. Additional interventions might include gender-sensitive awareness campaigns on healthy nutrition, the importance of the traditional Lebanese diet and with special focus on the dietary needs for children under five years of age in the selected territories. This aligns with NAS Pillar 3, Programme 3.3, “Providing enabling conditions to promote agricultural and food industries and enhance utilization of locally produced primary products”, National Nutrition Strategy, Strategy Area 4, “Safe and supportive environment for nutrition at all ages (environment)”, and Action 4.4, “Implementing social and behavioural change interventions for individuals of all ages” in line with national guidelines.
5.3 The affordability pathway

Affordability was a principal concern for all product categories, particularly for animal protein sources such as fish, meat, poultry, and dairy products. The economic and financial crisis existing in Lebanon since October 2019 has led to increasing prices for all food items and decreasing purchasing power for the Lebanese population. The devaluation of the Lebanese currency due to inflation has led to a decline in Lebanese households’ income and increases in product prices. Rising international prices have also been a causal factor. This has eventually led to a shift in the dietary habits of Lebanese consumers (including households with children under 5) evidenced by a reduction in the consumption of animal protein sources (principally fish, meat, and poultry) and an increase in consumption of potatoes and pulses. Fish and meat are mainly imported, with limited local production, whereas Lebanon is self-sufficient in poultry, which was also affected by an increase in the cost of production due to the high cost of the inputs used which are mainly imported.

Investments are required to develop the animal value chains in Lebanon, focusing on the following sectors: livestock, including small ruminants; the poultry and eggs sector; and aquaculture. The aim is to increase local production and thus availability of these food items. Actions that would support the production of fodder crops and the restoration of pasturalelands should be equally promoted.

Additional interventions should aim at supporting producers to reduce their production costs and thus reduce the prices paid by consumers for food items. This could be achieved by designing and implementing direct support programmes targeting crop and livestock producers and by providing financial and technical support to smallholders, cooperatives and MSMEs. Crop and livestock producers should also be targeted with initiatives that promote the adoption of good agricultural and management practices with the aim of increasing production and productivity.

These interventions are linked to NAS Pillar 1, “Restoring the livelihoods and productive capacities of farmers and producers” and NAS Pillar 2, “Increasing agricultural production and productivity”, particularly Programme 2.1, “Increase the total agricultural production by increasing the total cropped areas, animal and aquaculture production and enhancing productivity” and Programme 2.2, “Support the adoption of good agricultural practices and good livestock management”. These interventions also contribute to the National Nutrition Strategy, particularly Strategy Area 3, “Sustainable, resilient food systems for healthy diets (supply)”, and Action 3.1, “Improve agriculture production in Lebanon and ensure access to sustainable, diverse and safe food”.

5.3.1 Animal proteins source foods

It has been found that fish, meat, poultry, and eggs were subject to low purchasing frequency, with less than 33 percent of the consumers interviewed purchasing these animal protein source foods from the markets. This percentage climbs to almost 45 percent for consumers with children under 5. However, more than 50 percent of the consumers with children under 5 declared that these products remain too expensive.

Dairy products were by far the main protein source both in dietary consumption (88 percent) and in the purchasing patterns, being purchased often by almost 60 percent of the consumers with children under 5.

While animal production remains an important component of agriculture in Lebanon, poultry and dairy are by far the most produced animal products. Mutton and sheep follow these. Lebanon is a significant
importer of animal protein. Priority interventions should then also include developing gender-responsive dairy value chains and/or cheese industries. This aligns with NAS Pillar 3, particularly Programme 3.3 “Provide enabling conditions to promote agricultural and food industries and enhance utilization of locally produced primary products”.

In addition, specific interventions to increase the overall size of cultivated areas and production of pulses, and to improve seed multiplication programmes for pulses should also be considered, as this food group represents a good plant-based protein source and constitutes a major part of the Lebanese diet. This aligns with NAS Pillar 2, Programme 2.1, “Increase the total agricultural production by increasing the total cropped areas”.

Finally, and in support of the above-mentioned pathways towards improved nutrition and a healthy diet in the territorial markets, there is need to design and launch a programme for local territorial development. This should include a review of local territorial development policies and action plans, and development of territorial markets in support of healthy nutrition, with the importance of implementing national nutrition surveys including food consumption survey and monitoring nutrition indicators on a regular basis. This is in line with NAS Pillar 5, “Strengthening the enabling institutional environment” and the National Nutrition Strategy, Strategy Area 1, “Strengthened multi-sectoral nutrition governance, accountability and information management”.
6. Conclusions

Despite the recent changes in dietary patterns in many developing countries, driven by rapid urbanization, the expansion of the middle class and the globalization of the market, territorial markets remain fundamental food supply outlets even in urban settings and regardless of economic status. Local markets allow the purchases of what is not at hand, addressing issues such as seasonality and conservation of fresh produce particularly for fruit and vegetables that cannot be stored for the entire year (Hirvonen et al., 2016).

Territorial markets have the potential to improve accessibility to, and the availability and affordability of, diverse, locally produced, seasonal, healthy and nutritious food. This can contribute to household food security (FAO and INRA, 2016; FAO, IFAD, UNICEF, WFP and WHO, 2018) and to progress towards Sustainable Development Goal 2 (SDG 2).

In Lebanon, with modernization and development, consumer tastes and demands have evolved. This has had implications for the traditional Lebanese foods and dietary habits. Some changes occurred to the food ingredients used and to the percentage contribution of macronutrients to energy intake, although the present Lebanese dietary habit has retained many of its Mediterranean characteristics (Hwalla et al., 2008).

Notwithstanding the recent changes in dietary patterns caused by modernization and development, coupled with the recent economic crisis that hit the country since 2019 and which had a major impact on dietary shifts, territorial markets remain essential food market supply outlets for Lebanese households in the mapped territories. In the Lebanese context, territorial markets have an important role to play in making available diverse, locally produced, seasonal, healthy, and nutritious food, thus contributing to improved food and nutrition security at both household and national levels.

Similarly, territorial markets can play an important role in shortening the supply chain between producers and retailers, thus facilitating producer access to these markets and commercialization of their locally produced food products. They can also address gender gaps and improve access for women producers enabling them to sell their locally produced foods, such as fresh and artisanal processed foods and beverages. Furthermore, territorial markets have a major contribution to make towards Lebanese households’ diversified and nutritious diets, especially at the level of those markets where a diversity of food items is offered, and product quality and safety are ensured.

Based on the findings of this study, interventions and priority actions have been proposed with the aim of developing territorial markets by increasing their resilience as well as improving the productivity and marketing capacities of both producers and retailers, and raising consumer awareness regarding diversity, quality and safety of food purchased in support of healthy and nutritious diets. Additional interventions included strengthening the enabling environment, enhancing business and credit services, as well as improving infrastructure facilities in support of territorial market development. Furthermore, the importance of integrating territorial market development into local and national development strategies contributing to local economic development was equally promoted.

This can only be achieved through effective and meaningful collaboration among all public institutions concerned. These include the Ministry of Agriculture, Ministry of Public Health, Ministry of Economy and Trade, Ministry of Industry, Ministry of Social Affairs, and Ministry of Interior and Municipalities. Effective collaboration and partnership with municipalities, unions of municipalities, food producers and industrialists, producers’ associations, and cooperatives (including women’s cooperatives), and retailers’ associations is also needed to ensure inclusive and equal participation of all actors in support of territorial markets’ development.
Further study can explore the differences between markets in greater depth, examining what makes one market more remunerative for women and men value chain actors, or more environmentally sustainable, or better able to contribute to dietary diversity. Another area ripe for further study further is the additional and specific constraints that women face when participating in territorial markets. Furthermore, this study proposed main recommendations at the national level that are applicable for all selected territorial markets in the designated territories. Further analysis can investigate other actors and factors in greater depth and articulate specific recommendations at the level of each market/territory.
References


Annex 1: Proposed interventions according to the National Agriculture and Nutrition Strategies

Related National Agricultural Strategy (2020-2025):

**Pillar 1**: Restoring the livelihoods and productive capacities of farmers and producers

**Programme 1.1**: Ensure and facilitate access to inputs and tools to maintain agricultural production capacity

**Programme 1.2**: Facilitate access to subsidized agri-loans for farmers and small and medium enterprises (SMEs) working in the agrifood industries to revive the sector

**Programme 1.3**: Reduce risk of worsening levels of food and nutrition security

<table>
<thead>
<tr>
<th>Proposed interventions</th>
<th>Timeline</th>
<th>Level of Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and implement direct support programmes to crop and livestock producers</td>
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<td>High</td>
</tr>
<tr>
<td>Provide financial and technical support to smallholders, cooperatives and MSMEs for increasing agricultural production and productivity</td>
<td>X</td>
<td>High</td>
</tr>
</tbody>
</table>

Related National Agricultural Strategy (2020-2025):

**Pillar 2**: Increasing agricultural production and productivity

**Programme 2.1**: Increase the total agricultural production by increasing the total cropped areas, animal and aquaculture production and enhancing productivity

**Programme 2.2**: Support the adoption of good agricultural practices and good livestock management

**Programme 2.4**: Improve the quality and safety of agricultural and food products

Related National Nutrition Strategy and Action Plan (2021-2026):

**Strategy Area 3**: Sustainable, resilient food systems for healthy diets (supply)

**Action 3.1**: Improve agriculture production in Lebanon and ensure access to sustainable, diverse and safe food

**Action 3.2**: Improve food production via the food industry and ensure food is of high nutritional value, safe, and accessible to the people residing in Lebanon
## Proposed interventions

<table>
<thead>
<tr>
<th>Proposed interventions</th>
<th>Timeline</th>
<th>Level of Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop targeted actions to crop and livestock producers (including support for adoption of good agricultural and management practices) with the aim to increase production</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Investments to develop the livestock sector in Lebanon including small ruminants</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Investments to develop the poultry and eggs sector in Lebanon</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Investments to develop the aquaculture sector in Lebanon</td>
<td></td>
<td>Medium</td>
</tr>
<tr>
<td>Support the production of fodder crops and support the restoration of pasturelands</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Increase cultivated areas and production of pulses and improve seeds multiplication programmes for pulses</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Develop capacities of producers/cooperatives to improve quality and safety of the products (storage, processing, packaging, labelling/branding and better certification ...) and reduce food losses and wastes</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Develop and deliver training programmes for retailers on storage to reduce spoilage and contamination of food and provide small retailers with small equipment or tools (such as refrigerators) to reduce food losses</td>
<td>X</td>
<td>Medium</td>
</tr>
<tr>
<td>Conduct awareness sessions to consumers on food safety and food losses and wastes</td>
<td>X</td>
<td>Medium</td>
</tr>
</tbody>
</table>

**Related National Agricultural Strategy (2020-2025):**

**Pillar 3:** Enhancing efficiency and competitiveness of agrifood value chains

**Programme 3.1:** Support the modernization of value chain infrastructure and post-harvest handling systems, wholesale and local markets

**Programme 3.2:** Encourage private investments along the agrifood value chains

**Programme 3.3:** Provide enabling conditions to promote agricultural and food industries and enhance utilization of locally produced primary products

**Programme 3.5:** Promote and organize cooperative work and farmers’ associations and groups at the level of the value chains (targeting smallholder producers)
**Related National Nutrition Strategy and Action Plan (2021-2026):**

**Strategy Area 4:** Safe and supportive environment for nutrition at all ages (environment)

**Action 4.4:** Implement social and behavioural change interventions for individuals of all ages in line with national guidelines

<table>
<thead>
<tr>
<th>Proposed interventions</th>
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<th>Level of Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short (1-2 years)</td>
<td>Medium (3-5 years)</td>
</tr>
<tr>
<td>Provide technical assistance and direct support to producers to develop post-harvest technologies</td>
<td>X</td>
<td>Medium</td>
</tr>
<tr>
<td>Develop the market infrastructure through improving cold chain infrastructure and warehouses (including supporting the creation of cold facilities at the level of the fruits and vegetables markets)</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Support linkages between producers and retailers through supporting small individual producers/cooperatives producing fresh agricultural products and agro-processed artisanal or industrially processed products, dairy, poultry... and linking them with food retailers in the territorial markets</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Develop platform to link retailers to producers</td>
<td>X</td>
<td>Medium</td>
</tr>
<tr>
<td>Provide support and training to smallholders to access territorial markets through collective bargaining and increase access to price information</td>
<td>X</td>
<td>Medium</td>
</tr>
<tr>
<td>Support the creation and development of new/existing permanent or seasonal farmers’ markets</td>
<td>X</td>
<td>Medium</td>
</tr>
<tr>
<td>Support gender-responsive activities for business expansions, product diversification, and marketing of local foods “mouneh”</td>
<td>X</td>
<td>Medium</td>
</tr>
<tr>
<td>Develop gender-responsive dairy value chains/cheese industries</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Develop gender-responsive business development services and formal credit services to food retailers and producers</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Conduct gender-sensitive awareness campaigns on healthy nutrition, importance of traditional Lebanese diet with special focus on dietary needs for children under 5 years of age</td>
<td>X</td>
<td>High</td>
</tr>
</tbody>
</table>
**Related National Agricultural Strategy (2020-2025):**

**Pillar 4:** Improving climate change adaptation and sustainable management of agrifood systems and natural resources

**Programme 4.2:** Promote sustainable use of natural resources (soil, pastures, forests and fisheries)

**Programme 4.4:** Encourage and support the use of renewable energy in the agricultural sector

<table>
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<th>Level of Priority</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Short (1-2 years)</td>
<td>X</td>
</tr>
<tr>
<td>Provide financial support to producers and retailers for the adoption of alternative energy sources including renewable energy (when applicable)</td>
<td>X</td>
<td>High</td>
</tr>
<tr>
<td>Design and implement policies to support energy costs to producers and retailers</td>
<td>X</td>
<td>High</td>
</tr>
</tbody>
</table>

**Related National Agricultural Strategy (2020-2025):**

**Pillar 5:** Strengthening the enabling institutional environment

**Programme 5.3:** Enhance sectoral governance to maximize public and private development financing and encourage agricultural investments

**Related National Nutrition Strategy and Action Plan (2021-2026):**

**Strategy Area 1:** Strengthened multi-sectoral nutrition governance, accountability, and information management

**Action 1.1:** Develop a national multi-sectoral policy framework and action plan for nutrition that ensures political commitment and continuity

**Action 1.2:** Develop an integrated, multi-sectoral information and surveillance system and a research plan that ensures updated nutrition information generation and sharing

<table>
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<tr>
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<th>Level of Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and launch a programme for local territorial development including review of local territorial development policies and action plans, and development of territorial markets in support of healthy diets</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Develop and implement national nutrition surveys including food consumption survey and monitor nutrition indicators</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Proposed interventions</th>
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<th>Level of Priority</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Short (1-2 years)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Medium (3-5 years)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Long-term (5-7 years)</td>
<td>X</td>
</tr>
</tbody>
</table>
Annex 2: Examples of food products for each product category

<table>
<thead>
<tr>
<th>Groups for analysis</th>
<th>Food groups</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains, white roots and tubers, and plantains</td>
<td>Grains</td>
<td>Wheat, burgul, rice, pasta, bread, corn, oat...</td>
</tr>
<tr>
<td></td>
<td>White roots and tubers, and plantains</td>
<td>Irish potato, or white-fleshed sweet potato, sugar beet, turnip...</td>
</tr>
<tr>
<td>Pulses</td>
<td>Pulses (beans, peas and lentils)</td>
<td>Beans, broad beans, dried peas, lentils, chickpeas</td>
</tr>
<tr>
<td>Nuts and seeds</td>
<td>Nuts and seeds</td>
<td>Pumpkin seeds, sunflower seeds, peanuts, walnuts, almonds, pine nuts...</td>
</tr>
<tr>
<td>Dairy products</td>
<td>Dairy products</td>
<td>Milk, cheese, labneh, yogurt...</td>
</tr>
<tr>
<td>Meat</td>
<td>Meat</td>
<td>Beef, mutton, goat, offal, grinded meat, pork or rabbits...</td>
</tr>
<tr>
<td>Poultry</td>
<td>Poultry</td>
<td>Chicken, ducks...</td>
</tr>
<tr>
<td>Fish and seafood</td>
<td>Fish and seafood</td>
<td>Various types of fish, shrimp, other seafood...</td>
</tr>
<tr>
<td>Eggs</td>
<td>Eggs</td>
<td>Eggs</td>
</tr>
<tr>
<td>Vitamin A rich fruits and vegetables</td>
<td>Dark green leafy vegetables</td>
<td>Chard, spinach, jute mallow, chicory, parsley, lettuce...</td>
</tr>
<tr>
<td></td>
<td>Vitamin A rich fruits</td>
<td>Mango, papaya</td>
</tr>
<tr>
<td></td>
<td>Vitamin A rich vegetables</td>
<td>Carrots, orange-fleshed sweet potato</td>
</tr>
<tr>
<td>Other vegetables</td>
<td>Other vegetables</td>
<td>Tomato, eggplant, cabbage, okra, cucumber, sweet pepper...</td>
</tr>
<tr>
<td>Other fruits</td>
<td>Other fruits</td>
<td>Banana, pineapple, avocado, grapes, apple, pear, watermelon, melon, apricot, dates, fruit juices...</td>
</tr>
<tr>
<td>Artisanal processed food and beverage</td>
<td>Pastry and sweets</td>
<td>Different types of pastry (moajanat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sweets made in an artisanal way: biscuits, sweets, chocolate, ice cream...</td>
</tr>
<tr>
<td>Groups for analysis</td>
<td>Food groups</td>
<td>Examples</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mouneh products and fruit juices with additives</td>
<td>Jams, pickles, thyme, rose water, berry juice...</td>
<td></td>
</tr>
<tr>
<td>Roasted nuts</td>
<td>All types of roasted nuts in oil with salt or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sugar or other additives</td>
<td></td>
</tr>
<tr>
<td>Ultra-processed food and beverage</td>
<td>Sweets</td>
<td>Cakes, cookies, sweet biscuits, chocolate, or ice cream</td>
</tr>
<tr>
<td>Ultra-processed packaged salty snacks</td>
<td>Packaged chips</td>
<td></td>
</tr>
<tr>
<td>Sweet beverages</td>
<td>Sodas</td>
<td></td>
</tr>
</tbody>
</table>