



BEIRUT LEBANON

FOOD SYSTEM SUSTAINABILITY ASSESSMENT

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Written by Let's Food

CONTEXT AND OBJECTIVES

CONTEXT

- In a world with limited resources and an ever-increasing population, food is an essential issue. The transition to more sustainable and equitable agricultural and food practices - essential for the survival of biodiversity and adaptation to global warming - must be considered both locally and globally. Strengthening sustainable food is a challenge that must be approached in a systemic way, considering all the components and actors of food systems. Local authorities and governments must seize this transition to build food-producing territories with the actors of the food system and thus guarantee access to quality food for all.
- Although cities around the world are gradually taking up the food issue and are increasingly communicating on the public, private or associative actions underway, there is still little information on public policies and local initiatives in favour of sustainable food systems in Mediterranean cities.

LET'S FOOD

- Let's Food is a French based NGO aiming to support territories in building sustainable and resilient food systems through territorial cooperation and the exchange of good practices at local, national and international levels.
- The NGO has 3 specific objectives:
 - Support the development of sustainable local food policies in France and across the world.
 - Promote and operationalise the sharing of knowledge and initiatives among the different actors of the food system in order to accelerate a food and agroecological transition on a global scale.
 - Raise awareness and provide training on territorial sustainable food systems in order to strengthen the skills needed to set up sustainable food policies.

ZOOM: ASSESSING THE SUSTAINABILITY OF A FOOD SYSTEM

The French NGO Let's Food has developed a methodology to analyse the sustainability of a food system. This is based on Nicolas Bricas' definition built from the definitions proposed by the FAO, Bioversity International and IPES Food (2015):

"Sustainable food systems:

- Protect the environment without depleting non-renewable resources and biodiversity and without polluting ;
- Provide access for all to sufficient, safe, nutritious and culturally acceptable food;
- Are based on an inclusive economic system that creates jobs for all and reduces inequalities of power for a fair distribution of added value;
- Promote social cohesion and respect for diversity;
- Restore confidence in the system and allow citizens to participate in its evolution".

The proposed methodology aims to analyse the connections within the value chain in the light of the dimensions of sustainable development in order to identify the main challenges.

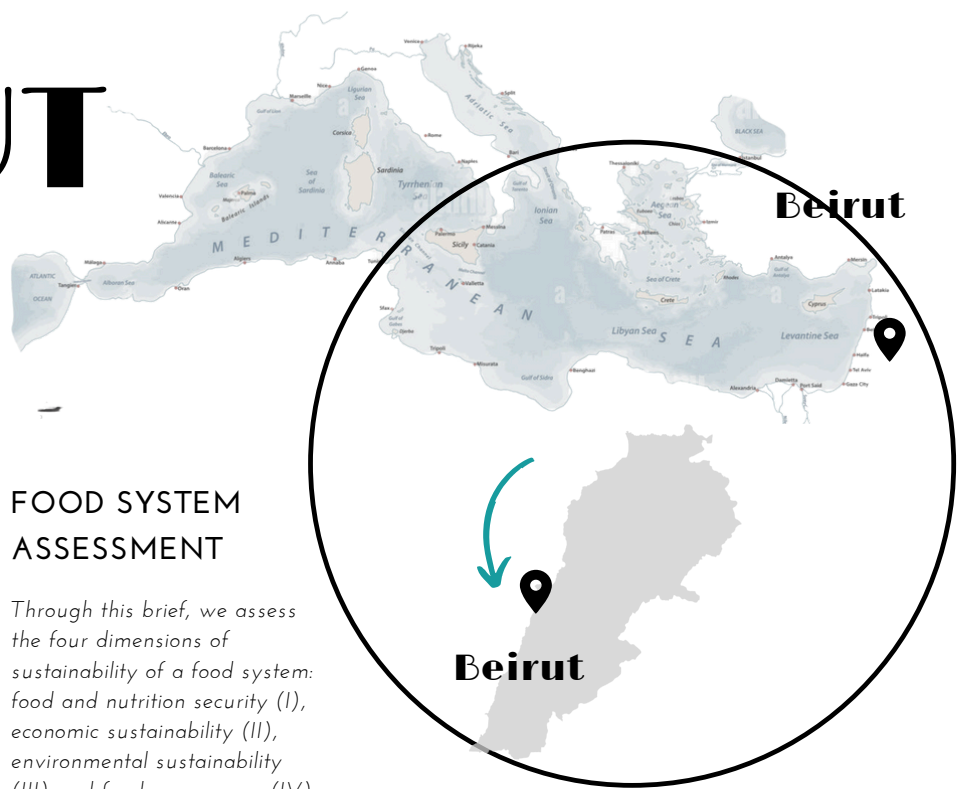
BEIRUT

LEBANON

- 5.6 million inhabitants
- Host to nearly 1.5 million Syrian refugees
- **Political system:** multi-faith parliamentary democratic republic

BEIRUT

- **City:** 20 km² - 363 033 inhabitants in 2015
- **Agglomeration:** 468km² - 2 million inhabitants in 2015
- Beirut is home to almost half of the Lebanese population



FOOD SYSTEM ASSESSMENT

Through this brief, we assess the four dimensions of sustainability of a food system: food and nutrition security (I), economic sustainability (II), environmental sustainability (III) and food governance (IV).

Introduction

While the area of the City of Beirut is only 20 km², the urban area covers more than 468 km² and is home to over 2 million inhabitants (2015). The city is located on a rocky cape that juts out into the eastern Mediterranean.

Lebanon is part of the ancient "fertile crescent" and has productive soils and a long agricultural history. However, investment in agriculture accounted for only 1% of GDP in 2018.

In 2023, Lebanon is experiencing one of the worst economic crises in its history. The Covid-19 health crisis, inflation, the war in Ukraine and the explosion of the port of Beirut in 2020 all have a major impact on the country's food security.

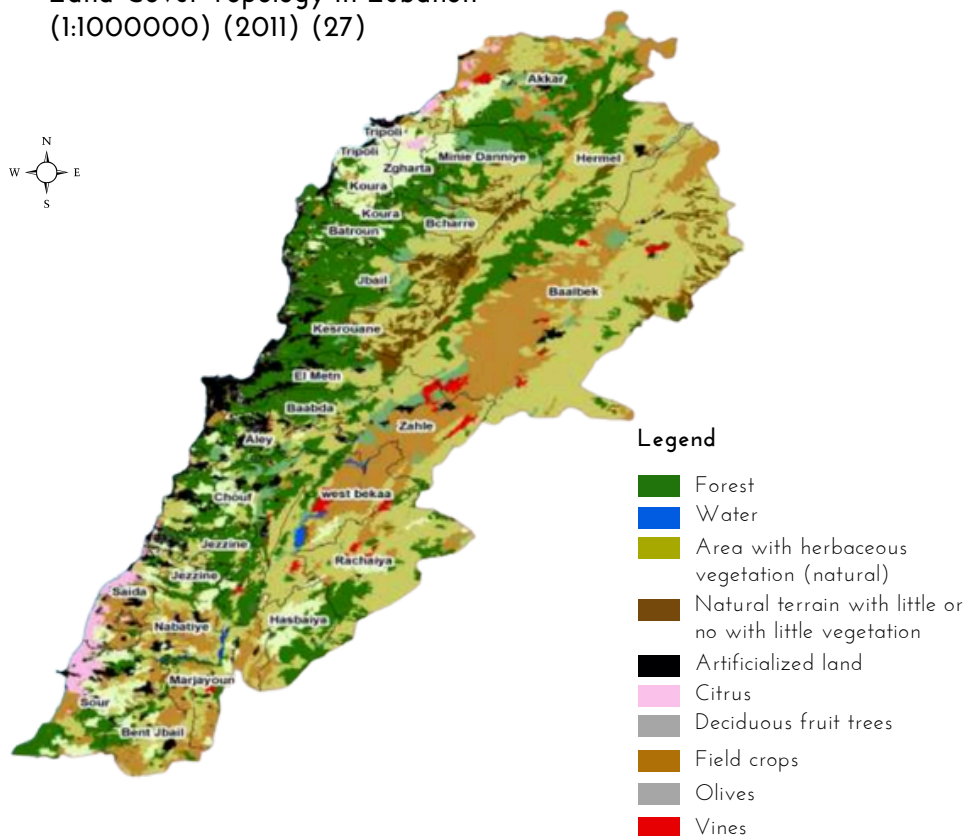
I. Increased dependence on imports: a threat to the country's food security

- In 2021, 3/4 of the national population was living below the poverty line (29),
- Increase in food prices between December 2019 and October 2021: +1,874%,
- Share of the national population supported by the UN World Food Programme: 1/3,
- Share of Beirut's population that is overweight or obese: 42% (2017) (26).

In Lebanon, nearly 75% of the population lives below the poverty line. Since 2019, the country has been facing an unprecedented economic crisis: the Lebanese pound lost 92% of its value between February 2021 and February 2022 and food prices increased by + 1,874% between December 2019 and October 2021. This increase is also explained by the surge in energy prices caused by the war in Ukraine and the disruption caused by the explosion in the port of Beirut in 2020 and the impact of the coronavirus crisis on reducing food imports. This situation has forced part of the population to adapt their eating habits: 60% of families say they have reduced their food portions, 41% have reduced the number of meals they eat. Combined with a lack of physical activity, malnutrition is causing alarming public health problems: 42% of the population of Beirut is overweight or obese (26). Humanitarian aid is crucial to address the food insecurity affecting the country. In response to the food crisis, several citizen-based urban agriculture initiatives have emerged to reduce the dependence of households on their purchasing power for adequate food (3).

The increase in food prices mainly concerns imported products on which Lebanon depends to meet the needs of its population (65% to 80% of food needs are imported). The increase in the price of imported foodstuffs has encouraged traders to favour local supplies: some traders have reduced the proportion of imported products in their offer by almost 70%, in favour of local products (2). The current economic crisis may represent an opportunity to revitalise local production and strengthen the link between local producers and urban traders (2).

Land Cover Topology in Lebanon (1:1000000) (2011) (27)



II. An agricultural sector under-invested by the State and poorly remunerative for farmers



HANNA
MIKHAEL

"Chemical pesticides and fertilisers are widely used by Lebanese farmers. These products end up in water resources and in the fruits and vegetables consumed by the Lebanese, which can lead to serious health problems (the cancer rate in particular is very high in Lebanon).

If some farmers are moving towards agricultural models that are low in synthetic inputs, they are doing so for economic reasons: the fall in the Lebanese currency makes it increasingly difficult to access inputs that are almost entirely imported."

Hanna Mikhael, agricultural consultant

- Share of agricultural land in the total area of the country: 35% (2019) (22),
- Contribution of the agricultural sector to the country's GDP: 8.9% (2021) (6),
- Share of the national active population working in the agricultural sector (including refugees): 13.6% (2020) (6).

The main agricultural products in Lebanon are vegetables (potatoes, tomatoes, cucumbers), fruits (citrus, apples, grapes), cereals, poultry meat and milk. On the outskirts of Beirut, there are some market gardening, arboriculture and livestock activities (22). The Lebanese agricultural sector is facing various difficulties threatening the living conditions of farmers, who represented nearly 13.6% of the active population in 2020 (6). The cost of agricultural production in Lebanon increased by more than 50% between November 2019 and November 2020, due to the increase in the cost of imported agricultural inputs (+400% between 2019 and 2020). Although the Ministry of Agriculture has set up a subsidy for the purchase of imported agricultural inputs in 2021, it is insufficient and unevenly distributed, favouring mainly large farms (4). Moreover, the multiplication of intermediaries along the value chain works against producers, who then only recover a tiny part of the cost price (24). As a result, more than 20% of farming households cannot meet their needs and live below the poverty line. Moreover, agriculture remains under-invested by the State: the sector receives only 0.36% of the national budget, whereas it contributes around 8% of GDP (4) (22). However, some actions are emerging to favour access to urban markets for small local producers around Beirut (farmers' markets, online platforms for direct sales, etc.).

The agri-food industry sector contributes between 3 and 6% to GDP (2019) and employs 22% of the working population. About one third of food products (by value) are distributed in the country's 200 supermarkets. The remaining two thirds are sold in traditional, formal and informal shops. The restaurant industry also plays an important role in the country's economy (3.1% of GDP and 2019). In particular, Beirut is home to nearly 1000 establishments, 20% of which have been forced to close due to the economic crisis since 2019 (6).



NICOLAS GHOLAM

"The sustainability of the food system is not a priority for the Lebanese government. There is no real strategy at national or local level to strengthen food autonomy or facilitate access to healthy and sustainable food for all: the food system is in the hands of private actors. Humanitarian aid, which is very present in Lebanon, compensates for the lack of ambition and action by public actors in meeting the needs of the most precarious population and of farmers."

"Moreover, there is no regulation of the intermediaries who intervene along the food value chain. They often recover a large margin of the final price, due to their strong bargaining power, particularly in relation to farmers who then suffer the consequences by recovering only a tiny part of the cost price. Nevertheless, some associative and private initiatives are developing in Beirut, allowing producers to sell their products at reasonable prices by cutting the chain of intermediaries."

Nicolas Gholam, Food Systems Expert, American University of Beirut, Founder of Al Mawsam (a company offering logistical services for small rural farmers to facilitate their access to the market)

COMPETENCES

Municipality of Beirut:

- Environmental protection
- Land Reclamation Permits
- Cleaning, safety and public health
- Social action

III. An agricultural sector that responds to conventional models that impact on the environment

- Contribution of the agricultural sector to total water consumption in Lebanon: 70% (6),
- Evolution of the share of organic food products on the markets (in terms of value): +20% per year approximately (25).

Lebanon suffers from a lack of water due in large part to its inability to store surface water (only 6% of total resources are stored, compared to 85% on average in the MENA region). Yet Lebanese agriculture consumes around 70% of the available water: this level of consumption could be reduced by modernising irrigation techniques (only 25% of irrigated areas use the drip technique). In addition, the wastewater collection networks are deficient, leading to infiltration into the soil and pollution. Bacterial contamination and heavy metals present in the water and soil are found in agricultural products which then become unfit for consumption and export (8).

Agriculture is conventional in the majority. The massive use of imported chemical inputs coupled with intensive agricultural practices exhausts the soil and contributes to the pollution of water resources. However, more and more farmers are resorting to organic farming or agroecology as it allows them to limit their economic dependence on increasingly expensive inputs (9) (19). The consumption of organic products is increasing among the Lebanese, mainly for health reasons. This awareness accelerated in 2009 when a study revealed the presence of pesticides in nearly 40% of fruit and vegetables sold in Lebanon. The organic sector is gradually becoming structured: the number of organic distributors and wholesalers is increasing. The organic market is growing steadily (about 20% per year) (25). The development of new distribution points is structuring the links between producers and consumers. Nevertheless, despite the increase in organic farming, the sector remains a minority in Lebanon and represents only 1% of cultivated agricultural land (11). The organic products consumed remain mainly imported (25). While the economic crisis is pushing consumers towards less expensive local products, it is also leading to a decrease in meat consumption (80% is imported), thus reducing the carbon impact of the Lebanese diet (13).

IV. The private sector and associations are particularly active in agricultural and food issues

- A significant centralisation of powers and competences in Lebanon,
- Beirut takes part in city networks for health: "Cities Changing Diabetes", "Healthy City Network" (World Health Organisation).

At the national level, there are few incentives and awareness-raising for a transition to a sustainable and healthy food system. The Ministry of Agriculture's website advocates the use of expensive pesticides, under the influence of plant protection companies. There is no information to help farmers make the ecological transition despite the growing demand (15). However, a ministerial committee on food safety was urgently established in 2022 to discuss food safety risks (26).

At the local level, the municipality of Beirut has little competence in the field of sustainable food. The few actions that have been carried out relate rather to the promotion of healthy eating habits, the practice of physical activity or the establishment of green spaces. Food governance is mainly embodied by private actors, associations, the humanitarian sector and international cooperation, which fill the gap in local and national public policies (24). For example, a cooperation project has emerged between the Occitanie region in France and Lebanon in order to strengthen the production, processing and distribution of basic foodstuffs by building the capacity of local actors and organisations (18).

At the same time, some citizen collectives are organising themselves to increase their self-sufficiency and secure agricultural land in the face of the inaction of public authorities (20).

A FEW INITIATIVES FOR SUSTAINABLE URBAN FOOD SYSTEMS



PERMACULTURE TRAINING - FREE MINDS SCHOOL

- School in Beirut.
- Training young school children in permaculture so that they can bring these solutions to their families to improve their food security.



BADARO URBAN FARMERS MARKET

- Market selling fresh and local products.
- Organisation of meetings between local producers and consumers.



FARMERS' MARKET - ASSOCIATION JIBAL

- Established in 2017 in Beirut.
- Selling fresh, local and sustainable products.
- Raising public awareness about the environment and sustainable agriculture.



BEIT EL BAKARA - HELPING THE LEBANESE COPE WITH THE RISING COST OF LIVING

- Emergency food donations.
- Support for the creation of organic farms.



TRADITIONS & PEOPLE - LOCAL NGO

- Farmers' market every Saturday morning
- Space dedicated to cooking and catering.



NATION STATION - ASSOCIATION

- A place for citizens to meet and exchange ideas.
- Collective kitchen and shared garden.
- Raising awareness about healthy and sustainable food.



THE GOOD FOOD HUB - INCUBATOR

- Helps producers and entrepreneurs to develop their business and their network.
- Organization of meetings between local producers and consumers.



URBAN AGRICULTURE - JAFRA NGO AND CITIZENS

- Creation of gardens above Palestinian refugee camps.



AKLETNA COMMUNITY KITCHEN

- A community and central kitchen in Beirut that employs women chefs from rural and urban areas of marginalized communities.
- Traditional Lebanese cuisine based on local products.
- Preparation of daily meals for individuals.



COMPOST BALADI - COMPANY

- Composting and reuse of bio-waste.

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