



AMMAN
JORDAN

**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 Brucas' 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.

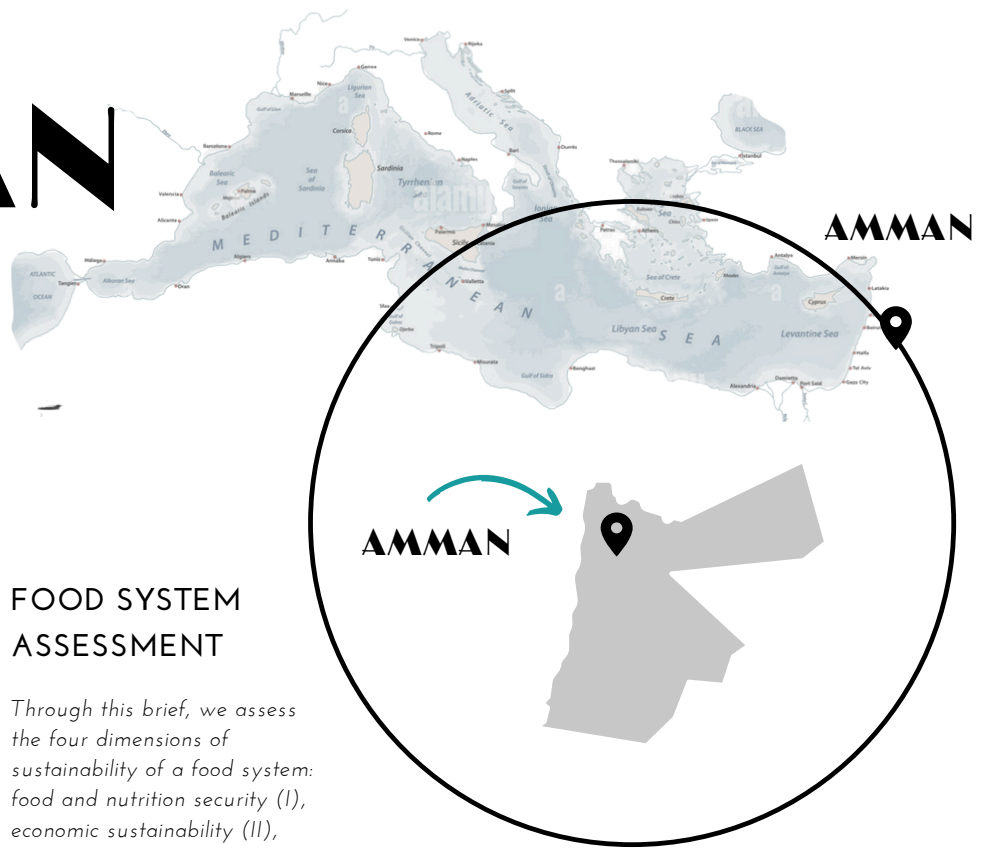
AMMAN

JORDAN

- 11.15 million inhabitants (2021) for 89,342 km²
- **Political system:** multiparty parliamentary constitutional monarchy
- **King:** Abdullah II
- **Prime Minister:** Bisher al-Khasawneh

AMMAN

- 4,061,150 inhabitants (2021) for 1,680 km²
- Amman is home to 45% of the Jordanian population
- **Mayor:** Yousef Shawarbeh



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

Amman is located in the northwest of Jordan, of which it is the capital. The city has a semi-arid climate, and the country has very few water resources, which makes it a challenge to supply the population. Amman is also home to around 150,000 Syrian refugees.

I. Food security undermined by successive crises

- *Share of Amman residents living below the poverty line: 15.7 % (2)*
- *Number of Amman residents who are food insecure: 160 000 (2014) (12)*
- *Unemployment rate in Jordan: 19 % (2)*
- *Share of food in the household budget: 28.2% in Amman, 32.5% in Jordan (compared to 20.4% in France (1))*

Jordan is experiencing low economic growth (+2.2 in 2022 (11)). Unemployment amongst young people is high (around 50% of 15-24 year olds in 2022 (13)), while they represent a large share of the population (the median age in Jordan is 22.4 years (Department of Statistics, 2019)). 15.7% of the Jordanian population was living below the poverty line in 2021 (2).

Trade liberalisation has expanded the presence of hypermarkets and supermarkets in the city (2). Food prices have risen by 4.8% since the successive crises affecting the country (COVID, war in Ukraine) (3) and fresh produce is generally more expensive than processed products or ready-made meals, which does not encourage the population to turn to fresh and healthy food.

Moreover, Jordanians are still not very aware of the importance of a healthy and balanced diet (6). All these factors help to explain the high rates of obesity (over 30% of the population according to the WHO in 2014) (4).







Furthermore, half of the cultivated land in the Near East and North Africa region is classified as highly vulnerable to climate change: it is estimated that yields will fall by 10 to 20% by 2050 (7). Thus, Jordan's high dependence on food imports, food price inflation, increasing poverty and the vulnerability of local agricultural production reflect growing food insecurity issues. Urban agriculture, which is quite widespread in Amman, is an alternative that has emerged in response to the many vulnerabilities that affect the local agricultural model. Although the development of urban vegetable gardens can partially meet the fresh produce needs of certain households, its role in the food security of the inhabitants remains anecdotal.

Land use and economic activities in Jordan (32)

Agriculture

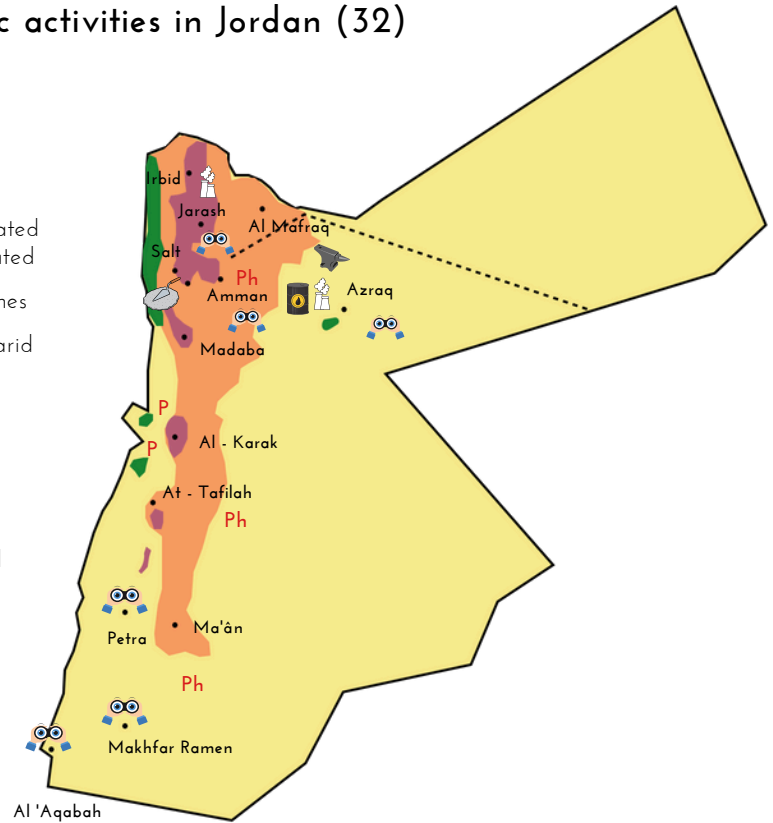
- Cereals
- Agriculture intensive irrigated and non-irrigated
- Olives and vines
- Uncultivated arid region

Industries

-  Light industry
-  Cement plant
-  Steel rolling mill
-  Tourist centre
-  Oil refinery
-  Oil pipeline

Minerals

- Ph Phosphate
- P Potash



II. An important agri-food sector for the country's economy but a lack of support for small producers

- Share of agriculture in the country's GDP: 5.6% (8) ;
- Share of the country's food needs covered by imports: 98% (Jordan Investment Commission, 2017) (9) ;
- Share of the food industry in the country's industrial activity, in terms of turnover: 15.4% (10) ;
- Amman is home to the largest wholesale market in the country (30,000 t of products per day).

Although the official share of employment in the sector (outside Amman) varies from 0.8% to 5.8%, agriculture remains the main source of household income in rural areas. However, the agricultural sector suffers from a lack of attractiveness and insufficient means of production. In 1994, Jordan lost prime agricultural land as a result of the Israeli occupation of the West Bank. In the Amman area, land for cereal cultivation decreased by 65% and for market gardening by 91% between 1975 and 2007 (12). Jordan's food trade balance is structurally in deficit and the country imports almost all of what it consumes. The main imported products are cereals with barley, wheat, maize, rice, refined sugar, soya cake and beef. Climate change makes farming difficult, as it does not provide a stable income (dependence on decreasing rainfall). In addition, inflation and the recent political and energy crises have led to an increase in the cost of inputs for producers, who are seeing their expenses rise (3). Many Jordanians are abandoning their land and farms for more lucrative activities in Amman or abroad or for the gradual expansion of urban areas (10).

The municipality of Amman is in charge of markets and hosts the largest wholesale market in the country, through which all fruits and vegetables sold in the city transit (the same is true for imported and exported products): this could be a relevant lever to promote access to urban markets for small Jordanian producers (this lever is not currently used, as small Jordanian producers do not benefit from specific marketing conditions) (3).

MERVAT MOHAMMAD ALMHIRAT

"There are big issues of NCDs in Amman, especially on obesity and diabetes. The ministry of Health is developing campaigns to raise awareness on health but it would also be the role of the municipality, closer to the people, to raise awareness on those issues."

Dr. Mervat Mohammad Almhiraat, city manager deputy for Health and Agriculture Affairs, Municipality of Amman



WALID
ABED
RABBOH

"Beyond the official FAO definition (33), there is a fifth component of food security: food governance. In Jordan, until recently, there was no body dedicated to food security, either at the national or local level. This has caused real problems of coherence of public policies, which are sometimes contradictory, and lack of efficiency in the use of public funds, which are nonetheless significant. Jordan and Amman host many projects led by international NGOs, UN organisations, etc. At the national level, the process of building a strategy to fight against food insecurity has led to the creation of the "food security authority". This is a multi-stakeholder entity that aims to facilitate decision-making and strengthen the coherence of actions taken by all in favour of food security. This new authority mobilises nearly 7 different ministries, private and associative actors, but also the municipalities which have a key role because of their proximity to the inhabitants."

Walid Abed Rabboh
Senior International Expert on
food security and agriculture

COMPETENCES

Municipality of Amman:

- Urban agriculture
- Food markets
- Slaughterhouse
- Food safety in markets and stores
- Waste collection

III. An agricultural model that is not sustainable but organic farming is gradually developing

- Share of agriculture in the country's total water consumption: 65% to 72% (14);
- An arid and dry climate: 90% of Jordan's total surface area receives less than 200 mm of rainfall per year ;
- 300 hectares are being converted to organic agriculture in Amman.

The country has a dry climate and the lack of water threatens the current agricultural model (10). Jordan is the second least watered country in the world and 65% to 72% of the resource is used for agriculture (14). Agriculture is only possible on these very dry soils with intensive irrigation, provided by the King Abdullah Canal, which diverts much of the water from the main tributary of the Jordan, the Yarmouk (17). Agricultural policies have encouraged mechanisation, monoculture and the massive use of synthetic fertilisers and pesticides (18). On the other hand, the poorly structured land policy has pushed farmers to settle on marginal land. These factors increase land degradation and desertification. Faced with the negative impact of agriculture on the already highly fragile and degraded environment, organic farming has become one of the main priorities of the Jordanian agricultural policy agenda. Most of the land is devoted to permanent crops, including fruit trees, which account for 96% of the area under organic cultivation (compared to only 1% for vegetables). In 2019, 1,446 hectares were organically cultivated (19). However, the population of Amman is not necessarily aware of organic farming and these products remain more expensive than conventionally grown products (6). Finally, there is no strict waste sorting programme in Amman, even though this is part of the Municipality's responsibilities. Biowaste represents 50% of municipal waste (21) and is not recycled, even though it could partly replace synthetic fertilisers and enrich the largely degraded land. Part of the food waste occurs at the level of Amman wholesale market - while there is growing interest from the municipality, no solution has been implemented so far to tackle this food waste issue (34).

IV. Urban agriculture as a vehicle for a new local food governance

- Urban agriculture has been an integral part of Amman's municipal agenda since 2007 ;
- Amman hosted the "Food Systems Summit" in July 2021 ;
- Creation of a multi-stakeholder "National Food Security Council" in 2022.

The Greater Amman Municipality has been implementing an urban agriculture and food security programme since 2007 by cultivating public land. Through its "Office for Urban Agriculture" and its Multilateral Forum (collaboration between public and private entities, NGOs and citizens to jointly plan urban agriculture in the city (5)), the municipality has developed partnerships with several international organisations to encourage inhabitants to produce part of their food themselves. It relies on a municipal strategic programme to collaborate with the various actors who are mobilising to develop urban agriculture in the territory and is supported by several ministries such as the Ministry of Agriculture and the Ministry of the Environment (5). More than 300 gardens are present on the roofs of buildings and 4,000 in schools and private homes. A land bank connects landowners with producers and new land use guidelines require 15% green space or crops (22). The Municipality is also coordinating the Central Market Council involving farmers, traders, police, Ministry of Agriculture and local communities (34).

Amman also hosted the first secretariat of the Global Soil Partnership, organised by the FAO in 2015 (24). The first launch workshop established a Near East and North Africa Soil Partnership and was attended by 12 national institutions (25). The Minister of Agriculture of Jordan, in partnership with the UN, also hosted the "Food Systems Summit" in July 2021 in Amman (26). Responding to the King's vision to transform Jordan into a food security hub, the Ministry of Agriculture partnered with the FAO and WFP to launch a food security strategy, which led to the establishment of a national food security council in 2022: this inter-ministerial and multi-actor council aims to coordinate funding and actions in favour of food security. The Municipality of Amman takes part in this council (27).

A FEW INITIATIVES FOR SUSTAINABLE URBAN FOOD SYSTEMS

MUNICIPALITY OF AMMAN AND BLOOMBERG FOUNDATION - GLOBAL MAYORS CHALLENGE

- Grant and technical support to develop projects issues related to: economic recovery and inclusive growth, health and wellbeing, climate and environment and gender and equality
- 2022 - 2025

AMMAN MUNICIPALITY - SUPPORT TO URBAN AGRICULTURE

- Multi-stakeholder forum to coordinate urban agriculture actions,
- Linking landowners with urban producers.

FROM FARM TO FORK IN JORDAN - CULINARY CULTURE PROMOTION

- Company promoting sustainable culinary tourism,
- Tourist and culinary guide (20).

NOUR AL BARAKAH - BARAKAH FARMERS MARKET

- Founded in 2009,
- Garden and weekly public market in Amman,
- Sells organic products and women's handicrafts,
- Local businesses and small producers.

GREENING THE CAMPS - ROOFTOP FARMING

- Established in 2017,
- Using unused roofs in refugee camps in Amman to grow vegetables (15).

INAYA PERMACULTURE CENTER - PERMACULTURE TRAINING

- Training farmers in permaculture since 2017 (29).

SUSTAINABILITY LIVING LAB FOR FOOD - WATER - ENERGY - IN URBAN ENVIRONMENTS

- A 3-year transdisciplinary research project,
- Supported by Stanford University and Greater Amman Municipality (16).

AMMAN DESIGN WEEK - "MOUNEH: THE ART OF PRESERVATION" FOOD PROGRAMME

- Exhibition on Jordanian culinary culture and promotion of local produce in 2017

WFP-UNICEF PROGRAMME - PARTICIPATION OF JORDANIAN YOUTH IN BUSINESS CREATION ON INNOVATION ISSUES FOR THE COUNTRY'S FOOD SECURITY

- Innovative projects set up by students, e.g.,
- "Golden Sands": conversion of agricultural waste into organic fertilizer
- Natural fertiliser to increase production (31).

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