

## **Mainstreaming Urban Agriculture in the Middle East and North Africa: a multi-stakeholder approach**

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**Abstract:** Several constraints have limited the development of sustainable urban agriculture (UA) in developing countries mainly prohibitive urban policies and regulations. This article sheds the light on a multi-stakeholder approach that was implemented in Amman, Jordan by the Environment and Sustainable Development Unit (ESDU), American University of Beirut, Lebanon within the context of a project led by RUA Foundation (Resource Centers Network on Urban Agriculture and Food Security) to mainstream urban agriculture in the Middle East and North Africa (MENA) region between 2007 and 2009. Participatory and Multi-stakeholder Policy formulation and Action Planning (MPAP) is a process of collaboration between public and private sector in the preparation, implementation and evaluation of policies and related action plans. The process reviewed the existing data and statistics about UA and food security and existing policies and regulations related to UA. An extensive stakeholder analysis and mapping of cultivated and vacant land in the city was carried out. Consequently, a multi-stakeholder forum (MSF) was established and a policy narrative and City Strategic Agenda were developed serving as an operational tool for UA in Amman. The efforts to identify key action points culminated in the municipality of Greater Amman taking the initiative to establish a specialized UA bureau with dedicated human and financial resources. The municipality and other interested and influential stakeholders adopted the city agenda as part of the city strategy for developing agriculture in 2009. The UA bureau has worked diligently to include UA as a major component of greening initiatives in the city and rezoning initiatives. In parallel, pilot projects were implemented such as rooftop gardening in poor neighborhoods, and vacant land assessment to serve as a database to link owners with farmers. The approach marked significant progress in bringing UA to table as a major policy point.

**Keywords:** urban agriculture, multi-stakeholder approach, Middle East North Africa region.

### **Significance of urban agriculture**

The role of agriculture in urban areas is gaining recognition across the globe as a response to increasing urban poverty, food insecurity and scarcity of natural resources. For the purpose of this publication, urban and agriculture are used in their broadest meanings, pertaining to the definition of urban agriculture by Jac Smit et al, 1996: “an industry that produces, processes and markets food and fuel, largely in response to the daily demand of consumers within a town, city or metropolis, on land and water dispersed throughout the urban and peri-urban area, applying intensive production methods, using and reusing natural resources and urban wastes, to yield a diversity of crops and livestock”.

The average world urban population is estimated to be 51% (percent of total population living in urban areas) and the number of urban poor is quickly growing. Developing countries account for a large and rapidly increasing proportion of the world's urban dwellers (Population Reference

Bureau, 2012): 77% of Latin Americans live in cities, while in Asia and Africa the proportion is currently 39% and climbing at a rate of 3% and 4% per year, respectively (United Nations, 2003).

The United Nations Development Program UNDP estimated in 1996 that 800 million people are engaged in urban agriculture worldwide. Of these, 200 million are considered to be market producers, employing 150 million people full time (UNDP, 1996). Since then, urban poverty and the number of families involved in some kind of urban agriculture have substantially increased.

Urban Agriculture is a noteworthy source of income and savings and the up and downstream effects of urban agriculture in the local economy can be considerable. Growing your own food saves household expenditures on food and poor people in poor countries generally spend a substantial part of their income (55 – 70%) on food (FAO, IFAD, WFP, 2011).

### **Urban Agriculture in the MENA**

Agricultural production in and around cities is an ancient activity in the Middle East and North Africa (MENA) region. In Middle Eastern cities, a higher percentage than average of the overall population lives in conurbations, hence urban agriculture has a powerful role in the cities. Despite the negative pressures and increasing demand for land and water, crop cultivation and animal husbandry remain common throughout the region's cities (Nasr J., Padilla M., 2004). Fertile agricultural areas are still considerable and are expected to remain productive for years to come and are an important source of income and job opportunities.

Although in Jordan, Amman has the lowest poverty rate of all governorates, 8.5% and an unemployment rate of 12.7% (Directorate of Statistics, 2010), it is home to the largest number of poor individuals due to the high concentration of population: 196,000 people live in poverty, representing 9.43% of the poor in Jordan (World Bank, 2009). Consequently UA could positively affect the standard of living in Amman where a significant amount of land is still allocated to agriculture use (42% out of the total available land area was in agricultural use according to the Department of Statistics, 2002). On the fringe of the city of Beirut, Lebanon, despite the increasing pressure of urbanization, the main vegetables are produced year round and most of the households involved in farming activity obtained all their income from this activity (Tohmé Tawk S., 2004). In Sana'a, Yemen a large number of citizens (9,770 as estimated in 2007) still work on 9,300 hectares of agricultural land in the city. The same 2007 census showed that more than 37,500 tons of vegetables (leak, coriander, radish, onions and tomatoes), forage (alfalfa, maize and barley), fruits (grapes, berries, nuts, peaches and apricots) quats and other seasonal grain crops were produced on 7,700 hectares (YASAD, 2007).

### **Constraints to urban agriculture**

Several constraints have limited the development of safe and sustainable urban agriculture particularly in the Middle East North Africa region. They include prohibitive urban policies and regulations where cities in developing countries are often perceived as solidly built up with no specific zoning for agriculture use.

Urban agriculture in the MENA countries is at present a highly diverse and widespread activity, yet it still suffers from lack of recognition from the planners, agriculturists, policy-makers, researchers and even by its practitioners. Research, extension, resources, suitable policies and strategies concerning existing urban agricultural lands and other urban fertile areas are almost non-existent (Nasr J., Padilla M., 2004).

Consequently, any long-term efforts to institutionalize urban agriculture must adopt a participatory approach. The present article sheds light on a participatory multi-stakeholder approach

which facilitated the integration of urban agriculture in urban policies and programs, building capacity among local authorities and other local stakeholders in the city of Amman-Jordan.

### **The Multi-stakeholder Policy Formulation and Action Planning in Amman**

The multi-stakeholder policy formulation and action planning approach was developed in the 1990's in the context of the UNEP Local Agenda 21 programs and the UN Habitat city consultation strategies (UN Habitat and UNEP, 1999). The process of multi-stakeholder is increasingly considered to be an important element of action planning and policy design. Involving several stakeholders in decision-making enhances inclusive policies and programs to be developed and implemented. Urban agriculture involves different actors and sectors and coordination among them leads to successful actions. Multi-stakeholder processes have been widely promoted in different sectors and provide a negotiating space for a diversity of interest (Dubbeling M. et al, 2010).

The multi-stakeholder approach was implemented in Amman, Jordan by the Environment and Sustainable Development Unit (ESDU), American University of Beirut, Lebanon within the context of a project led by RUA Foundation (Resource Centers Network on Urban Agriculture and Food Security) to mainstream urban agriculture in the Middle East and North Africa (MENA) region between 2007 and 2009. The process was initiated in 2007 by conducting an exploratory study on UA. A core team was trained on participatory methodologies and tools leading to the development of a city strategic agenda and the establishment of a multi-stakeholder forum (MSF) aiming at supporting the sustainable development of UA.

The exploratory study included a review of the existing data and statistics about UA and food security, a critical review of existing policies and regulations related to UA, an extensive stakeholder analysis, mapping of UA land in the city and of vacant spaces that can be potentially used for agriculture. The Participatory and Multi-stakeholder Policy formulation and Action Planning (MPAP) process involved urban authorities, citizens, farmers, civil organizations, private sector companies and other governmental entities in the preparation, implementation and evaluation of policies and related action plans.

### **Results and outcomes**

The MPAP team in Amman was led by a core unit consisting of some municipal departments, in addition to university and farmer representatives. The core unit guided the implementation of the MPAP process and was based at the Municipality of Greater Amman to produce the exploratory study.

#### **Exploratory study**

The exploratory study revealed that in the city of Amman, almost 60% of the land is not constructed and hence available for agriculture. The total agricultural area in the city is around 3.2 million hectares on which 18.4 per cent of total crop production and 19 per cent of total livestock production of the Kingdom is produced (GAM, 2007).

Although water is a major limiting factor (annual average rainfall is 275 mm but total rainfall varies between 200 and 500 mm depending on the location within Amman) still 22% of urban households are engaged in gardening or other forms of agriculture. Two major categories of UA were documented: 1) Peri-urban full-time farmers, who own large areas of land (between 0.5 and 10 hectares), used for vegetable production, olive trees and animal production mainly goats and sheep; 2) Small scale urban farmers who, often part-time, produce a variety of crops on their home gardens, mainly vegetables. The most important challenges identified in the exploratory

study were water scarcity, urban sprawl on agricultural land, the high increase in land prices, land ownership fragmentation and prohibitive legislation.

### **The multi-stakeholder forum and city strategic agenda**

The completion of the study led to the establishment of a multi-stakeholder forum (MSF). The process was initiated in Greater Amman Municipality; the forum comprises 28 participants and includes in addition to the municipality, the Ministries of Agriculture and Environment, as well as the Royal Directorate for the Environment, the University of Jordan and a number of Civil Society organizations. The forum created a number of working groups on media, technical issues and legal issues. Furthermore, a policy narrative was elaborated to serve as a basis for the development of the city strategic agenda for the mentioned working groups. Based on it, the following priority issues were identified as the main areas for action in the City Strategic Agenda on UA:

- Improving access to water by the reuse of grey water and recycled sewage water, rainwater harvesting, installment of water reservoirs, adopting efficient irrigation techniques, and introducing drought tolerant plants.
- Supporting urban agriculture producers by providing adequate training and extension services, appropriate inputs and by strengthening their organizational skills.
- Analyzing existing laws and regulations relevant to urban agriculture and introducing new laws.
- Supporting farmers' markets and fairs to insure optimal profit to urban producers.
- Improving post harvesting techniques and meeting international standards to market better quality produce.
- Enhancing access to credit, particularly important in the realization of technical and organizational improvements along the market chain.
- Consequently, the MSF established new working groups for each of the above key issues to recommend new actions to be included in the city agenda on UA.

### **Institutionalization of urban agriculture**

The efforts to identify key action points culminated in the municipality of Greater Amman taking the initiative to establish a specialized UA bureau with dedicated human and financial resources, which gives solid sustainability and institutionalization prospects for the City Strategic Agenda. The municipality and other interested and influential stakeholders adopted the agenda as part of the city strategy for developing agriculture. In parallel, pilot projects were implemented such as rooftop gardening in poor neighborhoods, vacant land assessment to link farmers to land owners and value chain development of selected produce.

This institutionalization of UA through the MPAP and the MSF has had dramatic success. The UA bureau at the municipality and the Amman Institute have worked diligently to include UA as a major component of greening initiatives in the city and rezoning initiatives. It has also included UA in a policy initiative to allow the city to capitalize on CO2 credits in the global market. The initiative, dubbed Amman Green Growth marked a major shift in the outlook of urbanization in Amman and Jordan as a whole. Urban farmers' participation to the forum was key to build their lobbying capacities for a participatory and inclusive decision-making processes.

Laws and regulations related to urban agriculture were revisited and suggestions for modification were presented to the municipality and the legislative institutions concerned with urban planning and the local authorities. Such new legislation included support as well as immediate restrictions of the re-zoning of agricultural land for non-agricultural use and the development of informal housing in or near agricultural areas.

The main outcomes of the multi-stakeholder mainstreaming process are summarized in table below:

Table 1: Outcomes of multi-stakeholder process to mainstream UA in Amman

Action	Outcome
Municipal unit or program established	Municipality of Greater Amman (GAM) established a specialized UA bureau GAM implements a city-wide UA project to promote home gardening for food security
Funding and support	The multi-stakeholder forum on urban agriculture secures funding for the activities that were agreed by the partners in the city agenda with the forum serving as a key interlocutor for major donors. GAM provides farmers with in-kind support Micro-credit institutions are aware of urban farming and are securing micro-credit
By-laws and regulations adapted	15% of the surface of any building permit should be dedicated to green spaces and/or home garden
	Incorporation of UA in the new master plan in Amman
Gender mainstreaming	A female member was appointed as the coordinator of the urban agriculture bureau at the municipality
Institutional capacity building	MSF members such as <i>associations</i> , NGO's and cooperatives have incorporated UA in their institutional programs

The multi-stakeholder forum on urban agriculture also played a critical role in securing funding for the activities that were agreed by the partners in the city agenda with the forum serving as a key interlocutor for major donors.

The ESDU multi-stakeholder approach in Amman has proved to be an effective operational tool to promote UA in the MENA. Elsewhere in the world, MPAP has been applied and provided institutional support for UA in Asia and Latin America. In Sri Lanka the approach helped in developing institutional synergies for the effective development of UA and its adoption at different levels of government (Amerasinghe P. et al, 2011) while in Brazil, it proved the importance of implementing a decentralized operational system to supply services to urban farmers and help to reinforce the role of the state in policy making (Santandreu A. et al, 2011).

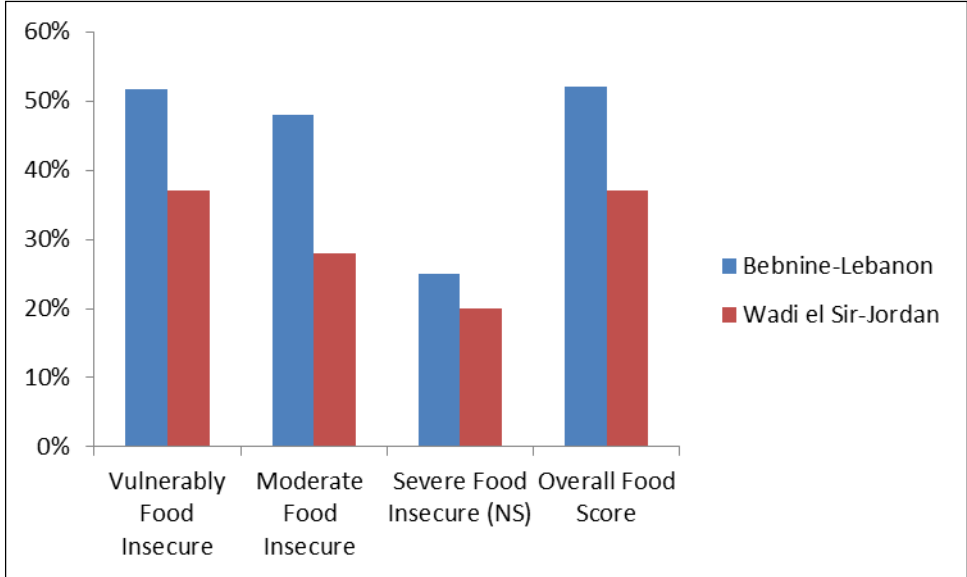
### **Impact beyond the process timeline**

As a follow-up on the mainstreaming initiative of UA in Amman, a study was conducted in 2011 to describe agriculture activities and investigate food security in a comparative approach between two peri-urban communities:(i) Bebnine-Akkar, Lebanon, where agriculture is lacking institutional frameworks and (ii) Wadi el Sir, Amman, Jordan, where urban agriculture is being institutionalized (Tohmé Tawk et al, 2014). When the local policy environment was supportive of these activities, producers in such areas were more food secure than producers in areas where agriculture is not supported, which is the case in Amman where the government is supporting the presence of agriculture within the districts of the capital through the municipality.

These results showed that when the local environment is more conducive to agriculture production, producers are less food insecure (Figure 1). While some positive benefits have already been

seen in Amman, the support for agriculture is relatively recent, and it is likely that further benefits will be evident in the future. Additionally, urban agriculture has likely provided a safety net for these families who have traditionally practiced agriculture by providing some additional income and extra food for household consumption.

Figure 1: Frequency of food insecure households according to 3 indicators of food insecurity: Bebnine Lebanon versus Wadi el Sir Jordan



Frequencies tested by Chi-Square at  $p < 0.05$

**Conclusion**

Urban Agriculture, although a tradition, still plays an important role in the MENA, however it lacks policy and institutional framework. Amman offers an example where governments and communities have successfully addressed urbanization and food security through an approach that focuses on UA. The multi-stakeholder process proved to be successful in mainstreaming UA bringing it to policy level and finding solutions to meet varied needs involving governmental institutions and the community. Consequently, UA was institutionalized through a specialized bureau at the municipality and was integrated in the development strategy of the city. The UA bureau is now playing an important role in implementing projects and keeping UA on the policy level in development strategies and actions.

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