Urban Agriculture in Informal Urban Areas

Achieving Territorial Resilience through Youth Empowerment

18th June 2020
# Urban Development Cluster

<table>
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<tr>
<th><strong>PDP</strong></th>
<th><strong>PIP</strong></th>
<th><strong>CBUID</strong></th>
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<tbody>
<tr>
<td><strong>Objective</strong>&lt;br&gt;Public administration and civil society organisations <strong>collaborate</strong> in improving services and environmental conditions for the poor urban population.</td>
<td><strong>Objective</strong>&lt;br&gt;Improved delivery of basic infrastructures and services in 9 informal settlements of Greater Cairo Region through <strong>integrated participatory</strong> urban development approaches.</td>
<td><strong>Objective</strong>&lt;br&gt;Enhancing economic &amp; <strong>equal opportunities</strong> for local population groups most at risk of migrating irregularly, most vulnerable or living in disadvantaged areas.</td>
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<td><strong>Partners</strong>&lt;br&gt;MoHUUC&lt;br&gt;Governorates of Greater Cairo Region (Cairo, Giza, Qalyubeya)&lt;br&gt;Civil Society Organisations</td>
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<td><strong>Partners</strong>&lt;br&gt;MoHUCC&lt;br&gt;Governorates of Asyut, Behaira (possibly Alexandria)</td>
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<td><strong>12/2010 - 06/2019</strong></td>
<td><strong>04/2017 - 12/2020</strong></td>
<td><strong>under preparation</strong></td>
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Context: Participatory Development Programme (PDP)

Improve services and environmental conditions for the poor urban population cooperatively with public administration and civil society

- Participation
- Sustainability
- Capacity Development
- Community Focus
- Local Ownership
- Empowerment
- Partnership
- Gender Equality
Our Target Areas

Total population: approx. 2,000,000

9 informal areas:

- In Giza Governorate
  - Masaken Geziret El-Dahab
  - Markaz El-Abhath (El-Warraq)
  - Old Boulaq

- In Cairo Governorate
  - Ain Shams
  - Ezbet El-Nasr
  - Matariya

- In Qalyubeya Governorate
  - Qalyub
  - Shubra
  - Khosooos
Context: Climate Change Adaptation and Urban Resilience

Participatory Development Programme in Informal Areas

Climate Change and Urban Resilience

Increasing awareness and information level of public administration and civil society organizations with regard to the consequences of climate change on informal urban areas

- Small-scale adaptation measures
- Exchanges and dialogues
- Support in the development of policies and strategies
Socio-economic Measures
As part of the climate change strategy, this measure aims at supporting local communities in urban agriculture activities as a means to provide income generating opportunities while improving the microclimate through a community-based approach.
History: Piloting Urban Agriculture in Greater Cairo Region

- Pilot was implemented in Ezbet El Nasr informal area in 2014
- Built on the cooperation between community members and a lead technical consultant
- Pilot was built on the main objective of studying the urban farming conditions, while raising **awareness**, building **capacity**, and improving **environmental** conditions.
History: Piloting Urban Agriculture in Greater Cairo Region

- Top-down approach
- Implementation through technical partner
- Market linkage relying on project partner
- End beneficiary as a receiver
History: Piloting Urban Agriculture in Greater Cairo Region

Project Outcomes

- 24 residents engaged
- Concept of urban farming gained community wide attention
- Change in perception regarding rooftops
- Exchanges between community members organically formed
- Model replicated with NGOs as main technical leads
Project Design: Social Business Model

Rooftop Farming Hub
as a community-based social business model

A social-business model that is *locally embedded* to support a rooftop farming *ecosystem* and grow a *community of practice* in the field of urban agriculture. Through embedding rooftop farming *knowledge* and *practice* within a locally active NGO in the heart of an informal settlement, it serves as a technical hub, a social hub, and an economic hub.
Project Design: Social Business Model

Rooftop Farming Hub
as a community-based social business model

1. Equipping residents with skills and tools

2. Facilitating regular dialogues and exchanges to support farmers growth

3. Facilitating market linkages
Project Objectives

- Increased productivity
- Reduced spending on consumable food
- Reduced vulnerability to price hikes
- Income generation

- Growing sense of community
- Social networking and participation
- Space for social interaction and recreation
- Healthier home-grown food
- Happier urban communities

- Improved physical conditions of rooftops
- Increased green spaces in urban areas
- Improved micro-climate
- Increased appreciation for green spaces
I. Enabling a Rooftop Farming Hub

✓ Financial Feasibility

- To analyse the socio-economic profile of potential beneficiaries of the project based on a cost-benefit analysis through studying different markets, produce, farming techniques, as well as average consumption.

- To analyse the break-even point, the net returns of each crop, recovery period and return on investment (RoI) costs.
I. Enabling a Rooftop Farming Hub

✓ Financial Feasibility

✓ Technical Feasibility

• To analyse physical and structural conditions of the potential rooftops of potential beneficiaries, social and family dynamics of the households, previous farming knowledge

• To identify most suitable farming technique
I. Enabling a Rooftop Farming Hub

- Financial Feasibility
- Technical Feasibility

**Bed Substrate Culture (BSC)**

This model is suitable for crops that do not need deep roots such as lettuce, radish, celery, Melochia and spinach; and

**Pots Substrate Culture (PSC)**

This model is suitable for crops that need deep and extended roots such as tomatoes, aubergines, green pepper, red cabbage, and crisp head lettuce.
I. Enabling a Rooftop Farming Hub

✓ Financial Feasibility
✓ Technical Feasibility
✓ Capacity Development Programme
I. Enabling a Rooftop Farming Hub
II. Operationalising a Rooftop Farming Hub

- Selection of residents and rooftops
- Training of the beneficiaries by the Rooftop Farming Hub
- Setting up Rooftop Farms
  - Setting up 20 tables 1m x 1m
  - A mixture of peat moss and perlite (1:1)
  - Nutrient solutions: (A) calcium, nitrogen and iron, (B) the rest of the fertilizers of other nutrients
  - Use of natural pesticide
II. Operationalising a Rooftop Farming Hub

✓ Establishing Rooftop Farmers Network

✓ Ongoing Support

- Setting up a watsapp group for communication
- Support during heatwaves and extreme weather conditions
- Support during infestations
- Facilitation of crop exchanges
II. Operationalising a Rooftop Farming Hub

✅ Market Linkages and Sales

- Local vegetable vendors
- Local markets
- Non-formal markets
- Local food vendors

- Neighborhood scale
- Niche market
Project Outcomes: Strengths and Challenges

- 2 local CBOs enabled as Rooftop Farming Hubs
- 20 households engaged in this programme with 20 tables cultivated each
- Farmer’s network and watsapp group strengthened productivity, commitment and motivation
- Growing interest in Rooftop Farming among the communities

- Feasibility and Sustainability
  - Weather conditions and heatwaves
  - Slow learning curve and/or lack of commitment from residents
  - Lack of commitment from vendors to buy crops
  - Access to water on rooftops
Thank you!

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