

Improving Living Conditions in disadvantaged Areas of Amman via the implementation of Green Infrastructure (ILCA) Project and Urban Micro-lungs (UML) Initiative

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Agenda

1. Overview of ILCA Project
2. Objectives and Goals
3. Key Activities and Strategies
4. Urban Micro-lungs Initiative
5. Miyawaki Method
6. Community Participation and Benefits
7. Summary and Conclusion

Overview of ILCA Project

- Partners: GIZ | MoEnv | GAM
- The ILCA project aims to improve public open spaces in disadvantaged areas of East Amman through green infrastructure.
- Duration: July 2017 - July 2022
- Budget: 5 million Euros



Objectives and Goals

1. Enhance access to public services
2. Improve ecological and social benefits
3. Increase green cover and rainwater harvesting
4. Foster community participation
5. Build municipal capacity



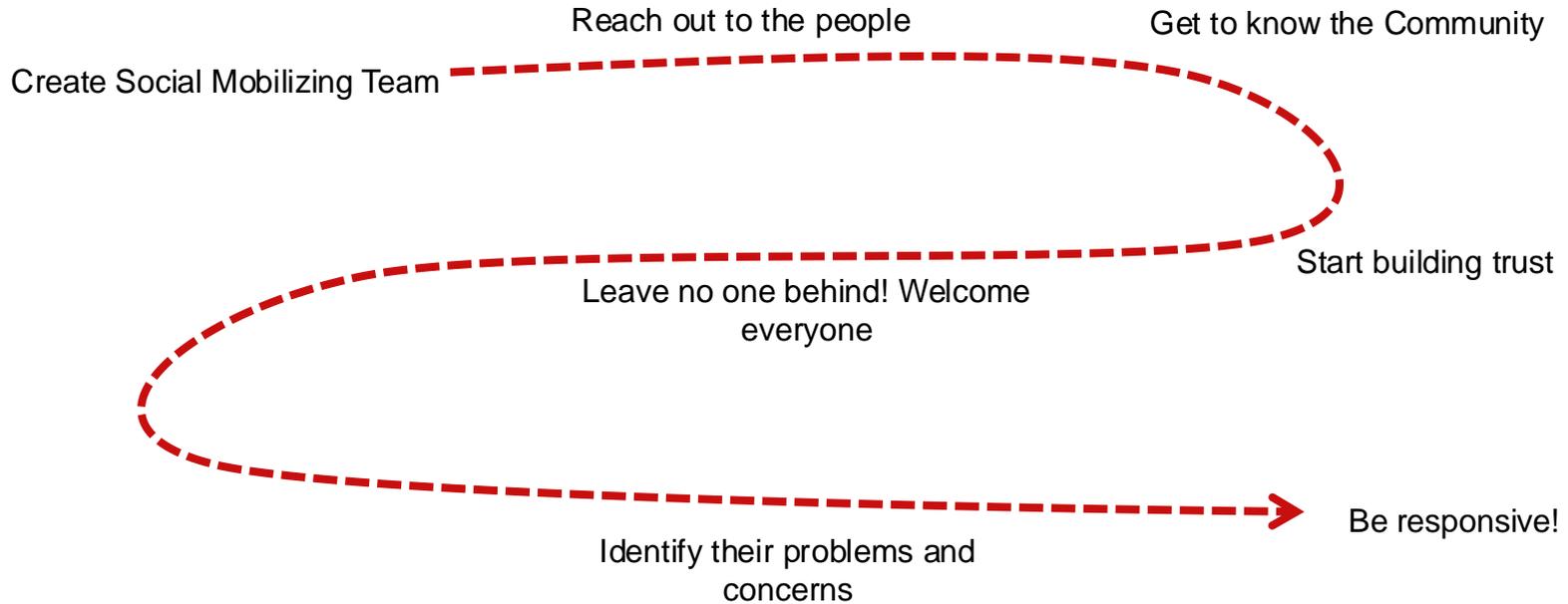
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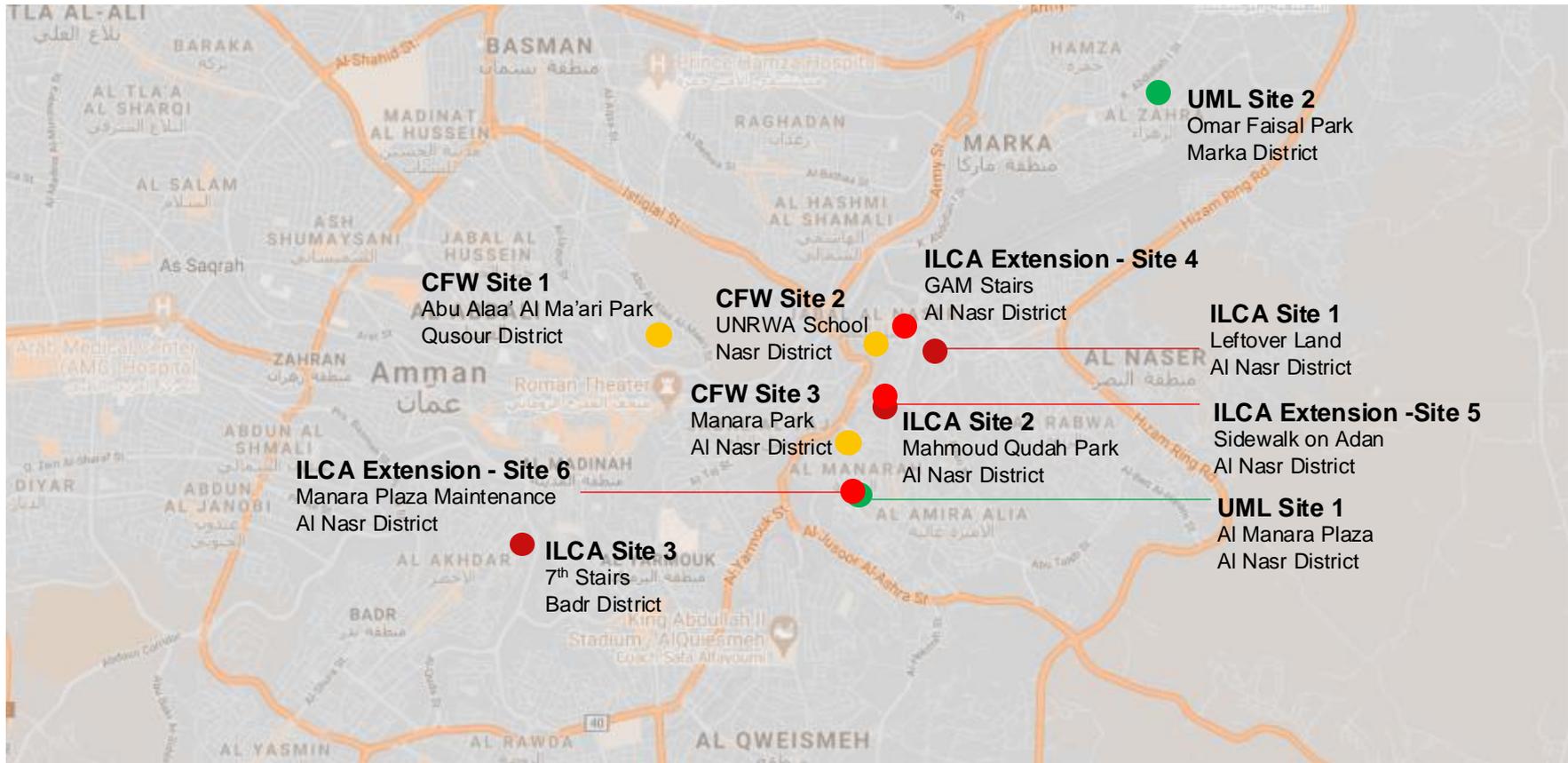
Key Activities and Strategies

1. Participatory design and planning
2. Implementation of green infrastructure
3. Capacity building for municipal employees
4. Community engagement and awareness
5. Monitoring and evaluation



Engaging the Community





Site 1 – Leftover Land



Photos by: GIZ

Before



Photos by: GIZ

After



Site 1 – Green Infrastructure Interventions

- Added picnic area with cement tables and seating.
- Use of permeable materials to reduce water runoff.
- Interlocked tiling on Juneid Street to reduce car speeds.
- Green wall to deal with difference in elevation.
- Added sidewalk on Palestine Street.
- Children’s play area.
- Increased green cover and shading.
- Disability access through ramps and handrails.
- Added lighting fixtures.



Site 2 – Mahmoud Al Qudah Park



Photo by: GIZ

Before



Photo by: Praxis

After

Site 2 – Mahmoud Al Qudah Park



Photos by: Praxis

After

Site 2 – Green Infrastructure Interventions

- Improved accessibility through the addition of slopes and handrails.
- Incorporated vegetation to improve water uptake and runoff.
- More play areas and zones added throughout park to allow for some privacy and more options.
- Football field rehabilitation and the addition of a mini basketball court.
- Materials take into account former flooding issues.



Site 3 – 7th Stairs



Photos by: GIZ

Before



Photo by: GIZ

After

Site 3 – Green Infrastructure Interventions

- Complete rehabilitation of the stairs so that they are easier and more comfortable to use.
- Ramps added to help residents carry things up and down the stairs.
- Railings are provided in order to improve accessibility for the elderly.
- Planters installed to improve water drainage and runoff.



Site 3 – Green Infrastructure Interventions

- Blocks and benches added for seating and to create a social area.
- Lighting fixtures installed for better visibility and safety along the stairs.
- Planters added to walls to engage community to take care of the site
- Drainage channel added
- Municipality contributed to paint all facades



Observed benefits of Community Participation by ILCA

- ✓ Reduce Vandalism
- ✓ Increase sense of belonging
- ✓ Social Inclusive Communities
- ✓ Green Infrastructure and health benefits
- ✓ Positive Impact
- ✓ Resilient Communities



Photo by: Hala Murad

Women, girls and children playing in the football field of MQ Park Al Nasr

Urban Micro-lungs Initiative

The UML initiative aims to create urban forests in disadvantaged areas using the Miyawaki method to improve the urban environment and quality of life.

The Miyawaki method produces dense, biodiverse forests that grow 10 times faster than traditional methods, creating self-sustaining urban green spaces.

- **Partners**
 - **GIZ** (Funding and implementation)
 - **Jordan Ministry of Environment (Political partner)**
 - **Greater Amman Municipality** with agricultural and district staff (Implementation partner)
- **Others Involved**
 - **Tayyun:** Local research studio in partnership with the Japan based Midorization project
 - **Dibeen:** Local Community partner
 - **Royal Greens:** Afforestation Implementation

<p>تحليل التربة SOIL TEST & ANALYSIS</p>	<p>تحليل التربة وتحديد الخصائص الطبيعية SPECIES SURVEY & POTENTIAL NATURAL VEGETATION ANALYSIS</p>	<p>تحليل التربة وتحديد الخصائص الطبيعية SOIL ENGINEERING & FOUND LAYING</p>	<p>تحليل التربة وتحديد الخصائص الطبيعية IDENTIFY PLANT COMMUNITY, NATIVE SPECIES IDENTIFICATION & SELECTION</p>	<p>تحليل التربة وتحديد الخصائص الطبيعية DENSE PLANTATION & NURSERY</p>
<p>نقوم بتحليل التربة وتحديد الخصائص الطبيعية (اللون، القوام، الكثافة، الحموضة، إلخ) لتحديد الخصائص الطبيعية للتربة وتحديد الأنواع النباتية المناسبة للزراعة في هذه التربة.</p> <p>We perform physical and lab tests of soil to provide detailed information on soil color, texture, density, pH and composition and analyze the soil properties.</p>	<p>نقوم بتحليل التربة وتحديد الخصائص الطبيعية (اللون، القوام، الكثافة، الحموضة، إلخ) لتحديد الخصائص الطبيعية للتربة وتحديد الأنواع النباتية المناسبة للزراعة في هذه التربة.</p> <p>We survey the existing vegetation cover and identify the potential natural vegetation cover according to research papers and field observations.</p>	<p>نقوم بتحليل التربة وتحديد الخصائص الطبيعية (اللون، القوام، الكثافة، الحموضة، إلخ) لتحديد الخصائص الطبيعية للتربة وتحديد الأنواع النباتية المناسبة للزراعة في هذه التربة.</p> <p>We work on improving the physical, chemical and biological characteristics of the existing soil, developing an optimal soil structure and building soil beds, using natural and organic fertilizers.</p>	<p>نقوم بتحليل التربة وتحديد الخصائص الطبيعية (اللون، القوام، الكثافة، الحموضة، إلخ) لتحديد الخصائص الطبيعية للتربة وتحديد الأنواع النباتية المناسبة للزراعة في هذه التربة.</p> <p>بناءً على أبحاثنا، نحدد الخصائص الطبيعية للتربة ونحدد الأنواع النباتية المناسبة للزراعة في هذه التربة.</p> <p>Based on our research, we define the potential soil, community and develop the list of species and percentages of different tree layers (e.g. canopy, tree, sub-tree, and shrub layer).</p>	<p>نقوم بتحليل التربة وتحديد الخصائص الطبيعية (اللون، القوام، الكثافة، الحموضة، إلخ) لتحديد الخصائص الطبيعية للتربة وتحديد الأنواع النباتية المناسبة للزراعة في هذه التربة.</p> <p>نقوم بتحليل التربة وتحديد الخصائص الطبيعية (اللون، القوام، الكثافة، الحموضة، إلخ) لتحديد الخصائص الطبيعية للتربة وتحديد الأنواع النباتية المناسبة للزراعة في هذه التربة.</p> <p>We support the nurseries identification and provide a list of selected species with a canopy of 10-20% height per layer. In addition, we identify and establish a species list.</p>

Benefits and Potential of the Miyawaki Method



رئيت الأرض
EARTH LUNGS



صانعات المطر
RAINMAKERS



مخازن الكربون
CARBON SINKS



سبائك غذاء
FOOD BASKETS



علاجات قديمة
ANCIENT HEALERS



موائل للحياة البرية
WILDLIFE HABITATS



مخازن المياه الجوفية
GROUND WATER RECHARGERS



مقاتلون التلوث
POLLUTION FIGHTERS



مهندسات المناخ المحلي
MICROCLIMATE ENGINEERS



العمود للاقتصاد الأخضر
GREEN ECONOMY PILLARS



مناطق خضراء
GREEN SANCTUARIES



حماية الأجيال
LIFE SAVERS

١٠ مرات أسرع
٣٠ مرة أكثر

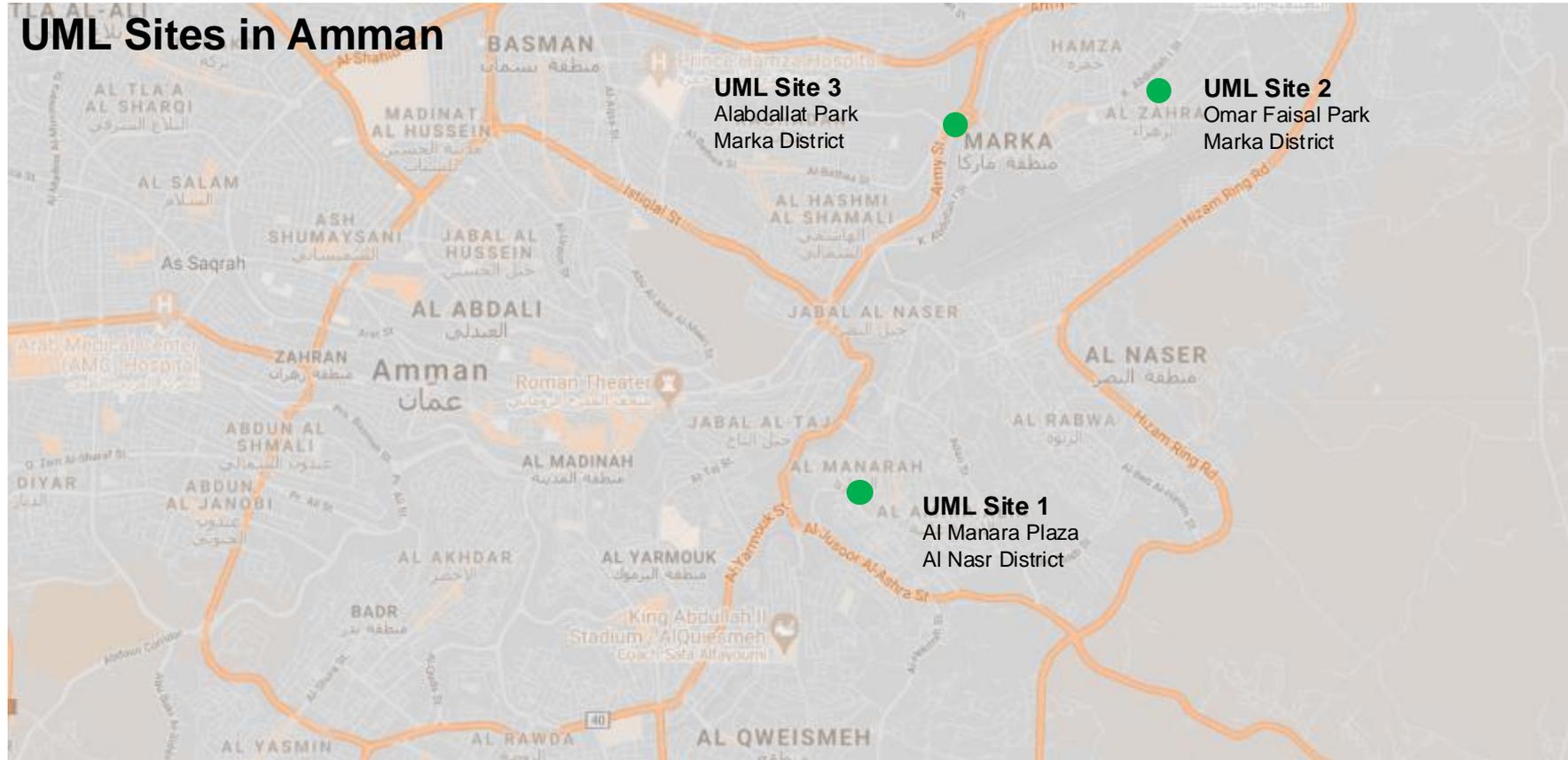
مضاعفة كل الفوائد
في جزء من الوقت

x10 FASTER
x30 DENSER

MULTIPLYING BENEFITS
IN A FRACTION OF TIME

Miyawaki benefits ©Tayyun

UML Sites in Amman



UML Site 3
Alabdallat Park
Marka District

UML Site 2
Omar Faisal Park
Marka District

UML Site 1
Al Manara Plaza
Al Nasr District

Urban Micro Lungs (UML) – Impressions from the Sites



Omar Al-Faisal Park in Marka District



Photo by: Tayyun



Al-Manara Plaza in Al Nasr District



Photo by: Tayyun





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UML Results

Regarding the first two established Miyawaki forests, the following results are achieved:

- A total area of 375 m² was transformed into a green lung within the dense urban setting.
- Approximately 80 volunteers and community members, ages between 6 and 70 years old, participated in planting
- 1210 saplings of 18 types of native trees and shrubs - some of which are critically endangered in Jordan.



FAUNA SPOTTED IN/AROUND MARKA FOREST

INSECTS: BEETLES, GRASSHOPPERS, BUTTERFLIES, BEES, WASPS, GRUBS, WORMS, FLIES. **BIRDS:** HOUSE SPARROWS, YELLOW-VENTED BULBUL, BLACKBIRD, PIGEONS, A BIRD-OF-PREY. **REPTILES:** LIZARDS, CHAMELEONS. **MAMMALS:** FIELD MICE, CATS, AND A DESERT FOX.



<https://www.youtube.com/watch?v=TfjYKkqiOcQ&t=2s>

https://www.giz.com/en/downloads/giz2021_en_ar_UML%20MANUAL.pdf



Community Participation and Benefits

1. Enhanced community identity and well-being
2. Improved environmental quality
3. Increased green cover and biodiversity
4. Strengthened community resilience
5. Achieving SDG 13 and SDG 11



Summary of Main Points

The ILCA project and UML initiative significantly improve living conditions in East Amman by implementing green infrastructure and fostering community participation.



Final Thoughts and Call to Action

To ensure sustainable urban development and improve quality of life, it is crucial to continue investing in green infrastructure and engaging communities in the process.

