Keywords: *Urban agglomeration, food security, food supply chains, foodscapes, socioscapes, new normal, retrofit, repurpose, regeneration, sharing city, tangible and intangible resources, recycling, environmental improvement, in general sustainability. SDG 11, 12, 13 among others.*

1. The issue your project addresses:

Cities and metropolitan areas of the global south witness rapid urbanization. And the Greater Cairo Region is by no means an exception. Informal urban expansions take over former agricultural land and formally planned new towns stretch far onto desert land, expanding into an agglomeration of more than 100 km at its widest measure. The former twin cities Giza and Cairo dissolve in an agglomeration of multiple cities, an incomplete accumulation of diverse urban patches.

What are Urban Patches?

It is understood by the process of urban growth in which cities, fragmented, start to form a MOSAIC pattern.

Long distances, what next?

Analog to the changing urbanization patterns, the Cairo metropolitan areas of approximately 25 million residents presently transforms along an ever expanding network of widened primary roads and newly build elevated highways that dissect the old districts and living neighborhoods to primarily facilitate the commute toward and from the emerging and growing new towns and satellite cities, morphing the already burdened Cairo into a car-oriented metropolis, eventually externalizing the apparent ecological and social costs.

2. Overview of the issue and your approach:

As the city evolves around more concrete and more asphalt, the project imagines to counteract the ongoing transformation by speculating on claiming the vacant lands between and left behind by the many large-scale real estate developments, to retrofit the metropolis with much needed green spaces, yet in times of water scarcity exclusively agro-production. Environmental improvement on all fronts. Productive and aesthetic at the same time. Economic and social, foodscapes as socioscapes. As much as historical maps of Cairo remind us on the important balance between build environment and food production on fertile land close-by, the new layer of urban farmlands and urban food forests suggests an alter-urbanism as a much needed retrofit to the 20th-century planning models that dominate our time-honored city.

. The design response is divided into two parts: a territorial approach that considers the entire metropolis, and a design proposal that seeks to imagine the ambitious landscape in detail.

WHAT? The “Osmotic Network” merges the creation of the foodscapes and social green spaces, while strongly interweaving the new towns and repurposing the vacant lands between the built. Each green string imagines a sustainable food production and supply chain. The new urban layer doesn’t go against the drift, yet seeks to counterbalance the red with the green, thereby enabling for new kinds of shared living environments.

The scientific definition of "Osmotic": Osmosis is a process by which molecules of a solvent tend to pass through a semipermeable membrane from a less concentrated solution into a more concentrated one.

HOW? The selected topographical site at al-Mokattam consists of four "fingers" that correspond to the district's uneven properties and resources. The imagined osmosis-layer has the properties of a fluid that diffuses between the built settlements, having different "solute concentrations" (varying context and fringes) until it reaches an "equal solute concentration" on both sides (a shared space for co-existence). Consequently, each "finger" has a different program (according to the surrounding available resources), contributing to the food supply chain (from resource and production to consumption). These resources not only represent sharing the tangible (waste, water, labor, etc.) but also, sharing the intangible (heritage, memories, cultures, etc.). The "fingers" come together to connected points that complete the cycle of the regenerative city; thus, reusing, recycling, retrofitting, and repurposing resources. Four "fingers" sustainably conveying a strong message of the life cycle.

3. The essence of your solution:

Have you ever lost a loved one and wished you had a second chance to replay your cards? The typical human only learns to appreciate their loved one when they are fully satisfied...

A city represents the life cycle of humans (birth/cityscape to death/cemeteries). In addition, foodscapes are the source of life.

Hence, merging both ideas, the selected site, Al Mokattam, reflects the concept "fingers" spanning over 4 lands representing a complete redo, to convey a deep message of the life cycle story while producing food.

Foodscapes with a co-created design help, honoring the unrecognized garbage collectors for their input and efforts to give life through sustainable recycled fertilizers for the living lands food. Meanwhile, other plant memorial trees to mourn their beloved lost ones.

Tying the land overlooking the garbage collectors (where the city's end cycle/rubbish end) to the land overlooking the city of the dead (where humans life end); they both represent main recycled resources (tangible: waste/water and intangible: memories) that contribute to the sustainable production of the living lands food: a source of life… Hence, recycling to represent a Second Chance at life to learn to appreciate things from the beginning before it is too late.

4. Project description:

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From a territorial approach of upscaling Cairo with foodscapes to the selected site of Al Mokattam, spanning on four "fingers" ... The shared space for sustainable co-existence is designed as follows:

Finger 1 – The Farmland: overlooking the city of garbage collectors, honors these by reusing their resources (recycled fertilizers and treated water) to produce food and create sustainable polyculture farmlands.

Finger 2 – The Golden Field: between an opaque (gated) community and a transparent (co-housing) community, it repurposes the neglected backyard of the gated area by producing yellow/golden foodscapes of crops and agroforestry.

Finger 3 – The Strip: between two residential communities of life, it represents a food production socioscape using colorful agroforestry and edible gardens with a pattern drawn from extended streets to connect to the built. It also introduces new food production technologies: hydroponics, aquaponics…etc.

Finger 4 – The Necropolis: overlooking the city of the dead, it remembers the lost loved ones by using fluxus pathways going through a memorial food forest (with a shape of lungs to breathe the memories).

The four "fingers" are connected at both ends with a food processing and distribution spots to be directly transported using the major road arteries surrounding the site. Therefore, a complete sustainable and local food supply chain that reflects city's purpose and life cycle.

A city of co-existence with shared and regenerated resources creating food security while fighting climate change. Moreover, a caring city that reflects a deeper message of life and foodscapes/socioscapes.

- **ENTRY CHECKLIST:**

1. A4 providing descriptions, approaches, and issues of the project
2. 6 Images:
    A. 1 Image - Territorial Approach (scale 1:150,000)
    B. 1 Image - Exemplary selected Site (scale 1:10,000)
    C. 1 Image - Storyline
    D. 3 Images - Landscape details