Landscape

MIDDLE EAST | SEPTEMBER 2020

EDITOR'S NOTE

In this issue,

As many children go back to school around the world against the backdrop of a global pandemic, and parents embrace the relative peace and tranquillity that comes with that, landscape professionals are seeing a rise in demand for their services, particularly among property owners who want to create their own outdoor sanctuary now that we are entering into the cooler months.

UAE based architect/designer Leiyah Magay shares his advice on why social distancing and good hygiene practices can easily be achieved in the Landscape industry without affecting productivity levels. (Page 8)

Don't miss our regular contributor John. A. Davies who writes about the beautification process that is underway on the streets of Bahrain and provides a detailed look at the various plants and fauna that will be included in the project. (Page 14)

Internationally, we look at projects in Lebanon and South American not forgetting the recent atrocity in Beirut as its still at the forefront of our minds, we include a project that continues the good fight against climate change despite the chaos that's happening around the capital, theOtherForest, planted Beirut's RiverLESS Forest, Lebanon's first Miyawaki urban forest in a bid to improve air quality for generations to come using mass planting of trees. Hear more on page 26

Staying with urban regeneration, we feature a project by the renowned Brazilian urban planner Jaime Lerner who has injected new life into a riverfront project in Porto Alegre, the largest metropolis in Southern Brazil. (see page 22) for the transformation.

Another waterfront project closer to home and set to transform Abu Dhabi into the world's most livable city is the Al Qana waterfront destination, find out more about one of the first post covid proposed projects on page 20.

We hope you enjoy the issue!

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theOtherForest

A NATURE-BASED TOOL FOR ECOLOGICAL AND SOCIAL REGENERATION IN CITIES

By: ADIB DADA
Lead Architect / Founder
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In 2019, theOtherDada [tOD] planted Beirut's RiverLESS Forest Lebanon's first Miyawaki urban forest. tOD is a regenerative consultancy firm developing urban design, architecture and landscaping projects. Its nature-based arm theOtherForest, designs and plants native urban forests to fight climate change and enhance livability in cities of the MENA region. In just 8 months, they have reclaimed five urban landfills in greater Beirut with sizes ranging from 1 sqm to 600 sqm, by planting 2,470 trees and shrubs. Basically, turning these forgotten spaces into vibrant native forests teeming with life.

theOtherDada's work promotes a symbiotic relationship between nature and the built environment by exploring new ways of creating generous and regenerative buildings and masterplans; in essence developing creative solutions that have a positive impact.

Urban forests improve physical and mental health, filter air pollutants, cool cities, sequester carbon, regenerate biodiversity, provide habitat for birds and animals, manage urban floods, and restore the water cycle, hence making cities more resilient to climate change.

From a technical perspective, the team adopted the Miyawaki method of forest-making, because it is scientifically proven to be the best way for cities to mitigate climate crisis. These forests are dense, fast-growing, native forests, which become completely maintenance-free in less than 3 years. ETH Zurich researchers have identified mass tree planting as a cheap and green way to lock carbon into the soil, while the 'World Economic Forum' refers to urban forests planted using the Miyawaki method as the 'secret weapon' against climate change and 'the Guardian' reports that fast-growing mini-forests are springing up to aid climate change in European cities. Urban afforestation also aligns with the 'UN Sustainability Development Goals' numbers 6, 11, 13 and 15.

Nature-based solutions are an alternative to heavy and carbon-intensive infrastructural projects, providing human well-being and biodiversity benefits by protecting, sustainably managing, and restoring natural or modified ecosystems. They address societal challenges effectively and adaptively. Urban forests are scientifically proven as one of the most effective and cost-efficient solution for cities to fight climate change and the many local urban challenges we face on a daily basis.

Community Planting

River stones used to create walkways

Botanical Survey

Pilot Project Watering

Beirut RiverLESS Urban Forest Second Phase of Planting

theOtherDada implements regenerative strategies that improve our environment and serve as catalysts for social change. Our practice strives to create a significant positive impact.

We have chosen the Miyawaki multilayered afforestation method because it outperforms conventional landscaping because it grows 10x faster, 30x denser, sequesters 30x more CO_2 and pollution, while being 100% organic and biodiverse. It is also very dense at 400 trees and shrubs in 100 sq. while requiring half the investment than conventional landscaping, thus providing a cost-effective, competitive advantage for public and private development projects. Being very versatile, the forests can be used as a fence for public spaces or private gardens to protect them from urban chaos and sand storms. Art installations can also be integrated within the forests, aligning with contemporary cities' vision for arts and culture.

Community Planting

Miyawaki forests thrive in any environmental condition, from humid environments to harsh arid deserts. They are ideal solutions for cities in the MENA region as they can be grown fast in very small (1 sqm) to very big plots of lands, irrespective of soil and climatic conditions. Degraded leftover spaces, roundabouts, road medians and urban landfills can be reclaimed into valuable land such as private development landscapes and urban parks.

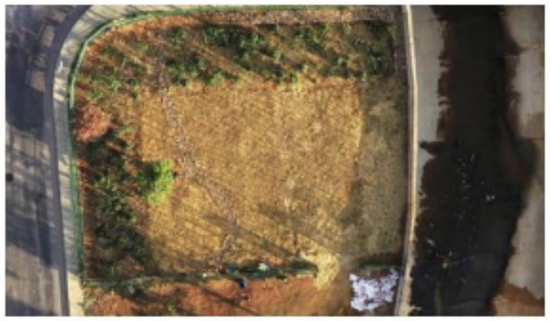
Within 3 years, the forests become completely self-sufficient and maintenance-free. theOtherDada has established a successful collaboration with the leading Miyawaki forest-makers Afforestt, as their official regional partners, and are currently raising funds through the innovative SUGi Project mobile app to afforest more lands in Lebanon and the MENA region at large.

Urban challenges are on the rise, costing cities and governments millions every year in environmental degradation and healthcare costs. Besides issues concerning increasing air and water pollution and temperatures while decreasing green spaces, we face more environmental challenges such as forests burning and urban areas flooding. According to the 2020 Greenpeace report, 'Toxic air: The price of fossil fuels': In the Middle East and North Africa region (MENA), Egypt, Saudi Arabia and the United Arab Emirates bear the highest costs from fossil fuel air pollution at an estimated US$6.9 billion, US$6 billion and US$5.9 billion per year, respectively. While Lebanon, Egypt, Syria and the UAE recorded the highest estimated premature death rates due to air pollution in the MENA region.

Beirut's RiverLESS Forest reconnects people with nature and empowers communities to reclaim urban landfills by planting dense native forests, recreating shared habitat for humans and other organisms. The site was chosen specifically for its location next to the river, which has been cut off from the local community and become a heavily polluted dumping ground since its enclosure in concrete in 1968. The forest restores the water cycle, provides habitat for critically endangered species and brings back the river's lost ecosystem services. Other than providing mental and physical health benefits for human beings, urban forests have immense environmental qualities. They reduce urban flooding by allowing water infiltration, reduce urban heat island effect, and require zero resources after the

Compost Tea Use

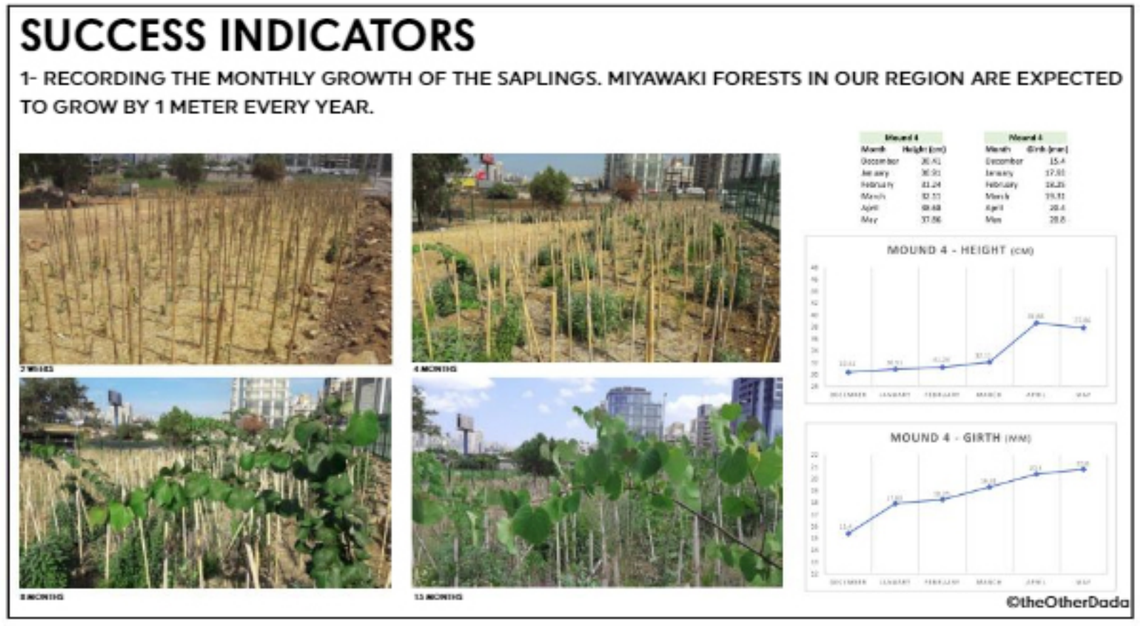
Beirut RiverLESS Urban Forest BEFORE



Beirut RiverLESS Urban Forest AFTER 2000 saplings

Beirut RiverLESS Urban Forest Barren

Beirut RiverLESS Urban Forest During Planting



Biodiversity combined; from microorganisms and fungi, to beneficial insects and birds.

short maintenance period. They also provide habitat for insects and beneficial organisms in the city.

The forest-making process started by locating a suitable area for planting, followed by identifying the native plant species during a natural forest survey with the assistance of a local botanist. The native trees and shrubs we identified are a part of the balance of nature that has developed over thousands of years.

The degraded land was then excavated and the soil was mixed with organic compost and nourishing biomass as a final preparation for the planting. Before planting, the native species were dipped in compost tea, an organic brew we make out of ripe seasonal fruits, molasses and native forest soil. This tea boosts the saplings' growth by returning life to the soil. After 6 months, the soil is already alive, with a rich smell, dark color, and a host of microorganisms and fungal networks.

Throughout the entire forest-making process, communities have come together to reclaim the degraded land and turn it into a green public space. From the land preparation to the continuous maintenance sessions, our native forest has brought together artists, architects, students, teachers, families and kids, and many community members to reconnect with nature through positive action focused on learning and bonding.

Compost Tea Making

In the first 3 years of maintaining the forest, an opportunity to develop fun and healthy social practices arises. The planting of the forest and as well as its maintenance offer a fascinating opportunity to discover the community, the neighborhood and build on a sense of belonging. Collaboration with various players allows the urban forest to thrive on more levels than the environmental ones. Planting and maintaining an urban forest offer an opportunity for bonding, for physical activities and a mental health boost, especially in times of lockdown, where the forest can become safe and physically distant spaces for escape.

Beirut has only 0.8 sqm of green space/capita, versus the WHO recommended 9 sqm/capita; the Beirut River Valley is also an Important Bird Area (IBA 4), it is undoubtedly one of the most important areas for bird migration in Lebanon, with important threatened species relying on the valley during the migration seasons between Africa and Europe.

Beirut's environmental degradation has left communities detached from nature and literally dying from pollution. There has been a major loss of wildlife and insect habitat downstream the river. After 6 months of planting Beirut's RiverLESS Forest, native fauna has already started to come back to live in the newly established ecosystem. The young forest is already thriving, passing all the success indicators of rapid monthly growth, improvements in soil biology, presence of fungal networks, and a return of biodiversity. By implementing urban afforestation, we can regenerate leftover degraded lands into a shared space between humans and native fauna and flora, tackle urban flooding, reduce pollution and urban heat island effect.

theOtherForest is one aspect of theOtherDada's work in climate action. Along with environmental consultancy and architecture, we provide an alternative approach to sustainability through invoking new relationships between climate, landscape, and inhabitants. We ask the same question biomimicry expert Janine Benyus asked: 'What if our cities were as effective and generous as forest?' Providing not only for ourselves, but for other species as well, in perfect balance with Earth's operating conditions. We can rewild our cities by planting a forest as a team building exercise, a CSR campaign, to set an example, as a new family tradition, a gift to a friend, for you, for your community, for your city, and for the planet. Essentially working with nature to transition our cities to healthy and resilient communities. ■