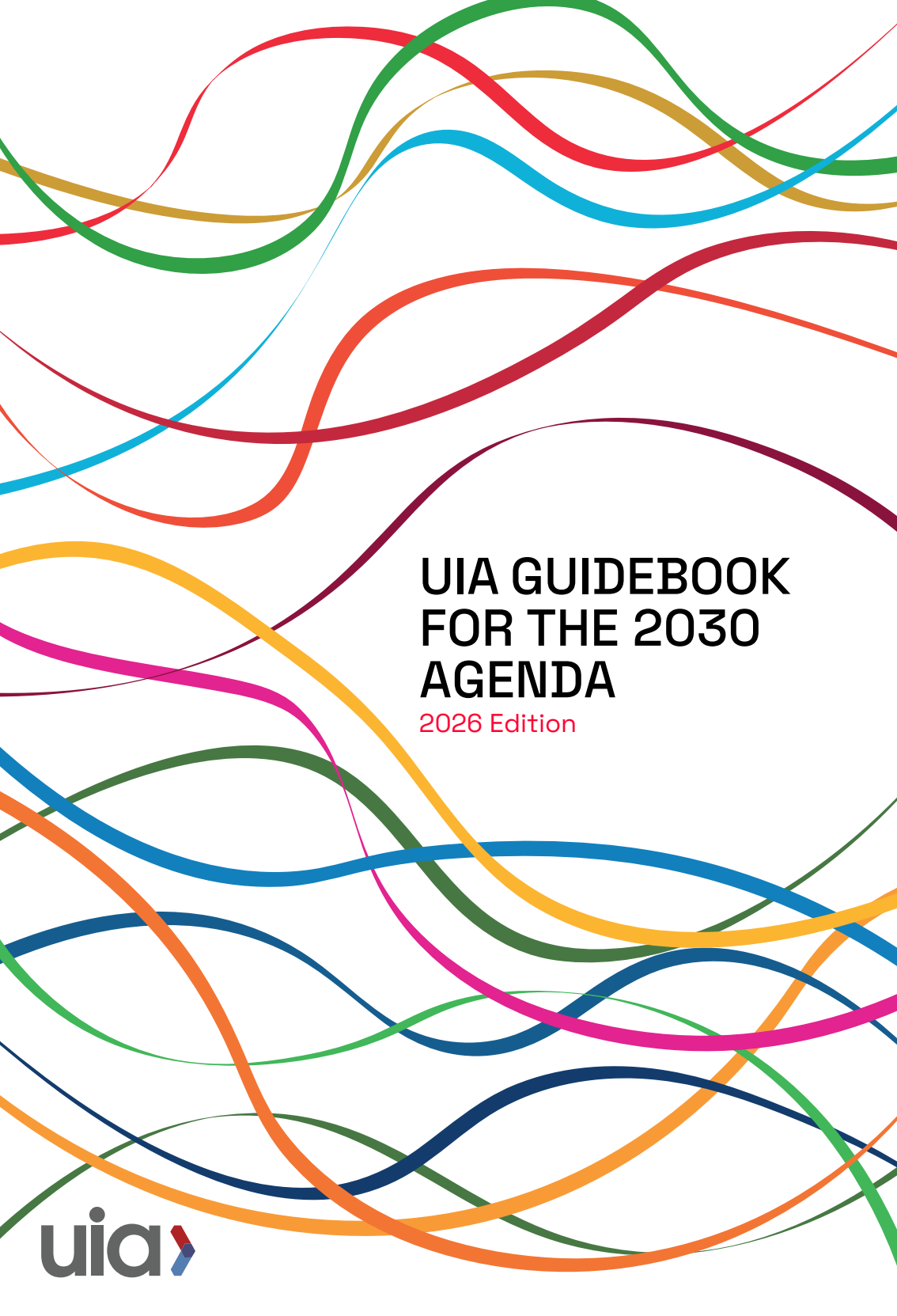


The background of the cover is white, overlaid with numerous thick, wavy, and flowing lines in a variety of colors including red, green, blue, orange, yellow, pink, and purple. These lines create a sense of movement and interconnectedness.

UIA GUIDEBOOK FOR THE 2030 AGENDA

2026 Edition



THE 17 GOALS

In 2015, world leaders agreed to 17 goals for a better world by 2030. These goals have the power to end poverty, fight inequality and stop climate change. Guided by the goals, it is now up to all of us, governments, businesses, civil society and the general public to work together to build a better future for everyone.

<https://www.globalgoals.org/>





LEAVE NO ONE BEHIND

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PREFACE

On the occasion of the publication of this new edition of the UIA Guidebook for the 2030 Agenda, organised by the UIA 17 SDG Commission, I would like, once again, to extend the appreciation of the International Union of Architects (UIA) to all those who have contributed to this timely and relevant publication.

We are now approaching the 2030 deadline. Ten years after the adoption of the Sustainable Development Goals, progress is uneven and the current pace remains insufficient to meet the commitments made. Millions of people continue to face poverty, inadequate housing, and limited access to basic services, while inequalities persist across regions and communities. At the same time, escalating conflicts, climate disruption, and economic pressures are slowing progress and, in some cases, reversing it. Wars are destroying lives, infrastructure, heritage, and ecosystems, and displacing populations. The environmental toll extends far beyond the impacts of war and the regions directly affected. The carbon footprint of contemporary conflicts exceeds that of

entire nations, while damage to land, food systems, and water resources may take decades to reverse. Accountability for these impacts must be part of the global sustainability discourse. A renewed sense of urgency and responsibility must be established.

As highlighted by the United Nations, the coming years will be decisive. The 2030 Agenda remains within reach, but only if ambition is matched by concrete and coordinated action, which unfortunately does not seem to be a political priority in the present international context. The 2025 Sustainable Development Goals Report underlines the importance of coordinated action, integrating strategies focused on affordable and inclusive housing, participatory urban planning, heritage preservation, and stronger local governance. Only through such collaboration can decisions deliver transformative impact at the environmental, economic, social, and cultural levels.

The UIA continues to affirm the crucial role of architecture in the sustainability discourse. The built environment is central to many of today's challenges: it shapes how we live, how resources are consumed, and how communities interact. Architecture, urban planning, and territorial planning must therefore contribute to more inclusive, resilient, and environmentally responsible development.

As the global organisation of architects, it is our duty to advocate for solutions that place culture at the centre, while caring for identity and a sense of place, supporting people's wellbeing, and improving the quality of life. In this context, the UIA Guidebook for the 2030 Agenda remains a valuable reference. More than a collection of projects, it offers a broad and diverse perspective on contemporary architectural practice, reflecting different geographies, cultures, and approaches. It promotes responsible and context-sensitive solutions aligned with the SDGs and provides a practical tool for professionals, institutions, and decision-makers committed to improving the quality of the built environment.

The UIA Guidebook for the 2030 Agenda is a platform for sharing knowledge and experience, highlighting how architecture can contribute, at different scales, to addressing global challenges while responding to local needs. Each project included reflects a concrete response to the conditions in which it is embedded, demonstrating that progress is built through context-responsive actions.

The UIA once again commends the 17 SDS Commission and its members for their continued leadership in this field. Through its sustained work, under the guidance of its Co-Directors Cid Blanco and Iman Gawad, the Commission's consistent dedication to this important global agenda and objectives reinforces UIA's role in supporting a more balanced, inclusive and sustainable future.

Regina Gonthier
President
International Union of Architects (UIA)

**THERE'S STILL
SO MUCH WE
CAN DO!**

It is our distinct honor to once again present to the global architecture and urban planning community how the work of our profession directly supports the goals set forth in the United Nations 2030 Agenda.

The 2026 edition of the “UIA Guidebook for the 2030 Agenda” is the result of another mandate leading the International Union of Architects UIA's Commission on the UN 17 Sustainable Development Goals SDG. Together with the 2023 edition and the two inaugural publications developed in partnership with the Danish Association of Architects, this volume marks the fourth publication highlighting the work of professionals from around the world whose projects make a direct contribution to the achievement of the SDG targets established for 2030.

As the deadline for fulfilling the commitments adopted in 2015 draws ever closer, and progress remains far from satisfactory, it is more important than ever to inform and engage architecture and urban planning professionals in the significance of this shared global responsibility.

In a context shaped by a pandemic, armed conflicts, extreme weather events, and ongoing economic and political crises, meaningful progress has been limited. Yet these challenges must not weaken our resolve or diminish our commitment to building a more sustainable and inclusive future. For this reason, we remain committed to sharing knowledge and learning from the remarkable professionals whose work was submitted to this edition and selected by our Editorial Board.

We extend our sincere gratitude to the members of the Board for their dedication and rigor in reviewing more than 170 submissions and making this thoughtful selection of projects. We also wish to thank the members of our Commission and the entire UIA team for their invaluable support in promoting the call for submissions, liaising with the selected participants, and contributing to the production of this new publication.

This new volume of the “UIA SDG Guidebook” joins other recent initiatives developed by the UN 17 SDGs Commission, including the “UIA Toolkit” and the “UIA Panorama for the 2030 Agenda”. Together, these efforts continue to reinforce the role of the International Union of Architects as a leading institution in global discussions on sustainability, poverty reduction, and climate action.

The years ahead will require sustained effort and active engagement from the UIA in the international forums that will shape the next global sustainable development agenda. We hope this new edition of the “UIA Guidebook for the 2030 Agenda” will inspire you, and that you will join us in the continued work toward a world that is fairer, less unequal, and undeniably more sustainable.

Cid Blanco and Iman Gawad
Co-Directors of the UN 17 SDGs
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(2024–2026)

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1

NO POVERTY

By 2030, eradicating extreme poverty—living on less than US\$3.00 per day at 2021 purchasing power parity—remains a key Sustainable Development Goal. Despite past progress, an estimated 808 million people (1 in 10 globally) were in extreme poverty in 2025, reflecting an upward revision due to the updated poverty line. At current trends, 8.9% of the world's population will still be extremely poor by 2030. Adding to the concern, hunger has returned to levels last seen in 2005, and food prices are rising more persistently than during 2015–2019.

- Using the updated \$3,00 poverty line, the number of people in extreme poverty was revised from 713 to 838 million in 2022 (World Bank).
- If current trends continue, only 1 in 5 countries will have halved national poverty levels.
- For the first time, over half the world's population receives at least one form of social protection, yet 3.8 billion people remain uncovered.
- Government spending on essential services (education, health, social protection) is significantly higher in advanced economies than in emerging and developing economies.
- Guaranteeing basic social security floors in low- and middle-income countries requires an additional \$1.4 trillion annually, or 3.3% of their aggregate GDP in 2024.
- A surge in action and investment to enhance economic opportunities, improve education, and extend social protection to all—especially the most excluded—is crucial to ending poverty and leaving no one behind.

Source: The Sustainable Development Goals Report 2025

SDG 1 TARGETS

1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$2.15 a day.

1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.

1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance

1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

1.A Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.

1.B Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

For more information: <https://www.un.org/sustainabledevelopment/poverty/>

P14 RECONSTRUCCIÓN PARTICIPATIVA DE VIVIENDA EN SANTIAGO NILTEPEC, OAXACA

1 NO
POVERTY



Author(s): Programa VACA Arch. Juan Carlos Loyo

Professional Architectural

Organisation(s) of the Author(s):

Collaborators: Arch. Alejandra Jiménez - Coordinadora Mtro. Luis Jiménez - Coordinador Tecnologías Apropriadadas y Docente Arch. Azucena Viveros Rosas - Docente Arch. Sarai Delgado - Docente Anchorage: Fondo Levantemos México - Ambulante A.C. Rotary International Oak Club Canadá Kelly+Jones AURONIX S.A. de C.V. AUROTEK S.A. de C.V. Donaciones Voluntarias

UIA Regions: Region III

Client Name(s): Multifamily Housing

Location: Santiago Niltepec, Oaxaca, México

Geographic Coordinates (Latitude and

Longitude): 94°37' longitud oeste y 16°34' latitud norte, a 60 metros sobre el nivel del mar

Status: Completed

Completion date: September 20, 2018

Image Author(s): Arturo Gómez, Programa VACA

Project Description: In the wake of the devastating September 2017 earthquakes in southeastern Mexico, VACA A.C., a participatory architecture platform, initiated a transformative reconstruction project in Santiago Niltepec, Oaxaca. One of the most affected areas, the community saw the loss of its architectural heritage, impacting over 3,000 families. VACA A.C. responded not with traditional aid, but with a methodology that places vulnerable communities, particularly women, at the center of their own recovery.

The project's core is a participatory co-design process that utilizes vernacular construction methods like Cob or Bla—a seismic-resistant mixture of local clay soils and natural grass fibers. This approach directly addresses **SDG 1** by helping families recover from a disaster that destroyed their patrimony, tackling multidimensional poverty through tangible, sustainable solutions.

PLANOS / CASA EPIFANIA Y BETO



PROCESO DE DISEÑO



By leveraging locally sourced, open-access materials (clay, fibers, rocks) and collective labor, the project achieved a remarkable reduction in construction costs—up to 70% compared to conventional methods—embodying the principles of **SDG 12**.

The initiative successfully built four homes for families with the highest vulnerability index, selected based on their need and willingness to participate. This process was a powerful exercise in building resilient infrastructure (**SDG 9**). The homes, constructed using an improved Cob technique, are designed to be six times stronger than adobe, creating monolithic walls that are highly resistant to seismic activity.

This innovation directly contributes to **SDG 13** by preparing the community to better withstand and respond to climate-related disasters, while avoiding assistentialism that can diminish long-term resilience. Furthermore, the exclusive use of natural, locally sourced materials like clay and grass fibers champions the sustainable management of terrestrial ecosystems (**SDG 15**).

The social fabric of the community was strengthened as much as its built environment. Over 30 volunteers from across Mexico and the world worked side-by-side with the four beneficiary families. Through a rotating work system, participants engaged in every stage, from material collection to construction and logistics, fostering profound emotional ties, inclusion, and an openness to other

SGDs considered



realities. This collaborative ecosystem directly supports **SDG 10** by ensuring that knowledge and benefits are shared across different groups. VACA A.C. thus functions as both a support platform for vulnerable families and a school of good practices, empowering volunteers and families alike with replicable, low-cost construction knowledge and reinforcing collective capacities through self-management, a cornerstone of peaceful and inclusive societies (**SDG 16**).

In essence, the Santiago Niltepec project is a microcosm of the 2030 Agenda. It demonstrates how locally grounded,

participatory action can simultaneously address poverty, build resilient and sustainable infrastructure, reduce inequalities, promote responsible consumption, combat the impacts of climate change, protect terrestrial ecosystems, and foster inclusive institutions. By transforming a moment of crisis into an opportunity for collective empowerment and sustainable development, VACA A.C. provides a powerful and replicable model for disaster recovery and community-led progress.



P59 KOTTAMEDU – A DESIGN- LED RURAL HOUSING INITIATIVE

1 NO POVERTY

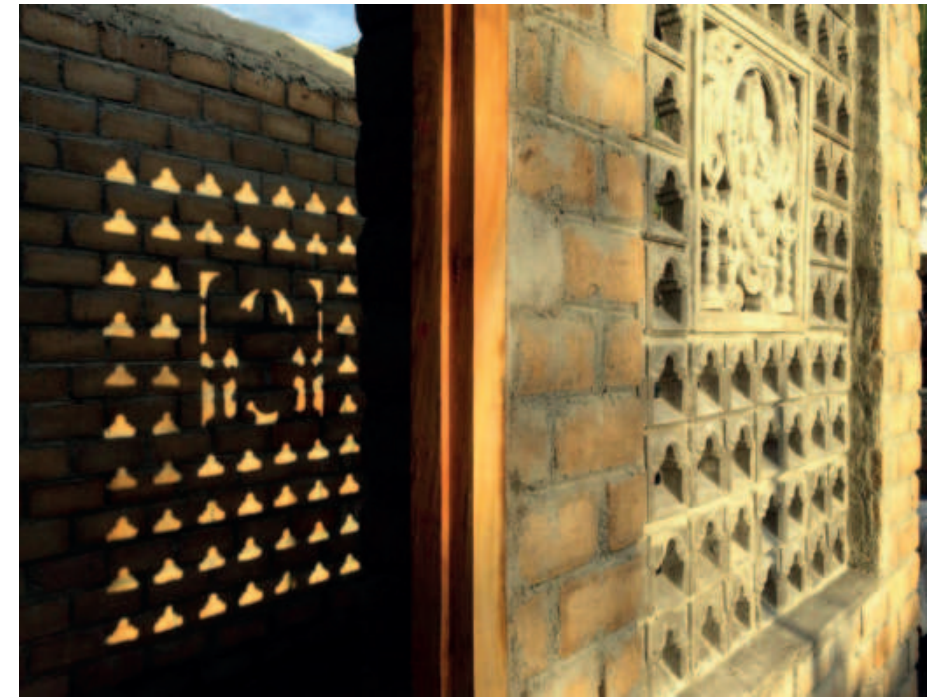


Author(s): Akhila Ramesh, Meenakshi K, Anitha Mahendra, Aditi S, Jean B
Professional Architectural Organisation(s) of the Author(s): NIVASA
UIA Regions: Region IV
Client Name(s): The Banyan - A Chennai-based NGO focused on mental health accessibility, especially in rural areas.
Location: Kottamedu Village, Chengalpet District, Tamil Nadu, India
Project/Intervention Area: 462m² (12 houses, 11 of 40m² and 1 of 28m²)
Status: Completed
Completion date: June, 2019
Image Author(s): Compiled by - Jaya Hariyani

Project Description: In the aftermath of the catastrophic floods of November–December 2015, the small tribal village of Kottamedu in Tamil Nadu faced a severe housing crisis, home to 28 families from the historically marginalized Irular tribe whose fragile infrastructure was decimated. This prompted The Banyan, a Chennai-based NGO focused on mental health, to seek a design-driven solution and partner with Nivasa, a

group specializing in participatory rural development, to initiate a holistic rebuilding process grounded in an Asset-Based Approach that recognized the inherent strengths and skills within the community, transforming the villagers from passive recipients into active agents of their own recovery through a five-pillar structure addressing housing, education, finance, skilling, and physical and mental health.

Guided by the Human Centered Design Toolkit, the project unfolded through understanding, design and construction, and capacity building phases, employing focused group discussions to understand community customs and studying local vernacular architecture for climate-responsive design. In a powerful act of participatory planning, the community mapped the evolution of their settlement using the traditional art of Kolam, grounding the modern design process in ancient cultural practice to create homes thoughtfully designed with living and sleeping areas, a kitchen, storage, and a shaded thinnai verandah,



incorporating Vaastu principles and allowing for future vertical expansion, while detached toilet and bath units were constructed with Panchayat funds to directly address sanitation needs.

A cornerstone of the project was its focus on capacity building, where community members were trained in making and constructing with Stabilised Adobe Blocks, a sustainable, low-cost, and low-carbon alternative to conventional materials, equipping them with vocational skills that could generate future income and shifting them from unskilled daily wage labor toward skilled, dignified work. This comprehensive model for community-led development directly contributes to multiple Sustainable Development Goals: it addresses **SDG 1** by providing flood-resilient homes and requiring community

contributions to reduce multidimensional poverty and foster empowerment over dependency; **SDG 3** by ensuring safe and sanitary housing that improves physical and mental health; **SDG 4** through construction workshops that provide lifelong learning opportunities and build awareness of sustainable technologies; and **SDG 6** by including toilet and bath units for all families to address open defecation and improve hygiene infrastructure.

The project further advances **SDG 8** by opening pathways to future income through construction skills and promoting a shift toward skilled labor, while **SDG 9** is realized through introducing innovative low-cost technology to create resilient community-led infrastructure tailored to the local context.

SGDs considered



By specifically targeting the marginalized rural community including women-led households, the intervention actively promotes social and economic inclusion under **SDG 10**, and through its participatory process it fosters inclusive and resilient settlement planning that strengthens long-term community cohesion in alignment with **SDG 11**. The use of locally sourced soil for blocks minimizes transport emissions and avoids high-energy materials, promoting sustainable construction patterns under **SDG 12**, while the entire initiative serves as a direct climate adaptation measure under **SDG 13**, replacing vulnerable thatched homes with flood-resistant structures using elevated foundations and resilient materials to protect the community from future climate-related disasters.

Despite facing challenges such as sustaining long-term engagement and discovering widespread anemia and malnutrition that highlighted deep-seated poverty, the project stands as a powerful evolving experiment that demonstrated an Asset-Based Approach can succeed in the Indian context, as exemplified by an all-woman household that took full ownership of their new home becoming a model for others. This underscores the importance of local connectors, flexible financial mechanisms, and the power of design to trigger long-term change, making Kottamedu more than a housing project but a blueprint for how to envision, execute, and sustain dignified community-driven development in rural India.



P70 PROJECT SUITCASE – TRANSITIONAL SHELTER FOR A DISPLACED TRIBAL COMMUNITY

1 NO
POVERTY



Author(s): Akhila Ramesh, Anitha Mahendra, Vishal

Professional Architectural

Organisation(s) of the Author(s):

NIVASA UIA Regions: Region IV

Client Name(s): Home owners and Tribal welfare department

Location: Rayanakallu Village, Manchenahalli Gram Panchayat, Gauribidanur Taluk, Chikkaballapur District, Karnataka, India

Project/Intervention Area: Built up area - 187m² (15,6m² per unit)

Status: Completed

Completion date: January, 2021

Image Author(s): Compiled by - Meenakshi K & Jaya Hariyani

Project Description: A small tribal community consisting of 19 families lived on a lake bank in the remote Rayanakallu village of Manchenahalli Gram Panchayat, enduring dismal living conditions in thatched roof dwellings that left them exposed to cold winters, harsh summers, heavy rains, and the perpetual threats of snakes and fire.

The flashpoint for action mental health, to seek a design-came tragically when a family lost their three-month-old baby in a fire, which galvanized government authorities into action as the DC allotted land for the families and the tribal welfare department of Chikkaballapur district approached Nivasa to build temporary homes for the community until permanent housing could be allocated, a scenario indicative of the fact that ninety-nine percent of India's nearly fifty thousand architects serve the top ten percent elite population, leaving poor communities to shelter in devastatingly unhealthy conditions.

In response, Nivasa adapted their PROJECT SUITCASE model, a humane and dignified solution originally developed for urban landless homeless populations after extensive studies of informal settlements, named to denote ease of portability and reuse through a system enabling easy and fast installation while being simple to dismantle and carry to the next location for reinstallation. The guiding force



behind this quest was the need for a versatile material that would not require skilled knowledge, was easy to source, to transport, and easy to adapt to various requirements as families grew, leading to extensive market research and rounds of prototyping before zeroing in on slotted angle palette racks for walls, with these storage units clad in bison board on the exterior to double for thermal comfort.

The basic layout provides segregated space for sleeping, kitchen, and veranda, while the modularity of both design and material fully supports expansion and adaptation of different layouts based on usage of space, with materials such as sheets upgradable in thickness and quality according to local availability and affordability. This innovative intervention enables rapid and cost-effective

housing for impoverished tribal families affected by displacement, addressing root vulnerabilities of homelessness by bypassing expensive permanent construction through a kit-of-parts shelter that significantly reduces financial burden and timelines, directly contributing to **SDG 1** as families avoid insecure informal shelters and dependency while gaining dignity and stability through an affordable and immediate response to poverty-induced housing insecurity.

By replacing open, leaky thatch huts with structured, durable shelters, the project minimizes health hazards including fire, rodents, snake-infested floors, and extreme weather, with stone plinths raising floors off damp ground and solid walls with ventilation preventing indoor

SGDs considered

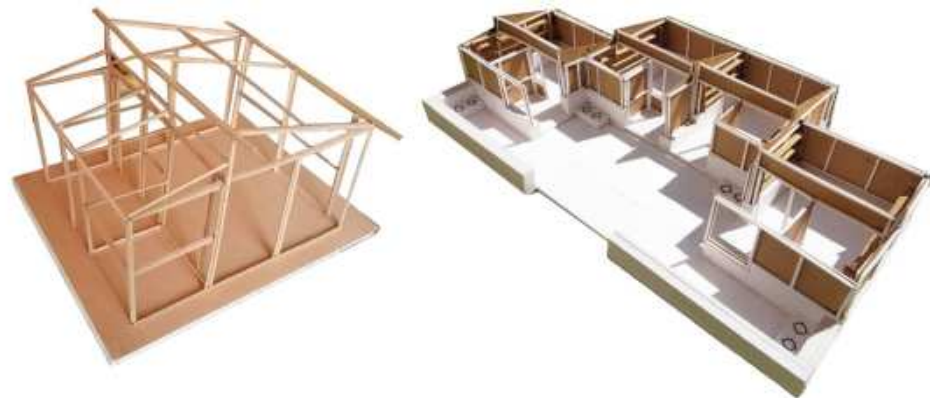


discomfort while defined cook and sleep zones improve indoor hygiene, contributing to better physical and mental well-being under **SDG 3**, while also enabling children to continue attending school or accessing informal education rather than being constantly displaced or facing unsafe learning environments in alignment with **SDG 4**. Safe and private temporary housing protects women and girls from violence and ensures their dignity in emergency situations, and by involving women in housing design and decision-making the project empowers them, directly supporting **SDG 5**.

Project Suitcase not only provides temporary shelter but also enables livelihood resilience by involving residents, especially women, in co-building the units to create immediate income opportunities and skill-building experiences, while safe dignified housing stabilizes families to improve their ability to focus on consistent employment without fear of displacement or disaster, allowing adults to engage in local or seasonal work with greater regularity as housing becomes a foundation for long-term economic empowerment under

SDG 8. This innovative solution using slotted-angle racks repurposed from industrial storage systems combines affordability with structural adaptability through modular design enabling rapid assembly, scalable clusters, and adaptability to changing household needs, demonstrating a new model for low-cost transportable infrastructure suited for displaced and transient populations that has been prototyped, refined, and deployed with minimal tools but maximum impact, directly contributing to **SDG 9**.

The project offers marginalized tribal families a housing alternative equal in dignity to mainstream solutions irrespective of their socio-economic status, with modular replicable units deployable in remote locations ensuring statewide or nationwide access for communities often excluded from formal housing policies while enabling self-assembly and reuse to empower those at the margins with agency in shelter construction and planning, thereby reducing inequality under **SDG 10**. By establishing dignified, context-sensitive shelters for geographies often excluded from



formal housing systems, the modular units deployable in rural and peri-urban settings enable community-led clusters of safe dwellings while reusable and easily available local components allow dwellings to be relocated or repurposed as settlements relocate, offering long-term resilience and preventing informal slum proliferation to contribute directly to building inclusive and sustainable human settlements under **SDG 11**.

Furthermore, by ensuring tribal groups have secure tenure even temporarily and are involved in decision-making about their housing, the project promotes justice and strengthens their trust in governing institutions while upholding their rights, fostering peaceful and inclusive societies under **SDG 16** in full alignment with the transformative vision of the 2030 Agenda.



P163 MACHA VILLAGE COMMUNITY CENTER

1 NO
POVERTY



Author(s): Jun Mu, Wei Jiang, Tiegang Zhou, Sharon Show, Zhuqing Chang, Qiangqiang Li, Weiwei Lu, Zengfei Liang, Yan Huang, Zhengyang Wang

Professional Architectural

Organisation(s) of the Author(s):

Beijing University of Civil Engineering and Architecture; OnEarth Studio; Xi'an University of Architecture and Technology

UIA Regions: Region IV

Client Name(s): Wu Zhi Qiao (Bridge to China) Charitable Foundation

Location: Macha Village, Huining County, Baiyin City, Gansu Province, China

Geographic Coordinates (Latitude and Longitude): 35°28'37.1"N, 104°59'51.9"E

Project/Intervention Area: 580m²

Status: Completed

Completion date: August, 2016

Image Author(s): OnEarth Studio

Project Description: The Macha Village Community Center was initiated in response to the profound socio-economic decline affecting villages on China's Loess Plateau, one of the country's poorest regions where traditional rammed-earth construction

has been increasingly abandoned and stigmatized as backward, despite new brick-concrete houses often performing worse in comfort and sustainability. Macha exemplifies the "hollowed-out" village phenomenon where most men migrate for work, leaving women, children, and elders behind, resulting in weakened community bonds and faded cultural traditions. In response, a coalition including university teams, local governments, villagers, NGOs, and international experts launched this long-term initiative in 2012 to meet urgent needs for public services, serve as a training base for upgraded rammed-earth construction, and create a platform for social engagement.

Strategically following the terrain to form a three-tier courtyard layout, the center houses a Chinese medicine clinic, nursery, reading room, theater stage, and multi-purpose hall, built with locally sourced earth and agricultural byproducts while utilizing upgraded passive thermal design, rainwater filtration, and low-tech sustainability systems. Over 30 local craftsmen and 80



university students co-built the structure, creating employment and hands-on learning that transformed the center into a training hub where over 60 trained villagers later formed a cooperative now working on 17 similar projects across China. The half-meter-thick rammed-earth walls serve as thermal mass balancing indoor temperature and humidity while enhanced waterproofing allows the natural texture to be expressed, with rainwater collection preserved through an enhanced roof-ground system and wind turbines harnessing valley winds to meet daily electricity needs.

Since completion in 2016, the center has evolved into a cultural and economic anchor where a full-time social worker facilitates daily programming, leading to women's groups hosting elder birthday celebrations while traditional performers have regained vitality through Qinqiang opera and shadow puppet shows, with children attending reading activities and returning youths operating an e-shop while participating in cultural revival. The project directly addresses **SDG 1** through poverty alleviation as charitable funding enabled hiring local craftsmen

alongside university volunteers offering fair wages, while the completed center serves as a technical training base where over 20 villagers engaged in demonstration projects across 17 rural areas achieved 50-80 percent average income increases, further supported by a Village Taobao e-shop enabling online agricultural marketing.

The center advances **SDG 3** through a dedicated clinic where a 78-year-old traditional Chinese medicine doctor provides ongoing care, while the social worker initiates community activities addressing social isolation, with a self-managed women's mutual support group now leading regular activities and organizing elder care, while left-behind children receive summer support from university volunteers providing tutoring and emotional support. **SDG 4** is realized through a children's reading space where primary school teachers now conduct preschool activities giving young children access to early education, complemented by summer volunteer tutoring and hands-on technical training in rammed-earth construction for villagers alongside informal learning

SGDs considered



through embroidery and storytelling sessions.

The project powerfully advances **SDG 5** as women who initially joined dance activities sparked participation leading to the formation of a 40-member Women's Dance Team reaching neighboring villages for cultural exchange, with these women becoming co-organizers managing center spaces, co-running the library, planning festivals, and launching volunteer efforts supporting elderly residents, gaining leadership recognition and participation in local decision-making. **SDG 6** is addressed through an innovative rainwater harvesting system combining metal roof collection, slow sand filtration embedded in the courtyard, and subterranean cisterns, relying entirely on gravity without electricity to support daily water needs and provide supplementary farmland irrigation.

The center promotes **SDG 8** through inclusive economic development as trained villagers formed a construction cooperative achieving significant income increases while transitioning to skilled

green building positions, complemented by youth entrepreneurship through the e-shop and elderly villagers reviving opera and puppet troupes whose performances are now welcomed county-wide, improving livelihoods through cultural heritage preservation.

SDG 9 is realized through architectural innovation as the team, supported by France's CRATerre-ENSAG, developed a modern rammed-earth system that is low-carbon and seismically safe, with this technology scaled to 17 other sites while the team published China's first DIY manual and is drafting the national technical standard for earthen architecture.

The project addresses **SDG 10** by actively reducing rural inequality through a shared platform empowering women, elderly, and children while narrowing urban-rural disparities, with elderly villagers reengaged through cultural revitalization, women establishing mutual-aid groups and assuming leadership, and disadvantaged children accessing tutoring and reading spaces. **SDG 11** is achieved as the center



introduced inclusive mechanisms gradually repairing fractured social fabric, with villagers taking initiative in organizing events and local residents now managing the space themselves, catalyzing cultural revitalization from craftsmanship to folk opera and reawakening what one resident called "the original soul of Macha."

The project demonstrates **SDG 12** through localized low-impact construction as over 60 percent of materials were sourced within ten kilometers, with soil from on-site leveling and agricultural by-products like corn cobs repurposed as insulation, resulting in carbon emissions reaching only 60 percent of typical concrete buildings. **SDG 13** is addressed through climate adaptation incorporating high-thermal-mass rammed earth with insulated roofing ensuring energy consumption at only 40-60 percent of conventional buildings, while the rainwater management system enables efficient storm capture and sustainable irrigation, creating resilience for a region experiencing drought and increasing extreme rainfall.

In the end, **SDG 16** is achieved as the center serves as a catalyst for the reconstruction of grassroots governance. Women who started a dance group gradually took on the role of facility manager and event planner, emerging as crucial local actors invited to participate in village decision-making. They went from being passive beneficiaries to active participants whose engagement has improved transparency and trust while their care for the elderly and children fosters intergenerational solidarity, transforming the center into the vibrant center of a revitalized rural community.





2 ZERO HUNGER

Goal 2 aims for a hunger-free world by 2030, but hunger and food insecurity have risen sharply since 2015 due to the pandemic, conflict, climate change, and inequality. Global hunger levels have remained unchanged for three years after a pandemic-driven spike. Additionally, 2.33 billion people experienced moderate to severe food insecurity in 2023—383 million more than in 2019. Two billion people lack regular access to safe, nutritious food. Extreme hunger and malnutrition trap people in poverty by reducing productivity and increasing disease susceptibility, making it difficult to earn

more or improve livelihoods.

- In 2024, 8.2% of the global population (1 in 12 people) faced hunger, and 28% (nearly 2.3 billion) were moderately or severely food insecure.
- In 2024, among children under 5: 6.6% suffered from wasting, 23.2% had stunted growth, and 5.5% were overweight.
- A fundamental shift is needed to achieve the 2030 nutrition targets.
- To reach zero hunger by 2030, urgent coordinated action is required to address inequalities, transform food systems, invest in sustainable agriculture, and reduce the impact of conflict and pandemics on nutrition and food security.

Source: The Sustainable Development Goals Report 2025

SDG 2 TARGETS

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species,

including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.

2.A Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

2.B Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.

2.C Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.

For more information: <https://www.un.org/sustainabledevelopment/hunger/>

P60

UPLIFE: SHARE LIFE / BEYOND DWELLING

2 ZERO HUNGER



Author(s): Sinan Gunay and Nurhayat Oz / SUPERSPACE
Professional Architectural Organisation(s) of the Author(s): Chamber of Architects Turkey (TMMOB Mimarlar Odası)

UIA Regions: Region II

Client Name(s): Organizers: International Green Building Alliance Southeast University Nanjing Yangtze River Urban Architectural Design Co., Ltd. The Third Construction Co., Ltd. of China Construction Eighth Engineering Bureau Nanjing International Healthcare Area Development & Construction Co., Ltd. Fondazione EMGdotART

Location: Pukou District, Nanjing, Jiangsu, China

Geographic Coordinates (Latitude and Longitude): 32°05'42.6"N 118°41'37.6"E

Project/Intervention Area: 11.000m²

Status: Design Phase

Completion date: October, 2018

Image Author(s): SUPERSPACE

Project Description: UPLIFE is a prototype for a "Vertical Intelligent Community" that integrates AI and IoT into high-rise architecture to address the urgent challenges of urban density, climate change, air pollution, and declining life expectancy in rapidly growing Asian cities. The first ten floors of a 28-story smart tower are reimagined as a low-carbon ecosystem featuring urban farms, communal terraces, public amenities, and circular systems for food, energy, and waste, all powered by narrowband IoT to create a closed-loop, self-sufficient model for regenerative city life with one mission: making farming cool again.

By incorporating vertical urban farming, which allows for the year-round local production of fresh vegetables, herbs, and small-scale protein, the initiative immediately advances **SDG 2**. It also replaces large tracts of cropland with effective hydroponic systems, providing 380 people with 2000 calories each day. In addition to lowering urban heat and increasing air quality to improve physical



and mental well-being and encouraging social connection through communal farming areas that lessen isolation, **SDG 3** is promoted through healthier active lifestyles that reconnect residents with food cultivation and nature. **SDG 4** is realized through dedicated research and development spaces including a library, maker's room, and seminar areas that foster an inclusive environment where residents gain practical skills in urban farming, sustainability, and smart technology, supporting knowledge transfer across generations.

SDG 5 is empowered through inclusive urban farming and community spaces offering women skills in sustainable agriculture and technology, promoting economic independence and enhancing health through active lifestyles while supporting gender equality and leadership within the vertical community. In order to achieve sustainable closed-loop water management in a dense urban setting, **SDG 6** is addressed by a system that collects 598,100 liters of rainwater annually, of which half is used

to irrigate 1,750 square meters of vertical and horizontal farms and the remaining portion is used to support public amenities. Hydroponics and greywater reuse are also included. By producing 1.42 GWh of renewable energy annually—more than 184 houses' worth of needs—and offsetting 1,010 metric tons of CO₂, or 16,700 tree seedlings over ten years, integrated solar arrays and micro wind turbines help accomplish **SDG 7**.

The project fosters **SDG 8** by creating local jobs in urban farming, renewable energy management, and smart building maintenance while supporting inclusive employment opportunities and encouraging entrepreneurial ventures that promote a self-sufficient urban economy. Resilient infrastructure that incorporates AI-driven systems, renewable energy, and urban farming is an example of **SDG 9** and sets the standard for inclusive, future-proof urban living. By providing cheap urban housing that is integrated with community farming, facilitating knowledge transfer

SGDs considered

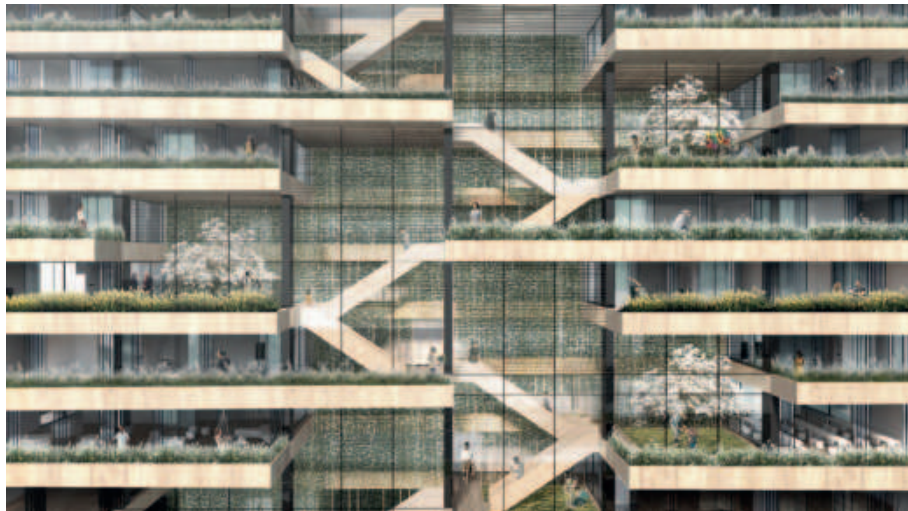


to future generations, and guaranteeing equitable access to nutritious food, green spaces, and economic opportunities, **SDG 10** fosters social inclusion.

Through regenerative vertical communities with circular resource management through biomass waste conversion, rainwater collecting, and intelligent IoT control of energy, water, and waste cycles supporting sustainable urban ecosystems, **SDG 11** redefines high-density urban living. By producing enough food for 380 people, generating renewable energy, and recycling biomass waste and rainwater in a closed-loop system that reduces waste, transportation, and resource consumption while promoting a circular urban economy, **SDG 12** guarantees sustainable consumption. **SDG 13** takes climate action by mitigating urban heat islands and cutting CO₂ emissions by

1,010 metric tons annually, with vertical greenery and smart systems advancing climate adaptation and urban resilience strategies.

By lowering food packaging waste, fertilizer runoff, and CO₂ emissions through hyper-local hydroponic farming and sustainable energy, **SDG 14** is indirectly supported, preventing ocean acidification and pollution. By substituting vertical farming for traditional agriculture, SDG 15 helps to preserve biodiversity, lessen land degradation, integrate nature into crowded urban areas, and sequester a sizable amount of carbon. Last yet not least, **SDG 16** encourages inclusive and peaceful societies by implementing a community-driven vertical living model that involves shared spaces and cooperative food systems that foster trust, unity, and a strong sense of belonging in densely populated areas.



P61 PÓRTICO COMUNITARIO DZUNUNCÁN

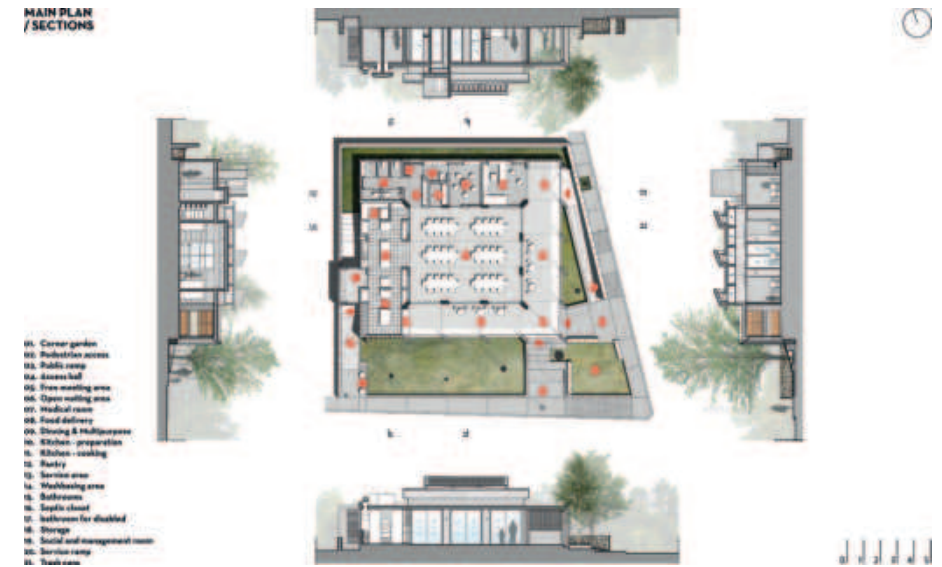


Author(s): Román Jesús Cordero Tovar
Professional Architectural Organisation(s) of the Author(s): PLUG Architecture; collaborators: Izbeth Mendoza, Katia Lopezconde, Odette Lizarraga, Alfonsina Rosas, Jimena Constantino, Sofía Cordero, David Beaudegard, Omar Barrera, Iris Mijangos; Ingeniería Estructural: Predecón, Ing. Enrique Escalante, GradoN, Ing. Lenadro Suaste; Ing. Electromecánica, Ing. Daniel Castro; Apoyo logístico: Ing. Mario Ancona.
UIA Regions: Region III
Client Name(s): Red Pro Yucatán, A.C.
Location: Mérida, Yucatán, México
Geographic Coordinates (Latitude and Longitude): 20.8914375, -89.6480625
Project/Intervention Area: 245m²
Status: Under Construction
Completion date: October, 2026
Image Author(s): PLUG architecture

Project Description: The Dzununcán Community Portico addresses the urgent need for social and emotional assistance alongside a children's dining hall within the limits of Dzununcán, a

marginalized area on the southern outskirts of Mérida, Mexico, by providing daily meals for 150 children while offering educational, medical, and recreational support for 237 families, with the building also designed to serve as a shelter in case of natural disasters and as a replicable model for eco-social, biocultural structures in vulnerable areas. The program is conceived around four health pillars: physical health, through a flexible multi-use space that encourages active lifestyles via dance, exercise, and classes; nutritional health, with meals ensuring children and families receive the nourishment they need; sociocultural health, by offering a dignified welcoming environment that replaces unsafe neglected public spaces; and emotional health, by facilitating psychological support, dialogue, and emotional care.

The project responds directly to **SDG 1** by providing essential social infrastructure and support to 237 families through educational, medical, emotional, and recreational services in a vulnerable area between the city of Mérida and the



rural town of Dzununcán, while serving as a shelter during natural disasters and aiming to become a pilot model for other vulnerable communities in need of eco-social and biocultural infrastructure, restoring dignity to marginalized families and laying groundwork for long-term community development. **SDG 2** is addressed through the portico's function as a welcoming and versatile space currently offering daily meals to 150 children with comprehensive support programs, aiming to expand its impact by doubling both meals distributed and families served once fully operational. **SDG 3** is embedded throughout the

program's four health pillars, ensuring physical activity, proper nutrition, dignified social environments, and accessible emotional care all contribute to holistic wellbeing for children and families.

The project advances **SDG 5** as the community portico is led and operated entirely by women who administrate, cook, serve, and promote the center, creating a powerful model of female leadership and economic empowerment within a marginalized community, fully aligning with the transformative vision of the 2030 Agenda.



P74 TWHGS E-CO VILLAGE



Author(s): AOS. Architecture, Spence Robinson, One Bite Design Studio; Directors-in-charge: Ar. Corrin Chan, At. Michael Sin, Ar. Alan Cheung; Landscape Architect: Earthasia; Beam Plus Consultant: Beexergy; Lighting Consultant: Spectrum Lighting

Architectural Organisation(s) of the

Author(s): AOS. Architecture, Hong Kong Institute of Architects

UIA Regions: Region IV

Client Name(s): Tung Wah Hospital Groups

Location: Tsang Kwan O, Hong Kong SAR (China)

Geographic Coordinates (Latitude and Longitude): 23.305, 114.269

Project/Intervention Area: 20.960m²

Status: Completed

Completion date: July 30, 2024

Image Author(s): AOS Architecture Ltda

Project Description: Once a landfill in Tseung Kwan O, E-Co Village is now a pioneering eco-camping and education hub, transforming waste into a thriving green space that promotes sustainability, community, and environmental healing.

This groundbreaking project, initiated by the Hong Kong SAR (China) SAR Environmental Protection Department and operated by the Tung Wah Group of Hospitals, stands as Asia's first advancing-zero-carbon development on a rehabilitated landfill, having received the 2021 Green Building Award Grand Award, the 2024 Hong Kong SAR (China) Institute of Architects Sustainable Architecture Award, and HK BEAM Plus Platinum certification for both New Buildings and Neighbourhoods. Embracing the theme "From Garbage to Garden, From Waste to Treasure," E-Co Village has turned a barren landfill into a lush public retreat for relaxation, connection, and environmental education, serving as a living laboratory for sustainability through its Experiential, Experimental, and Environmental Education Centre that demonstrates how waste land can be reborn as value for people, nature, and future generations.

Inspired by New Caledonia's heart-shaped Mangrove Island, E-Co Village's master plan symbolizes nature's unconditional love and humanity's care for the planet



through two platforms each centred with a heart-shaped space, where the Big Heart represents nature's all-embracing generosity while the Small Heart reflects meticulous attention to sustainability in every detail, featuring upper and lower platforms with camping, farming, and event spaces, community farming for farm-to-table experiences, butterfly gardens and biodiversity zones, children's green education and play areas, a green theatre, and demonstrative green stations. The project advances **SDG 2** by promoting urban farming and sustainable agriculture in Hong Kong SAR (China)'s high-density environment through a community farm allowing residents to adopt plots and grow their own food, complemented by workshops on healthy diets and raw eating that educate the public on sustainable nutrition while promoting reconnection to soil through planting one's own food.

In a high-stress city where anxiety and depression are prevalent among urban dwellers and young people, **SDG 3** is promoted through holistic well-being

for people of all ages and abilities, promoting healthy living through diet, outdoor exercise, and activities like yoga, sports days, mindfulness meditation, and social celebrations like Lantern Festival, Christmas, and Art Festivals. Families with parents and children reconnect with each other and with nature through camping experiences that reinforce the connection between health, community, and the environment. **SDG 6** is addressed through treatment and recycling of greywater, rainwater harvesting for irrigation, and eco-toilets that convert waste into compost, with conventional restrooms linked to the city's water supply and drainage ensuring sustainable water and waste management supported by clean water supply and main municipal drainage systems.

With more than 250 solar panels, portable solar stations for campers, and wind turbines built into buildings, the village has achieved **SDG 7**. Transparent solar glass and solar-heated water systems also show renewable energy in action, providing enough energy to support



operations at 97 percent reliability on sustainable solar energy, with any excess being fed back into the central grid. SDG 8 is promoted through collaboration with green businesses, sourcing local eco-materials and employing nature advocates to drive sustainable economic growth by supporting green jobs and environmentally conscious enterprises, while **SDG 9** is realized as a hub for sustainable innovation featuring an Inno Path showcasing cutting-edge green technologies and products including transparent solar glass and palm fiber panels used as infill for all walls and roofs.

The project addresses **SDG 11** by serving as a living model of urban sustainability transforming a former garbage landfill into a carbon-neutral zero-waste community through circular economy principles, proving that high-density cities can be livable, resilient, and regenerative while serving as a spearhead green sustainable development demonstration of a settlement that is inclusive, safe, resilient, and sustainable. While **SDG 13** takes climate action through solar energy, passive cooling, natural lighting, and energy-efficient design that reduces

reliance on grid power, and over 250 trees combat heat island effects, transforming wasteland into a biodiverse green haven that significantly reduces carbon emissions through extensive planting and zero-energy buildings, **SDG 12** is ensured through the procurement of sustainable building materials and technology with an emphasis on mindful consumption and waste minimization during production and construction processes.

More than 250 trees and more than 100 plant species have been introduced, advancing **SDG 15** by establishing a vibrant ecosystem. A proposed Tree Library will teach visitors about biodiversity, and green spaces will serve as a haven for urban wildlife, birds, and butterflies. Last but not least, the Tung Wah Group of Hospitals, a reputable Hong Kong NGO that exemplifies openness, inclusivity, and social responsibility while reestablishing harmony between individuals, families, and nature, is achieving **SDG 16** through its operations. This demonstrates that reestablishing connections between people and nature promotes a more tranquil society and creates strong, just, and community-based institutions.



P147 BRIDGING INEQUALITY



Author(s): Sumayya Akbar
Professional Architectural Organisation(s) of the Author(s): University of Karachi
UIA Regions: Region IV
Client Name(s): NON
Location: Qasba Colony, Karachi, Pakistan
Geographic Coordinates (Latitude and Longitude): Qasba football ground, Qasba colony, Karachi, Pakistan and kati pahari - 1. Qasba Football Ground, Qasba Colony, Karachi, Pakistan Latitude: 24.9384° N Longitude: 66.9686° E - 2. Kati Pahari, Karachi, Pakistan Latitude: 24.9300° N Longitude: 66.9710° E
Project/Intervention Area: 45.084m²
Status: Design Phase
Completion date: December 19, 2024
Image Author(s): Sumayya Akbar

Project Description: Karachi is broadly divided into planned and unplanned settlements, with the latter facing social exclusion, inequality, marginalization, and lack of essential services while being ignored by authorities, leading to community conflicts and turf wars in a city where more than sixty percent of the

population lives in informal settlements lacking planned infrastructure and hygienic living conditions.

The economic and resource distribution imbalance coupled with absence of basic needs has created two unequal worlds, a disparity observable at Kati pahari, a geographical boundary separating North Nazimabad town, a planned upper middle class settlement with all urban facilities, from Orangi town, facing blatant neglect and injustice as the most active ethnic fault line of Karachi lacking urban amenities and services.

The primary goal of this project was to understand the effects of geopolitics and conflict on social composition and cohesion of communities living in Kati pahari, where research found communities living together peacefully with different ethnicities helping each other during crisis, marrying daughters across ethnic lines reflecting acceptance and goodwill, with conflicts arising only due to lack of resources and infrastructural issues adding to daily frustration, as the area faces



severe landslide issues, twelve hours of load shedding, water and gas availability crises, and broken pathways representing neglect from authorities. With a population of ninety thousand people living on just five point three six square kilometers, Qasba colony has only twenty clinics operated by non-professional medical practitioners and forty educational institutions with eleven temporarily closed due to lack of teachers and attendance, while literacy rate stands at only seven percent as families in the low income bracket cannot afford education.

The project addresses this divide through adaptable, flexible, low cost and resilient solutions on the edge dividing the two worlds, taking advantage of the beautiful mountain range which is the highest point of Karachi to create a recreational intervention with capacity to empower locals by providing solutions to daily problems while generating income and need for recreational zones, reducing prejudice associated with this settlement

and initiating social cohesion between the two worlds where everyone would feel included, with part privately accessible to residents of Kati pahari and part open for all. In the second phase, a void called Qasba ground at the heart of Qasba colony is selected to empower locals through skill based, revenue generation and communal programs, using sustainable and quick construction from scaffolding with walls combining recyclable corrugated sheets and dry grass as insulating material.

While **SDG 2** is addressed by vegetable gardens and community kitchens that provide food security and promote communal care and social ties, **SDG 1** is advanced by the intervention through vocational training programs that enable children to acquire practical skills for income generation and self-reliance. Although **SDG 4** and **SDG 5** are advanced through vocational training programs that equip women with the skills to earn a living, start small businesses, and

achieve financial independence, **SDG 3** is promoted through playgrounds, outdoor theaters, and community gyms that support physical activity, mental wellness, and social engagement for people of all ages.

SDG 6 is supported through rainwater harvesting systems ensuring sustainable water availability for passersby and the neighborhood, while **SDG 7** is achieved as the entire area is powered by solar panels ensuring clean energy use, with a mountain intervention operating manually through a conveyor belt activating only when children engage with interactive installations promoting play-driven energy. Even though **SDG 9** is achieved through resilient, adaptable infrastructure using locally relevant materials like corrugated metal sheets and scaffolding reflecting the architectural language of the informal settlement, ensuring cultural familiarity and simplifying maintenance while permitting ease of assembly, disassembly, and future expansion, **SDG 8** is promoted through vocational training programs that create pathways to employment and economic growth.

The intervention addresses **SDG 10** by bridging social and spatial divides through inclusive public spaces providing access to education, skills, health, and recreation for marginalized communities, while **SDG 11** transforms the boundary into shared inclusive public space fostering connection and dignity across socio-economic lines, activating Qasba Ground as a hub for skill-building and cultural activities that close opportunity gaps between privileged and underserved populations. **SDG 12** is embedded through environmentally responsible construction using recycled and low-impact materials

like corrugated sheets, bamboo, and dry grass insulation, reducing dependency on high-emission materials while integrating rainwater harvesting and solar energy with community participation ensuring sustainable behavior and ownership.

By prioritizing minimal construction and material reuse, activating existing spectator stands rather than new buildings to prevent needless emissions, and utilizing recycled materials and renewable systems to increase resilience in informal communities, **SDG 13** addresses climate threats through low-impact adaptive design. Ultimately, **SDG 16** makes a contribution by converting a historically divided region into a site for peacebuilding and inclusion through community-driven, participatory processes that promote interethnic cooperation and lessen alienation, provide communities a voice in determining their surroundings, and increase their ability to govern themselves, thereby establishing the groundwork for a society that is more resilient, inclusive, and peaceful.





3

GOOD HEALTH AND WELL-BEING

Great progress has been made in global health: by 2023, 133 countries had met the SDG target for under-5 mortality. Since 2010, HIV treatment has halved global AIDS-related deaths, and by the end of 2024, at least one neglected tropical disease had been eliminated in 54 countries. However, health care inequalities persist.

The COVID-19 pandemic and other crises have slowed progress toward Goal 3, with childhood vaccination rates declining and tuberculosis and malaria cases rising compared to pre-pandemic levels. The SDGs aim to end epidemics of AIDS, TB, malaria, and other communicable diseases by 2030, achieving universal health coverage and access to safe, affordable medicines and vaccines. Increased investment in health systems is needed to support recovery and build resilience against future threats.

- Insufficient progress has been made on reducing maternal mortality and expanding universal health coverage.
- In 2023, an estimated 260,000 women died during pregnancy and childbirth globally.
- In 2019, 344 million people were pushed or further pushed into extreme poverty due to out-of-pocket health payments.
- Malaria cases are rising; tuberculosis returned to being likely the world's leading cause of death from a single infectious agent in 2023.
- In 2021, non-communicable diseases (NCDs) killed 18 million people under age 70—over half of all premature deaths.
- The SDG target of reducing premature NCD mortality by one third by 2030 is not on track to be met.

Source: The Sustainable Development Goals Report 2025

SDG 3 TARGETS

3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.

3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.

3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.

3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

3.A Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.

3.B Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.

3.C Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.

3.D Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

For more information: <https://www.un.org/sustainabledevelopment/health/>

P32 HUEBERGASS AND CITY PARK BERN

3 GOOD HEALTH
AND WELL-BEING



Author(s): GWJ (architecture) Ort (landscape architecture) Soziale Plastik (Sociology)
Professional Architectural Organisation(s) of the Author(s): Swiss Society of Engineers and Architects (SIA)
UIA Regions: Region I
Client Name(s): Wir sind Stadtgarten
Location: Bern, Switzerland Geographic
Coordinates (Latitude and Longitude): 2°59'32.35, 1°19'35.268
Project/ Intervention Area: Building plot 8.921,4 m²
Status: Completed
Completion date: 2021
Image Author(s): Susanne Goldschmid / Thomas Haug

Project Description: Designed collaboratively, this nonprofit cooperative housing project offers 103 affordable and sustainable units alongside flexible community infrastructure, including a daycare, café, and adjacent park, supporting a diverse tenant mix while fostering interaction and inclusion. Residents benefit from adaptable shared spaces that respond to evolving needs, promoting a vibrant and

active neighbourhood life, while the cooperative model ensures long-term affordability and resident involvement, creating a resilient urban community rooted in social equity and ecological responsibility. Through its non-profit housing model that prioritizes comfort, functionality, and cost-based rental, the development contributes to **SDG 1**. Families with children benefit from subsidized housing, and social integration of individuals in challenging circumstances is supported through collaboration with institutions. Common areas and mobility options are also included in the rent.

SDG 3 is promoted through a mix of housing types, common areas, and the cooperative model that together support well-being for people of all ages, anchored by a dynamic car-free central alley providing access to all common and private spaces while focusing on slow traffic through a mobility concept with bicycle infrastructure and minimized parking spaces.



SDG 6 is addressed through rainwater and greywater use systems that enable rainwater retention while supporting tree health and improving the urban climate, and **SDG 7** is achieved through compact building volumes and floor plans that relocate traffic circulation areas to minimize total energy reference area, compact basement volumes due to above-ground access for resource efficiency, thermal mass from solid masonry construction, and all apartments having two orientations for optimal room ventilation, natural lighting, and comfort.

A safe public area made possible by a central alley with good visibility, an accessible location that permits mixed use and permeability with the surrounding neighborhood, and neighborhood amenities like a café, a shared space that can be rented, a self-service store, guest rooms, and space for small businesses all support **SDG 8**.

Access to safe, inclusive, and accessible green spaces and public spaces; participatory inclusive and sustainable urban planning; sustainable transportation systems that prioritize non-motorized transportation through the mobility concept; and social institutions' support in attending to the needs of individuals in difficult circumstances are all ways to achieve **SDG 9**.

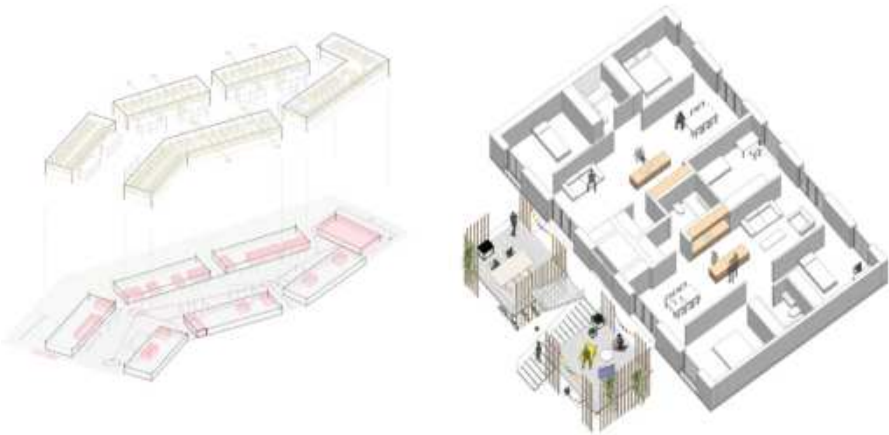
SDG 13 takes climate action through efficiency measures minimizing energy reference area, basement floors, and material consumption, combined with climate-adequate site development including landscaping, minimization of sealed surfaces, and generous retention areas. Inward urban development is encouraged by **SDG 15** based on the project's central city location, effective use of building space with minimal footprint, unsealing and restoration of the settlement's land surface to minimize

SGDs considered



paved areas, promotion of biodiversity through designated brownfield sites and local vegetation, and community gardens. Furthermore, interdisciplinary collaboration for sustainable urban development, construction, and landscape design, involvement and

integration of environmental sciences and sociology, and a neighborhood park created as a learning park with participatory procedures are ways to advance **SDG 16**.



red: Common uses of the cooperative on the ground floor
yellow: Through-living / equivalent 14 m2 rooms on the upper floors

Apartment modules / living flexibility / atmosphere



P149 “CASA SOLACE” RESIDENCE

3 GOOD HEALTH
AND WELL-BEING



Author(s): Constantinos Pieris, Stella Pieri, Valentinos Skiadas
Professional Architectural Organisation(s) of the Author(s): Pieris Architects
UIA Regions: Region II
Client Name(s): Private Client
Location: Kythnos Island, Greece
Geographic Coordinates (Latitude and Longitude): 41333 ° N - 53906° E”
Project/Intervention Area: 304m²
Status: Design Phase
Image Author(s): Valentinos Skiadas / Haris Heizanoglou

Project Description: Located on the peaceful island of Kythnos, Greece, Casa Solace is a masterful blend of traditional charm and minimalist design, drawing inspiration from the island’s historic barns and cells to create a tranquil retreat in perfect harmony with its natural surroundings. Crafted from local stone and wood by skilled artisans, the home is a timeless space that echoes the island’s cultural heritage while providing a modern, sustainable lifestyle for its

inhabitants, with the design rooted in the idea of a seamless connection between architecture and the landscape. The thick stone walls, characteristic of Kythnian construction, provide structural integrity while serving as natural thermal mass to regulate indoor temperatures without relying on artificial cooling or heating, ensuring year-round comfort and reducing the home’s environmental footprint through passive, energy-efficient design.

Wooden pergolas extend from the main structure to provide shaded areas for relaxation and outdoor living, encouraging residents to experience the landscape intimately with sweeping views of the hills and the Aegean Sea, while the minimalist design focuses on simplicity by removing unnecessary distractions and allowing the natural surroundings to take center stage, inviting a lifestyle of quiet reflection and peaceful interaction with nature. Strategically placed windows and doors with traditional wooden shutters allow natural light to flood interior spaces



while framing panoramic views, creating a strong visual connection between indoors and outdoors that enhances the living experience and promotes natural ventilation to ensure the residence remains fresh and comfortable throughout the year.

Sustainability is at the forefront of Casa Solace’s design, with recycled and reused materials incorporated throughout to reinforce connection to the land and island’s history, while using local stone and timber minimizes transportation emissions and embraces the island’s natural resources responsibly. Passive design strategies optimizing natural light and enhancing thermal performance reduce the environmental impact of construction, and solar panels will be incorporated to generate renewable energy, further enhancing the home’s energy efficiency.

Water management strategies including rainwater harvesting and water-efficient fixtures reduce water consumption, while landscaping with green roofs

and permeable paving encourages native plant growth and supports local biodiversity.

While non-toxic natural materials ensure a clean interior atmosphere and outdoor spaces invite daily interaction with nature proven to reduce stress, the project promotes **SDG 3** through its design with human well-being at its core. This design promotes mental and physical health by creating a calm environment that encourages mindfulness through natural light, cross-ventilation, and a strong connection to outdoors, supporting circadian rhythms and indoor air quality. **SDG 9** is promoted through integration of low-impact infrastructure and climate-responsive design using passive thermal strategies to significantly reduce energy needs, while collaboration with local engineers and artisans incorporates efficient renewable systems like solar energy and rainwater harvesting ensuring long-term resilience, with Building Information Modeling during design supporting smart planning and reducing material waste.

SGDs considered



SDG 11 is addressed by preserving local building traditions and sourcing materials from the island to strengthen cultural identity and community resilience, while engaging regional craftspeople ensures continuation of cultural knowledge and demonstrates how island communities can adopt sustainable design practices without losing architectural character, offering a replicable model for development in similar contexts.

SDG 12 is realized through resource efficiency as a core principle, with recycled and reused materials integrated wherever possible while new materials are selected based on low embodied energy and local availability, with construction practices designed to minimize waste and operational systems

including efficient plumbing and energy-saving lighting ensuring sustainability throughout the lifespan, reflecting commitment to circular thinking in residential design.

Last but not least, **SDG 15** is advanced because the house is designed to minimize site disturbance by adhering to natural contours and maintaining existing vegetation. Additionally, native drought-tolerant plants in landscaping lower water use and support local biodiversity through green roofs and permeable surfaces that promote habitat regeneration and healthy soil and water cycles, transforming Casa Solace into a small ecosystem that supports both people and wildlife.



P154 “OLON DIMITSANA” WELLNESS HOTEL

3 GOOD HEALTH
AND WELL-BEING



Author(s): Constantinos Pieris, Stella Pieri, Pieros Pieris, Margarita Varla, Electra Kefalloniti, Romina Routsis, Marianna Tzouti

UIA Regions: Region II

Professional Architectural

Organisation(s) of the Author(s): Pieris. Architects

Client Name(s): Olon Group

Location: Dimitsana, Nomos Arkadias, Greece

Geographic Coordinates (Latitude and Longitude): 37.592555 - 22.038332 “

Project/Intervention Area: 1.400 m²

Status: Under Construction

Image Author(s): Margarita Varla, Electra Kefalloniti, Romina Routsis, Marianna Tzouti

Project Description: Currently under construction in the mountainous village of Dimitsana, Greece, at an elevation of 950 meters surrounded by the wild beauty of the Arcadian landscape, Olon Dimitsana is a boutique wellness hotel that brings together cultural heritage, sustainable architecture, and holistic hospitality through the adaptive

reuse of an abandoned 1950s building transformed into a contemporary retreat spanning 1,400 square meters with 26 guest rooms, five junior suites, six luxury suites, a restaurant, bar lounge, wellness spa, and multi-purpose seminar room for up to 80 people, offering a refined yet grounded escape designed to reconnect guests with nature, tradition, and well-being.

Dimitsana’s historical significance, particularly its role in the Greek War of Independence, informs much of the design narrative, with local materials, forms, and craftsmanship celebrated throughout while traditional woven textiles such as the “Kaplan” fabric with its distinctive geometric patterns are integrated into bespoke furnishings, reinforcing cultural continuity. The hotel’s public areas draw inspiration from the region’s pre-industrial character, particularly the iconic “bar mills” once used in the village, reimagined in communal lounges and gathering spaces designed to foster storytelling, learning, and social connection,



delivering a wellness journey deeply attuned to its setting that offers guests an invitation to slow down and rediscover the rhythm of rural life.

Sustainability is embedded in every layer of the project, with the reuse of the existing structure preserving embodied energy and limiting construction waste, while the design incorporates locally sourced stone and timber, passive solar strategies, and energy-efficient systems to reduce environmental impact, with the hotel in operation following sustainable practices in resource management including water conservation and waste reduction. The spatial configuration balances privacy and connection as rooms and suites are positioned to maximize views and sunlight while public spaces are woven throughout to encourage gathering and reflection, with the natural slope of the terrain embraced resulting in layered terraces, quiet corners, and smooth transitions between indoor and outdoor areas. Interiors are defined by a warm earthy palette with tactile surfaces and hand-finished details reflecting regional craft traditions, while

wellness extends beyond the traditional spa experience to include nature-based rituals, guided forest walks, meditation, and seasonal activities rooted in local customs, with nutrition integral to the wellness philosophy through a restaurant offering thoughtfully prepared meals using organic produce from local farms and foragers.

The hotel is also committed to social sustainability, having engaged local craftsmen, tradespeople, and suppliers from early planning stages to ensure economic benefits remain within the community, and beyond construction will serve as a cultural platform hosting exhibitions, talks, and events that celebrate Arcadian identity. Landscape design is grounded in ecological sensitivity with native plant species used exclusively to preserve biodiversity and require minimal irrigation, while hardscaping is minimized to avoid disrupting the existing ecosystem and rainwater collection, composting, and responsible water management are integrated into the site strategy.

SGDs considered

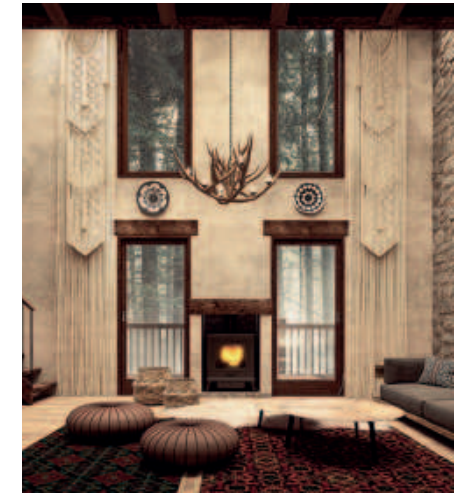


By offering wellness facilities including a spa, nature walks, yoga, and wholesome local food that promote visitors' physical, mental, and emotional renewal, the project directly supports **SDG 3** through holistic health and well-being.

SDG 7 is addressed through renewable energy systems including solar panels and energy-efficient design principles such as natural ventilation and passive heating and cooling systems that reduce reliance on non-renewable energy sources. **SDG 9** is realized through adaptive reuse that restores a 1950s building instead of constructing a new one, reducing material waste and energy consumption while integrating innovative technologies and sustainable building practices for resilient infrastructure. The design and operation of **SDG 11** is marketed as supporting the local economy by procuring goods and

services locally, encouraging sustainable tourism, and honoring Dimitsana's historical and cultural heritage through the use of local materials and craftsmanship.

SDG 12 is achieved through waste-reduction strategies including recycling, composting, and using biodegradable products, while promoting sustainable production methods by sourcing locally and using natural eco-friendly materials. By lowering carbon emissions through energy-efficient technologies, renewable energy sources, and climate-conscious architectural materials, **SDG 13** addresses climate change. Additionally, educational programs about regional ecosystems are incorporated into the visitor experience. At its least, **SDG 15** is furthered by landscaping, which protects and improves local biodiversity through native plants and ecosystems, with partnerships guaranteeing the preservation and revitalization of the surrounding.



P162 ATHLETIC & CULTURAL PARK

3 GOOD HEALTH
AND WELL-BEING



Author(s): Stella Pieri, Piers Pieris, Romina Routsis, Aggeliki Chronopoulou
Professional Architectural Organisation(s) of the Author(s): Pieris. Architects
UIA Regions: Region II
Client Name(s): Municipality of Ayia Paraskevi
Location: Athens, Attiki, Greece
Geographic Coordinates (Latitude and Longitude): 38.0136° N - 23.8255° E
Project/Intervention Area: 30.206m²
Status: Design Phase
Image Author(s): Romina Routsis, Aggeliki Chronopoulou, LOOM Design

Project Description: The Athletic & Cultural Park in Ayia Paraskevi, Athens, is a transformative urban development that blends athletic, cultural, and recreational facilities within a vibrant green landscape, designed to foster community engagement, promote sustainability, and enhance the well-being of all its users. The project features a wide array of amenities including football pitches, skateparks, outdoor gyms, yoga areas,

playgrounds, an underground basketball court, and extensive green spaces with dense groves and shaded areas that provide places for relaxation and mental rejuvenation, creating a holistic environment that supports both physical and mental health for people of all ages. Elevated wooden walkways and artistically designed treehouses crafted by local artists, scouts, and community participants symbolize a blend of creativity and innovative use of materials, while the adaptive reuse of historic military buildings into workshops and art centers reflects a harmonious blend of heritage preservation and innovation, ensuring the park respects its past while meeting modern community needs.

The park directly advances **SDG 3** through its core design focused on health and well-being, featuring recreational facilities encouraging physical activity and healthy lifestyles for all ages and abilities, while dense groves and tranquil green spaces offer mental rejuvenation through a biophilic



environment that contributes to reduced stress and enhanced well-being. Additionally, **SDG 9** is exemplified by sustainable and innovative infrastructure that includes pedestrian and cycling loops that connect various areas, promoting sustainable mobility and reducing reliance on cars. The elevated wooden walkway and treehouses show creative community engagement alongside adaptive reuse of historic military buildings that revitalize the site while promoting cultural engagement and sustainable building practices.

SDG 11 is addressed as the park transforms urban space into an inclusive, green, and sustainable environment fostering community inclusion through accessible spaces for people of all backgrounds, ages, and abilities, with seamless integration of athletic, cultural, and social facilities ensuring diverse groups come together to build a stronger sense of belonging while sustainable mobility encourages walking and cycling to reduce carbon footprint.

SDG 13 places sustainability at the center of design, integrating natural green spaces and shaded areas to improve microclimates and provide natural cooling. Comprehensive pedestrian and bicycle routes encourage residents to reduce carbon emissions, and green spaces help absorb CO₂ and mitigate urban heat island effects. Furthermore, sustainable materials and adaptive reuse of existing structures reduce environmental impact and promote circular economy principles.

Finally, SDG 15 is advanced through careful integration with the natural environment as dense groves, secondary paths, and treehouses demonstrate commitment to preserving and enhancing local ecosystems, with green corridors and native plants enhancing biodiversity while creating environments that allow residents to connect with nature, and trees providing shade, air purification, and temperature regulation to ensure the park remains a vibrant sustainable space for future generations.

SGDs considered







4 QUALITY EDUCATION

Progress toward quality education was already slow before COVID-19, and the pandemic further set back gains. Since 2015, global completion rates have risen only modestly, and learning proficiency remains low. As of 2023, 272 million children and youth were out of school—3% more than in 2015—with the highest concentrations in low-income countries.

The 2030 goals include free primary and secondary education for all, equal access to vocational training, eliminating gender and wealth disparities, and universal access to quality higher education. Education is key to breaking the cycle of poverty, reducing inequalities, achieving gender equality, enabling healthy and sustainable lives, and fostering tolerance and peace. To meet Goal 4, education financing must become a national priority, along with free and compulsory schooling, more teachers, improved infrastructure, and digital transformation.

- Between 2015 and 2024, the global primary completion rate rose to 88 per cent, lower secondary to 78 per cent, and upper secondary to 60 per cent, yet 754 million adults remained illiterate in 2024, with women accounting for 63 per cent of the total.
- Despite a high median rate for Internet usage (90 per cent), many lack essential skills, highlighting a significant gap between access and the ability to use the Internet effectively and safely.

Source: The Sustainable Development Goals Report 2025

SDG 4 TARGETS

4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes.

4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and preprimary education so that they are ready for primary education.

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development

and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

4.A Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, nonviolent, inclusive and effective learning environments for all.

4.B By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.

4.C By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states

For more information: <https://www.un.org/sustainabledevelopment/education/>

P79

NEIGHBORHOOD ARTS AND CRAFTS WORKSHOP OF THE HISTORIC CENTER OF PUEBLA (TALLER BARRIAL DE ARTES Y OFICIOS DEL CENTRO HISTÓRICO DE PUEBLA)

4 QUALITY EDUCATION



Author(s): Christian Enrique De La Torre Sánchez / Adriana Hernández Sánchez

Professional Architectural

Organisation(s) of the Author(s): Re Genera Espacio

UIA Regions: Region III

Client Name(s): Residents of the old neighborhoods of Puebla's Historic Center

Location: Puebla, Puebla, México

Geographic Coordinates (Latitude and Longitude): 19.03811019779409, -98.19165231606922

Project/Intervention Area: 10.000m²

Status: Under Construction

Completion date: 2030

Image Author(s): Adriana Hernández Sánchez / Christian Enrique De La Torre Sánchez / Re Genera Espacio

Project Description: Since 2013, Re Genera Espacio, a group led by architects, has coordinated the Taller Barrial de Artes y Oficios del Centro Histórico de Puebla, realizing activities for the conservation of built heritage from the 16th to 19th centuries under a sustainable approach by implementing

traditional construction knowledge, techniques, and procedures including masonry, plasterwork, carpentry, pottery, and adobe in vulnerable older barrios such as Analco, San Antonio, El Refugio, and Santa Anita, with limited financial resources and the collaboration of volunteers and neighbors on initiatives that include the restoration of church niches, facades of artisan workshops, and the improvement of communal restrooms in vecindades, the typical collective housing system in Mexico.

The project directly advances **SDG 1** by recovering traditional construction knowledge and applying it to collective spaces, workplaces, and homes of residents with limited financial resources, helping them improve their living conditions, while **SDG 3** is addressed through the renovation of collective spaces including patios, laundry rooms, and communal bathrooms in vecindades that are home to low-income people including indigenous migrants from southern Mexico, all renovated with the support of volunteers and neighborhood residents.



Taller Barrial promotes **SDG 4** through its sustainable and educational focus on preserving the cultural heritage of old and vulnerable neighborhoods, promoting the recovery of traditional knowledge as expert craftsmen share their expertise with neighbors, architecture students, and the public, while **SDG 5** is advanced through the dissemination of knowledge in an accessible and inclusive manner regardless of gender, with the majority of those trained being women of all ages from young girls to the elderly, including neighbors, university students of architecture, and professionals. **SDG 11** is realized through the project's goal of putting traditional construction knowledge into practice using a sustainable and collaborative approach to improve the

living conditions of vulnerable groups including elderly people, children, migrants, and people with disabilities living in older neighborhoods, and **SDG 16** is promoted through non-formal and collaborative education as a strategy for livability, cultural heritage conservation, and sustainable development in neighborhoods, encouraging the permanence of vulnerable groups which are at risk of being expelled by external economic and political interests, fully aligning with the main goals of the 2030 Agenda.

SGDs considered





P109 NANHU LABORATORY: A SCHOLAR'S GARDEN OF SCIENCE AND INDUSTRY

4 QUALITY
EDUCATION



Author(s): Zhang Wei, Zhao Jingxian, Huang Haiyang, Liang Sisi, Tian Yuan, Gong Zhonglin, Zhang Zhaoyue
Professional Architectural Organisation(s) of the Author(s): Architectural Design & Research Institute of Tsinghua University (THAD)
UIA Regions: Region IV
Client Name(s): Jiaxing Jia Shi Xingchuang Project Management Co., Ltd.
Location: Jiaxing, Zhejiang, China
Geographic Coordinates (Latitude and Longitude): 30°46'00.00"N, 120°45'00.00"E
Project/Intervention Area: 94.393,44M²
Status: Completed
Completion date: July 15, 2022
Image Author(s): Schranimage, Lv Xiaobin, Zhao Jingxian

Project Description: Nanhu Laboratory is a key component in Jiaxing City's exploration of developing a "world-class science and technology innovation hub," having attracted renowned scientists to focus on cutting-edge technologies while building an innovation platform across three above-ground floors and an interconnected

underground section, with Phase One catering to approximately 500 users from three scientific teams and Phase Two upon completion serving around 1,000 employees from six scientific teams spanning six disciplinary areas focused on bio-pharmaceutical research defeating diseases. The main feature of the design is the skillful integration of manufacturing facilities and scientific research functions with the spatial characteristics of Jiangnan gardens, adopting a courtyard layout arranged around a central lake and interconnected by corridors to create a landscaped spatial whole where different clusters of research buildings accommodate teams from various disciplines, promoting interdisciplinary collaboration through its integrated layout while traditional garden design wisdom creates a healthy environment in harmony with the existing water and natural surroundings.

Using a modern reinterpretation of Jiangnan style, the project creates an immersive scientific research environment with distinctive Chinese characteristics



rooted in the rich cultural heritage of Jiaxing's Jiangnan water towns, satisfying the various needs of research teams led by multiple academicians through careful planning and customized design that alternates between solidity and voids with volumes arranged in a harmonious and staggered manner, creating a meandering Jiangnan garden scene where the integration of buildings, courtyards, and gardens achieves an organic fusion ensuring continuity of architectural space within the historical context.

While the central lake serves as a large thermal mass that stores heat from sunlight to significantly lower ambient temperature, reducing reliance on air conditioning and providing a healthier, more sustainable setting, the courtyard-style layout improves the interior environment through excellent ventilation and natural light, and plants within courtyards generate ample oxygen through photosynthesis, significantly improving environmental health and

notably enhancing user well-being. These research outcomes directly advance **SDG 3** through research that defeats infectious diseases, primarily focusing on vaccine development and biopharmaceutical research, including the scientist who led the Ebola vaccine development, which helped Africa resist the virus. **SDG 4** is realized as the landscaped laboratory serves as an excellent science education center for the local community, with its open layout integrating the laboratory into the community offering a significant window for residents to engage with technology and culture, while corridors feature display walls showcasing scientists' research achievements inspiring visiting students to dream of becoming scientists themselves.

In just one year, the laboratory was recognized as one of Zhejiang Province's first batch of new research and development institutions, as a postdoctoral workstation in Zhejiang

SGDs considered



Province, and as a joint training point for master's students at Shanghai Jiao Tong University. It advanced **SDG 8** and **SDG 9** by becoming an essential part of the local exploration of the "world-class science and technology innovation hub" development path, hosting large-scale scientific research events that mark a new era of collaborative development in science and technology innovation throughout the Yangtze River Delta region, and achieving numerous significant research outcomes in biomedicine and electronic information. The high-level research facilities provide a solid foundation for innovation in research outcomes leading to substantial economic benefits from result transformation, attracting investments from multiple banks establishing a stable ecosystem for scientific and technological innovation while attracting related industries to boost economic development of the surrounding area, and through the use of Building Information Modeling throughout design, construction, and operation phases, the project achieves intelligent building

management reducing maintenance costs, saving energy, reducing pollution, and achieving the goal of a two-star green building rating.

SDG 11 and **SDG 12** are addressed through the design team's adoption of a "design response - generative design" workflow implementing comprehensive evaluations of form and performance while collaborating closely with construction client, user groups, main construction entities, process design teams, and construction teams across multiple stages to establish parametric models throughout park-scale, building-scale, and laboratory-scale processes that integrate specialized designs seamlessly ensuring comprehensive design solutions and successful implementation. Through the central lake, which lowers the campus's overall temperature, the courtyard-style layout, which improves the indoor environment and lowers stress levels, the plants that help sequester carbon and increase oxygen levels, the external sun

shading systems that keep direct sunlight out of buildings, and the independent control systems for each laboratory, which drastically reduce energy consumption in HVAC and electrical systems while maximizing efficiency, **SDG 13** takes climate action. Additionally, fitness trails and outdoor corridors around the campus perimeter offer exercise areas that promote outdoor activities.

Finally, **SDG 15** is advanced through preservation of existing natural water systems and vegetation while central water features and plants reduce campus temperature and improve air quality, with abundant vegetation strategically placed near each building and within courtyards

supporting local biodiversity, and **SDG 16** is strengthened as the respect and protection of the environment shown by the project makes scientists and researchers proudest, enabling them to work in a healthy comfortable environment while demonstrating their commitment and responsibility to environmental sustainability. The laboratory's research achievements and high-level research talents significantly elevate the development levels of the surrounding community while its knowledge dissemination sparks community-wide enthusiasm for science, and the entire campus preserves green plants and water bodies, thereby significantly improving the local ecological environment.



P110 YUANBO BUILDING: HUB OF RURAL ART TEACHERS

4 QUALITY
EDUCATION



Author(s): Zhang Wei, Zhao Jingxian, Huang Haiyang, Wang Yue, Li Xiangyi, Zhang Xiaoqian, Cai Mingcheng, Liang Sisi, Zhang Yuben, Li Ruoxing, Li Shiqi, Zhang Xin, Wang Dan

Professional Architectural

Organisation(s) of the Author(s):

Architectural Design & Research
Institute of Tsinghua University (THAD)

UIA Regions: Region IV

Client Name(s): Beijing Normal
University, Zhuhai

Location: Zhuhai, Guangdong, China

Geographic Coordinates (Latitude and

Longitude): 22.2700° N, 113.5767° E

Project/Intervention Area: 27.314m²

Status: Completed

Completion date: May 18, 2021

Image Author(s): THAD, Wu Qingshan,
Zhan Changheng, Zhao Jingxian

Project Description: The Yuanbo Building renovation at the Zhuhai Campus of Beijing Normal University transforms a typhoon-damaged 2005 structure into a vibrant teaching facility for the School of Design and an educational hub for rural art teachers,

serving a student body where over seventy percent of enrollees are female and come from disadvantaged regions with funded education, who will return to their hometowns as educators in rural schools. In an era of virtual reality, the project brings design education back to humanity and nature through a continuous roof loop offering spaces for feeling nature and exchanging ideas, an atrium with large stairs serving as exhibition and show space, a square courtyard with an original tree used for outdoor exhibitions, and a round courtyard with a stage for student concerts, all designed to inspire students while making best use of the original structure and prefabricated components for quick installation during summer and winter vacation construction windows.

The renovation extended the building's life after typhoon damage, reducing whole life cycle carbon emissions and setting a model for inclusive and sustainable urbanization as more renovation projects follow its success, with a dry-hanging brick wall system



and aluminum window casing using recycled materials from local factories while original ground paving materials were preserved and repurposed. The new facade maximizes natural light and ventilation through strategic openings and triangular scuttles directing sunlight into previously dark areas, while redesigned window casings block excess heat promoting energy efficiency, creating a healthier indoor environment while reducing energy costs, and a continuous hiking loop on rooftops repurposes unused areas into safe exercise spaces with loop lighting for nighttime use, resembling local mountain hikes and catering especially to female students.

The Zhuhai Campus offers funded education to students from underprivileged areas, with over 70% of students being female. This allows them to acquire knowledge and opportunities before returning to improve local

education in their hometowns, effectively breaking cycles of poverty and inequality while empowering women and girls through education and safe rooftop exercise spaces. As a result, the project directly advances **SDGs 1, 4, 5, and 10**.

In order to spread the pursuit of beauty, health, happiness, and sustainable development to underprivileged children throughout less developed regions, the building serves as a seed for rural art education. By serving as a seed for rural art education, the building promotes **SDG 3** by enabling students to enroll in rural art programs while they are in school and go on to teach rural art after they graduate. This helps spread the pursuit of beauty, health, happiness, and sustainable development to underprivileged children in less developed areas, fostering their physical, mental, and spiritual development while fostering resilience in the face of adversity.

SGDs considered



SDG 8 and **SDG 9** are addressed as the project promotes youth employment through funded education while employing over two hundred local workers during renovation, and fosters innovation through creating open, shared, multi-functional educational spaces where the building itself becomes part of design education, with the first exhibition about the renovation project encouraging students to find connections between building and surroundings through touching, hearing, and smelling. Using prefabricated components and recycled materials, the renovation extends building life and reduces carbon emissions, achieving **SDGs 11** and **12**. The continuous rooftop loop offers open spaces for communication and exercise that are accessible to the entire campus, and an art path connects courtyards with campus roads, giving the community access to safe, inclusive green and public spaces.

Through passive design techniques like natural ventilation, well-placed openings that let light into dark spaces, and window casings that block excess heat,



SDG 13 addresses climate change while lowering energy use and constructing a resilient, sustainable structure. In order to achieve **SDG 15**, all existing trees that serve as habitats for small animals—whom students lovingly refer to as “the building managers”—are preserved. Additionally, the integration of courtyards around the preserved trees blends the building with the breathtaking natural setting of the central lake and lush mountains. Finally, **SDG 16** is strengthened as the School of Future Design becomes a key art education center for the surrounding community through “Social and Public Design Education” courses using public spaces as informal educational settings, with the building open to neighborhood residents and students from other schools for activities within this artistic hub, while preserving original graffiti art and character ensures institutional memory and inclusive institutions.



P166 TIBAY BUHAY INCLUSIVE CENTER

4 QUALITY
EDUCATION



Author(s): KDAS Group: Ar. Kazandra Yap, Ar. David Cabigao, Leon Fernandez, Ivy Belza, Sophia Estabaya with Project Framework and Vision by Tibay Buhay Founders

Professional Architectural

Organisation(s) of the Author(s):

United Architects of the Philippines

Client Name(s): Myra Woperies

Location: Gubat Sorsogon, Philippines

Geographic Coordinates (Latitude and Longitude): 12°53'43.4"N / 124°07'17.7"E

UIA Regions: Region IV

Project/Intervention Area: 1,600m²

Status: Design Phase

Image Author(s): KDAS Group OPC

Project Description: Guided by the vision and framework of Tibay Buhay Incorporated, the project is conceived as a community-led initiative creating inclusive spaces for adults with different abilities and their caregivers. The project framework, which centered on inclusivity, environmental responsibility, and community engagement was developed in close collaboration with the foundation.

The first Tibay Buhay Inclusive Center in Sorsogon, Philippines serves as a prototype for replication across rural areas. Designed as both an educational facility and community hub, the center fosters training, therapy, livelihood opportunities, and public integration through a multi-purpose hall for skill-building and a community café where adults with different abilities can showcase their work and engage with the public. Responding to the foundation's emphasis on ecological resilience and pedestrian-oriented spaces, the design integrates a demonstration farm and vegetable garden that grounds users in nature, while surrounding spaces include an open-air amphitheater, Sunday market area, and quiet zones for rest and emotional regulation, all connected by a continuous infinity-loop pathway symbolizing connection, autonomy, and safe return. The project reflects a shared effort between the foundation's vision and its architectural translation into built form.



The architecture is rooted in local identity and ecological resilience, with materials such as bamboo, mud clay, anahaw palm, and coconut byproducts chosen for sustainability and cultural relevance. The C-shaped main structure symbolizes an embracing hand and is designed to withstand natural disasters through a reinforced concrete shell and steep roof geometry. Bioclimatic design strategies optimize natural light and airflow, featuring a vented breeze block wall using clay roof tiles and bricks that draws air through the building, cooled by dripping water from irrigation flows in an adaptation of beehive cooling systems, with heat escaping through a central courtyard while large openings enhance cross-ventilation.

In order to achieve **SDG 3**, the center actively supports social, mental, emotional, and physical well-being in a holistic setting. In order to provide flexible care, the multipurpose hall can be used as communal areas, training rooms, and therapy rooms. Particularly for neurodiverse people and caregivers,

quiet spaces, meditation areas, and sensory gardens support mental health and emotional control. The community café and demonstration farm, which provide livelihood training and boost self-esteem, promote social well-being. By using non-toxic, locally sourced materials and ensuring thermal comfort, natural sunshine, and circulation, passive design techniques lower health hazards while fostering a welcoming, non-institutional ambiance.

The center is an educational prototype that redefines learning spaces for adults with varying capacities in rural regions, which aligns with **SDG 4**. The multipurpose hall supports a variety of learning needs, including kinesthetic, sensory, and experience approaches, by integrating livelihood training and rehabilitation within a spatial framework. By offering practical, community-based skill development through farming, café management, and creative endeavors, the center fills in the gaps in lifelong learning. By fostering non-formal learning through quiet areas, sensory

SGDs considered



gardens, and the amphitheater, a rural educational model that can be applied to other underprivileged areas is created.

The center facilitates economic involvement for those with diverse abilities who are frequently shut out of rural economies in response to **SDG 8**. Operational training at the café and structured livelihood programs integrated within the multipurpose hall provide opportunities for skill development that lead to gainful employment. In a supportive environment, the café offers a live setting for practicing food handling, serving, and entrepreneurship, enabling people to actively participate in the micro-economy of their community. People of all abilities may contribute significantly to resilient rural economies by using locally produced, regenerative materials, which also drive demand for local craftsmanship and encourage sustainable building methods.



SDG 10 is directly addressed through the center's response to systemic marginalization of adults with different abilities in rural areas who face compounded disadvantages. The center prioritizes their inclusion, visibility, and empowerment through planning rooted in equity, ensuring needs of people often excluded from design processes are placed at center. The spatial experience is intuitive and dignified, designed to reduce psychological and physical barriers. The flexible, scalable architecture allows replication in other underserved provinces, reducing the urban-rural service gap and challenging centralized access to support. The project becomes a model symbolizing social justice and redefining accessibility as a fundamental right by empowering communities to support all their members.



In alignment with **SDG 11**, the center serves as a blueprint for inclusive rural development, placing a fully inclusive facility in a provincial setting while integrating sustainability through site-responsive planning, local ecological materials, and climate-adaptive strategies.

The bioclimatic design includes cooling clay tile roof, breeze blocks, and evaporative cooling systems reducing dependence on mechanical systems, while bamboo, coconut derivatives, and mud clay support sustainable local economy and reduce carbon impact. The spatial layout promotes safety and inclusivity through looped circulation path, intuitive wayfinding, and passive security. Program spaces from multipurpose hall to sensory gardens address physical, mental, and social well-being, demonstrating how architecture can serve both people and the planet through a replicable, context-sensitive model. Throughout the site, guiding principles of inclusivity through intuitive, multi-sensory spaces; grounded experience

connecting body and mind to nature; growth through spaces balancing safety and challenge; and adaptability through design rooted in local ecology all come to life. The Tibay Buhay Inclusive Center is more than a building — it is a living framework for dignity, resilience, and transformation, where architecture becomes a medium for health equity, community dignity, and sustainable living, creating a world where every person regardless of ability feels safe, seen, and able to grow.



5 GENDER EQUALITY

Goal 5 focuses on closing the gender gap and empowering all women and girls—essential for sustainable development. Despite progress, the world is not on track to achieve gender equality by 2030.

Women and girls represent half of the world's population and potential, yet gender inequality persists everywhere, including sexual violence, unequal unpaid care work, and discrimination in public office. Globally, women hold only 30% of managerial positions and spend about 2.5 times more hours on unpaid domestic and care work than men. At the current rate (as of 2023), it would take an estimated 300 years to end child marriage, 286 years to close legal protection gaps, 140 years for equal workplace leadership, and 47 years for equal representation in national parliaments. Political leadership, investments, and comprehensive policy reforms are needed to dismantle systemic barriers. Gender equality must be a key focus of national policies, budgets, and institutions.

- In 2024, legal barriers to gender equality persist: 61 of 131 countries (47%) restrict women from doing the same jobs as men; 38 countries (29%) set 18 as minimum marriage age with no exceptions; 63 countries (48%) define rape based on lack of consent.
- Nearly 1 in 5 young women aged 20–24 (19%) were married before 18. Child marriage remains highest in sub-Saharan Africa (31%), where the number of child brides is projected to rise by 2030.
- Over 230 million girls and women have undergone female genital mutilation (FGM), with 4 million girls affected annually. Eliminating FGM by 2030 requires accelerating progress to 27 times the pace of the past decade.
- In nearly 80% of countries with data, fewer than half of women have ownership or secure rights to agricultural land.
- As of 1 January 2025, women held 27.2% of seats in national parliaments (up 4.9 points from 2015, but only 0.3 points from 2024).

Source: The Sustainable Development Goals Report 2025

SDG 5 TARGETS

5.1 End all forms of discrimination against all women and girls everywhere.

5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.

5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.

5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decisionmaking in political, economic and public life.

5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.

5.A Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

5.B Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.

5.C Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

For more information: <https://www.un.org/sustainabledevelopment/gender-equality/>

P16

THE RIGHT TO PLANNING IN ETHNIC TERRITORIES THROUGH THE BIAS OF PARTICIPATORY MAPPING: THE EXPERIENCE OF PGTA IN THE POTIGUARA VILLAGES



Author(s): Angela Souza - Architect, Alicia Gonçalves - Gipcsa Coordinator, Maristela Andrade - Deputy Coordinator, Ivys Medeiros- Deputy Coordinator Gipcsa, Nathan da Silva - Tuxaua and Gipcsa Mediator, Gabriel Roque - Gipcsa Researcher, Matheus Araujo - Gipcsa Researcher.

Professional Architectural

Organisation(s) of the Author(s):

Interdisciplinary Research Group on Culture, Society, and Environment (GIPCSA) of the Federal University of Paraíba (UFPB). GIPCSA is an interdisciplinary research group that includes an urban architect regularly registered with the Brazilian Council of Architecture and Urbanism (CAU/BR).

UIA Regions: Region III

Client Name(s): Local Indigenous stakeholders and community-based organizations involved in territorial planning and memory preservation in Baía da Traição.

Location : Potiguara Territory - Baía da Traição, Paraíba, Brazil

Geographic Coordinates (Latitude and Longitude): -6.7153384452813825, -35.031845819765856

Project/Intervention Area: 33.757ha

Status: Under Construction

Image Author(s): GIPCSA

Project Description: Focusing on liminal zones and non-hegemonic territories of urban development, GIPCSA assists in defining zones of vulnerability, social interest, environmental and heritage protection, respecting the self-determination of indigenous peoples and contributing to the creation of material related to their villages so that the community can use it as a basis for the development of the Territorial and Environmental Management Plan (PGTA) for the Potiguara Indigenous Land, also developed through participatory mapping carried out with the local community in a coastal context marked by multiple vulnerabilities. Cartographic workshops, intergenerational consultations, and surveys of traditional knowledge resulted in collectively



developed guidelines for use and occupation, with community mapping identifying agroecological practices and sustainable land use to strengthen traditional agricultural production and promote food security through strategies like collective flour mills, while monitoring sugarcane plantations across thirty-two villages to reduce these areas and increase land allocated to agroecological family farming, directly advancing **SDG 2**.

The participatory process also highlights weaknesses in health coverage amid challenges such as the advance of gangs in some villages, reinforcing the urgent need for public infrastructure in ethnic territories by listening to and spatializing local demands to promote well-being under **SDG 3**, while mapping workshops encourage female and LGBTQIA+ protagonism by establishing partnerships and recognizing knowledge, territorial management, and political and spiritual leadership from Potiguara social movements integrated by these groups, empowering women and girls under **SDG 5**.

Social mapping identifies water sources and socio-environmental conflicts related to water, supporting strategies for access to clean sources and sustainable management of water resources while highlighting the Águas Potiguara project which has taken steps to restore rivers and springs under **SDG 6**, and the spatial diagnosis reveals deficiencies and opportunities for implementing sustainable and decentralized energy technologies in contexts with low energy infrastructure, addressing **SDG 7**.

Ethnotourism and the strengthening of local chains, collectively mapped, sustain solidarity economies and value Indigenous ways of life, countering the exploitative logic of monoculture while bringing economic movement, Indigenous recognition, and investment in education and health sectors under **SDG 8**, and since studies show that industrial insertion causes significant harm to Indigenous territories, participatory mapping prioritizes

SGDs considered



community infrastructure such as roads, garbage collection, public lighting, and social, educational, and health centers, incorporating social and technological innovation into territorial planning for **SDG 9**.

Territorial recognition and active listening to traditional peoples serve as tools to combat historical inequalities, promoting spatial justice and strengthening local autonomy by directing collective bias toward reducing segregatory spatial patterns and promoting welcoming collective spaces under **SDG 10**, while the territorial planning guidelines reinforce Indigenous territorial rights in traditionally marginalized territories, guiding already consolidated urban practices based on collectivity, memory, and care, with this organization serving as an example for mobilizing neighboring

municipalities and immediate non-Indigenous areas under **SDG 11**. The project values local management and production practices with a low ecological footprint, integrating sustainable cultivation techniques, extraction, carbon credits, and waste reuse into territorial plans for **SDG 12**, and addresses major concerns including rising sea levels that salinize rivers and fertile areas, sugarcane burning, and gullies, with safeguarding forests, rivers, and traditional knowledge representing a concrete response to the climate emergency combining ancestral knowledge and environmental planning under **SDG 13**.

While collectively constructed ethnozoning contributes to biodiversity conservation and sustainable land use, combating monoculture impacts and



recognizing the forest as a living entity, with evidence of species recovery within the Potiguara Territory under SDG 15, reforestation of riparian forests, actions in partnership with associations for dredging, and local mapping highlight the relationship of the Potiguara Indigenous people with aquatic ecosystems, allowing protection of rivers, estuaries, and mangroves from pressures of shrimp farming, pollution, and sugarcane monoculture **SDG 14**.

Finally, **SDG 16** is strengthened through the political articulation of Potiguara as an effective institution for peace and justice, with construction of the PGTA through participatory processes affirming the right to territory and autonomous governance, promoting territorial peace and institutional strengthening from the community

level, while **SDG 17** is realized through partnerships and coordination between the Federal University of Paraíba, Potiguara Indigenous communities, OTSS-Fiocruz, and international cooperation with ULAGOS-Chile and CIESAS-Mexico to enable sustainable and collective territorial and environmental management policies in the villages.

P76 UMA WARU P'IQI "WOVEN WATER WOMB"



Author(s): Vania Susana Calle Quispe, Elvira Zabala Brañez, Brandon Ricardo Quisbert Yujra, Benjamín Mayta Ventura

Professional Architectural

Organisation(s) of the Author(s):

Independent professionals

UIA Regions: Region III

Client Name(s): Chañi Community

Location: Chañi Community - Copacabana, La Paz, Bolivia

Geographic Coordinates (Latitude and Longitude): -16.133329, -69.088994

Project/Intervention Area: 25m²

Status: Design Phase

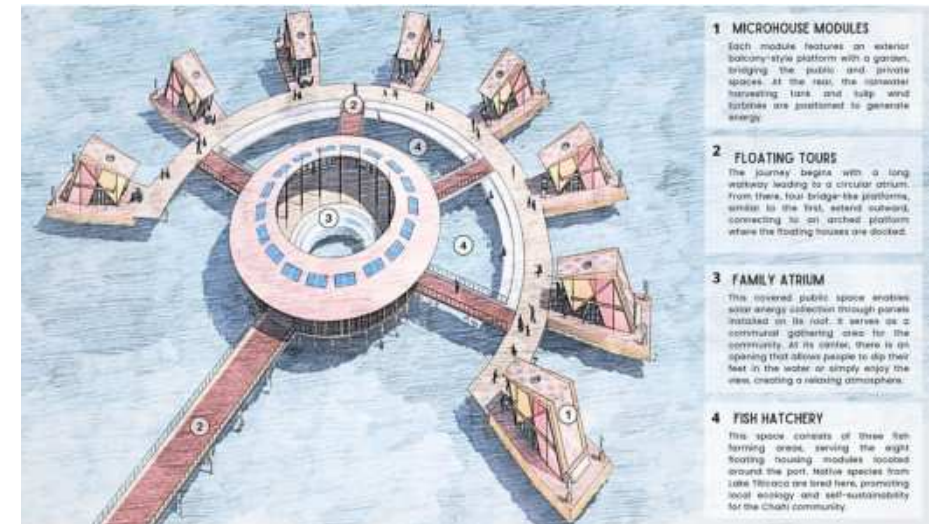
Completion date: August 27, 2025

Image Author(s): Vania Susana Calle Quispe, Elvira Zabala Brañez, Brandon Ricardo Quisbert Yujra, Benjamín Mayta Ventura.

Project Description: UMA WARU P'IQI, or "Woven Water Womb," proposes an architecture rooted in dialogue with Aymara knowledge systems to reconnect water, body, and territory, located in the community of Chañi

on Lake Titicaca in the municipality of Copacabana, Bolivia, where the amphibious micro-dwelling integrates contemporary technologies with traditional methods by using totora reeds in handwoven insulating panels combined with sheep's wool, wood, and renewable energies to honor local identity while ensuring self-sufficiency, reclaiming ancestral wisdom from a regenerative, situated, and sustainable perspective.

SDG 3 is strengthened by integrating the relationship between body, territory, and dwelling from a regenerative perspective that enhances physical and emotional well-being, connecting the human being with the lake environment during the day and with the constellations at night through a skylight in the roof, while **SDG 1** is directly advanced by encouraging sustainable livelihoods through the use of local building materials like totora reeds, sheep's wool, and wood, revaluing ancestral knowledge that strengthens



the local economy and guarantees access to housing. **SDG 4** is realized through intergenerational learning that showcases ancestral Aymara knowledge by reviving traditional building techniques and using natural resources as part of meaningful education.

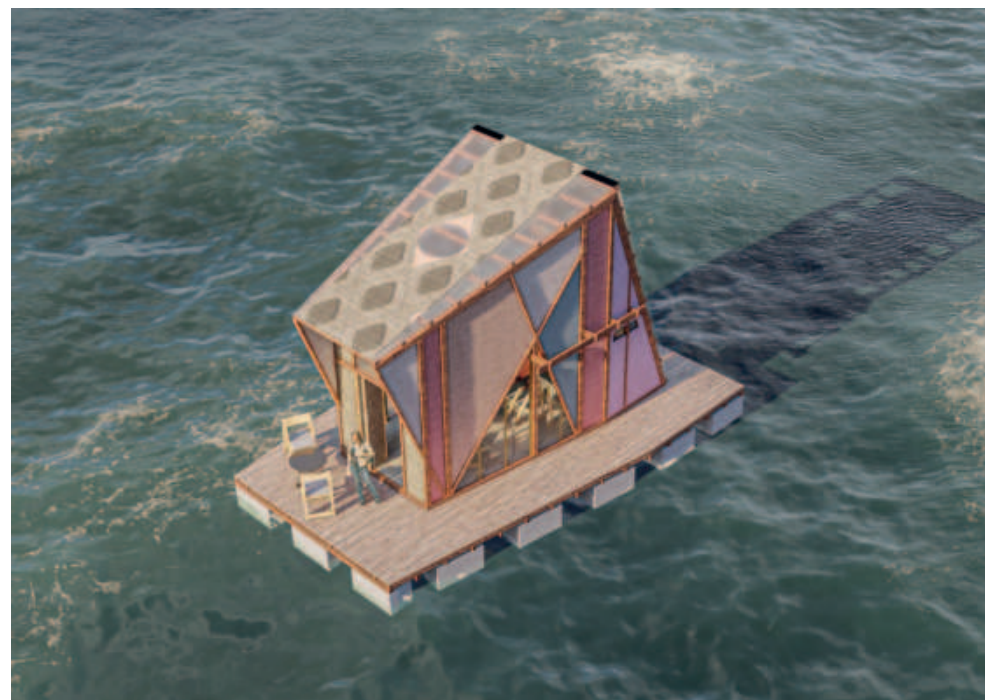
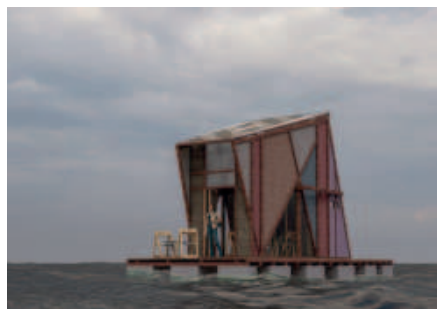
The micro-house serves as a living classroom for learning about the lake and the environment, and **SDG 5** is advanced by highlighting the role of women in the transmission of ancestral knowledge through the weaving of totora, moving from the artisanal realm to its use in architecture and acknowledging their symbolic role in positioning totora as a key construction material sustaining both habitat and community. **SDG 6** is addressed by restoring the symbolic bond with water as a source of life, respecting its natural cycles and avoiding invasive infrastructure while promoting awareness about lake pollution and

encouraging environmentally friendly practices such as dry toilets, conscious water use, and recycling, and **SDG 7** is achieved through renewable energy systems including solar panels that promote energy self-sufficiency and reduce reliance on fossil fuels while passive design strategies allow for natural light entry.

In order to drive a sustainable and productive economy in Aymara communities, **SDG 8** is promoted through local employment and the encouragement of artisanal work using natural materials. **SDG 11** is achieved by putting forward an alternative model of amphibious housing that is tailored to the lacustrine and cultural context, addressing climate risks like rising water levels and seasonal fluctuations while remaining true to the identity of lake communities and maintaining a strong connection to the landscape.

While **SDG 14** is advanced through best practices that protect the lacustrine ecosystem by proposing architectural solutions that do not disturb the aquatic environment or pollute its waters, encouraging responsible harvesting of the totora aquatic plant, **SDG 13** takes climate action by promoting climate-resilient architecture with low environmental impact that contributes to the lakeshore ecosystem of Lake

Titicaca, where the totora plant grows, providing shelter for many fish species and food for small organisms. Lastly, revaluing the sustainable use of natural resources for thermal insulation, such as wood, sheep's wool, and totora, strengthens **SDG 15** by encouraging regenerative construction methods that honor the environment and deepen ties to traditional knowledge.



P119 PAVILION FOR THE DEVELOPMENT OF ARTISTIC SKILLS IN HIGHLY MARGINALIZED AREAS



Author(s): Héctor Alejandro Martínez Gaona

Professional Architectural

Organisation(s) of the Author(s):

Federacion de Colegio de Arquitectos de la República Mexicana

UIA Regions: Region III

Client Name(s): Municipal Government of Xalapa, Veracruz

Location: Xalapa, Veracruz, Mexico

Geographic Coordinates (Latitude and Longitude): Several

Project/Intervention Area: 300m²

Status: Design Phase

Completion date: August 11, 2022

Image Author(s): Alejandro gaona

Project Description: This project addresses the urgent need for artistic and cultural expression spaces in highly marginalized neighborhoods within the municipality of Xalapa, Veracruz, with a replicable model for other municipalities, by developing comprehensive urban improvement interventions that include urban equipment, public space,

mobility, and connectivity works in areas where segregation, urban and social backwardness, inequality, poor accessibility, mobility problems, and deficient urban infrastructure collectively hinder the exercise of the Right to the City. Aligned with the guidelines of the Urban Improvement Program (PMU) through which SEDATU promotes inclusive, safe, resilient, and sustainable human settlements, the project ensures access to adequate, safe, and affordable housing and basic services while improving slums, increasing inclusive and sustainable urbanization through participatory, integrated, and sustainable planning and management, and providing universal access to safe, inclusive, and accessible green areas and public spaces particularly for women, children, older persons, and persons with disabilities, directly advancing **SDG 11**.

The project promotes **SDG 4** by creating community facilities that support artistic and cultural expressions, serving as



platforms for lifelong learning and equitable quality education through cultural programming, while **SDG 5** is advanced through gender-sensitive planning that promotes equality between women and men in all spheres of life, ensuring budget planning incorporates a gender perspective and supports programs for equality between women and men with equal access to social rights. Public policies, programs, and actions are implemented to reduce risk factors contributing to violence, gender-based violence, and crime, combating the various causes and factors that generate it while contributing to providing people with protection in the areas of freedom, security, and justice based on precise, clear, and measurable objectives, strengthening **SDG 16** through peaceful and inclusive societies.

The project supports positive economic, social, and environmental links between urban, peri-urban, and rural areas by strengthening national and regional development planning, substantially

increasing the number of human settlements that adopt integrated policies and plans to promote inclusion, efficient resource use, climate change mitigation and adaptation, and disaster resilience. Ultimately, this intervention reduces the physical and social gap in urban public policy implementation, impacting an improvement in quality of life and comprehensive development of people who exercise their right to the city, fully addressing the targets of the 2030 Agenda.

SGDs considered





5 GENDER EQUALITY

a 22.6-acre master plan replacing a Hurricane Ian-destroyed outlet mall. The development features three aerodynamic high-rise towers, 200 social workforce housing units, art-center, a 200-room hotel, a 15,000 square foot performing arts and conference centre, and over 65,000 square feet of reconfigurable retail and restaurant space, with buildings raised on 15-foot podiums to protect from storm surge and integrated bioswales, solar canopies, and stormwater retention systems, while advanced computational fluid dynamics, wind tunnel testing, and AI simulations shape climate-adaptive architecture optimizing daylight, thermal comfort, energy harvesting, and water reuse within an urban grid prioritizing walkability, social equity, Indigenous cultural representation, and educational art spaces.

Project Description: Grande Calusa 2025–2100 is a transformative, AI-optimized, hurricane-resilient mixed-use development in Fort Myers and Sanibel Island, Florida, designed as a net-zero, carbon-neutral smart campus resilient through 2100, inspired by the adaptive intelligence of the Indigenous Calusa people to fuse ancestral land stewardship with cutting-edge environmental technologies across



SDG 3 places a high priority on both physical and mental health through all-encompassing human-centered design that includes a lot of pedestrian-

Through safe, accessible pedestrian pathways, well-lit public areas, and universally inclusive design that supports equal participation, **SDG 5** promotes safe, inclusive, and equitable spaces for women and girls. Economic

opportunities prioritize employment equity and support women-led businesses and cooperatives, while community centers offer platforms for women's voices and leadership. In order to prevent flood-related sanitation crises, restore natural hydrological functions through engineered ecological solutions, and ensure continuous access to clean water, **SDG 6** integrates sophisticated water-management infrastructure such as bioswales, constructed wetlands, stormwater harvesting, and greywater recycling systems.

Using large-scale geothermal, wind, and photovoltaic solar canopies integrated into building roofs and walkways, **SDG 7** focuses on comprehensive mixed renewable generation. AI-driven microgrids provide a robust autonomous power supply that ensures energy continuity during climate-

related disruptions and contributes excess power back into the local grid. Through a variety of job opportunities in technology, construction, hospitality, and local commerce, **SDG 8** promotes sustainable economic development. Construction jobs emphasize green building practices and integrating local businesses, while long-term commercial viability supports cultural tourism and local entrepreneurship.

With infrastructure created using sophisticated computational fluid dynamics and AI optimization to create flood-resistant designs and aerodynamic towers, flexible reconfigurable spaces that encourage industrial sustainability, and smart digital infrastructure that serves as a replicable model for coastal urban redevelopment worldwide, **SDG 9** exemplifies state-of-the-art urban resilience. By purposefully combining

affordable and market-rate housing through universal design principles, **SDG 10** promotes social and spatial equity. Public facilities also directly address local socioeconomic divides, and cultural integration through Indigenous representation fosters empathy and recognition of marginalized groups.

By converting a hurricane-ravaged area into a thriving, inclusive community with tall, storm-adaptive buildings, complete flood protection, and integrated renewable energy, **SDG 11 is a prime example of sustainable urban regeneration**. It also promotes active transportation and cross-cultural interactions to strengthen community ties. While AI-supported design techniques maximize resource allocation and nurture efficient consumption patterns, **SDG 12** applies circular economy concepts across design and construction, giving priority to waste reduction technologies, modular solutions, and material reuse.

SDG 13 provides a comprehensive climate-responsive solution mitigating risks through elevated building podiums, wind-resistant architectural forms, and extensive stormwater infrastructure, with energy-positive buildings and integrated renewables drastically reducing emissions while AI-driven simulations ensure precise climate adaptation measures establishing a proactive response to climate threats.

SDG 14 addresses marine ecosystem conservation through engineered water management systems mitigating urban runoff and preventing pollutants from entering coastal waters, with integrated bioswales and filtration



wetlands reducing contamination while elevated design reduces coastal erosion protecting mangroves and seagrass beds.

Through ecological corridors and native planting programs, **SDG 15** restores native terrestrial ecosystems, preserving biodiversity and mitigating the effects of urban heat islands while fostering sustainable ecological management and regional habitat connectivity. And through the use of smart-city technologies to increase transparency in community governance and the integration of Indigenous Calusa heritage, which celebrates ancestral ecological knowledge and promotes intercultural understanding, **SDG 16** cultivates an inclusive peaceful community by emphasizing transparency and public participation in spatial designs. Universally accessible public spaces and cultural centers also encourage diverse interaction.





6 CLEAN WATER AND SANITATION

Access to safe water, sanitation, and hygiene is a basic human need, but demand is rising due to population growth, urbanization, and needs from agriculture, industry, and energy.

Water demand has outpaced population growth. Since 2015, global water stress has held at 18%, with 1 in 10 people living under high or critical stress and several regions exceeding 75% stress. Climate change is expected to increase water scarcity.

Achieving universal access to safe drinking water by 2030 requires infrastructure investment, ecosystem protection, hygiene education, and improved water-use efficiency. At current speeds, sustainable water management will not be achieved until at least 2049, and doubling the current rate of progress is needed to reach universal WASH coverage in schools by 2030. On a positive note, between 2015 and 2024, the share of the global population with access to safely managed drinking water rose from 68% to 74%.

- Despite progress, billions still lack safe drinking water, sanitation, and hygiene. Achieving universal coverage by 2030 requires a substantial increase in current progress rates.
- In 2022, roughly half the world's population experienced severe water scarcity for at least part of the year; one quarter faced "extremely high" water stress. Climate change worsens these issues.
- Only 0.5% of water on Earth is usable and available freshwater.
- The global urban population facing water scarcity is projected to double from 930 million in 2016 to 1.7–2.4 billion in 2050.
- In 2024, 2.2 billion people lacked safely managed drinking water, 3.4 billion lacked safely managed sanitation, and 1.7 billion lacked basic hygiene services at home.
- Water pollution poses a significant challenge to human health and the environment in many countries.
- Key strategies to get Goal 6 on track include increasing investment and capacity-building, promoting innovation, enhancing cross-sectoral coordination, and adopting integrated water management

Source: The Sustainable Development Goals Report 2025

SDG 6 TARGETS

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

6.A By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater

6.B Support and strengthen the participation of local communities in improving water and sanitation management.

For more information: <https://www.un.org/sustainabledevelopment/water-and-sanitation/>

P3 NORTHLAKE COMMONS REGIONAL BIOSWALE



Author(s): Rachael Meyer
Professional Architectural Organisation(s) of the Author(s): Weber Thompson
UIA Regions: Region III
Client Name(s): Hes- sCallahanGrey Group | Spear Street Capital | The Dunn Lumber Family
Location: Seattle, Washington, United States of America
Geographic Coordinates (Latitude and Longitude): 47.654342, -122.325155
Project/Intervention Area: 5.854m²
Status: Completed
Completion date: February 26, 2024
Image Author(s): Built Work Photography and Weber Thompson

Project Description: Northlake Commons, a private development located north of downtown Seattle, sets a new precedent for public-private partnership with Seattle Public Utilities by creating a replicable model that prioritizes and positively impacts the ecological, economic, and social health of the greater community, situated between the transforming Northlake maritime neighborhood and the single-family Wallingford community as a two hundred

seventy-five thousand square foot mass timber commercial building. At the north end of the site, the twenty-seven mile Burke Gilman Trail intersects with Northlake Commons' plaza, welcoming trail users to a mix of retail and publicly accessible open space that bisects the building and frames a stunning view of Lake Union and Downtown Seattle, with a meandering pathway through the project culminating in a pedestrian connection to a greenspace where the building's footprint was intentionally held back from the two hundred foot Lake Union shoreline buffer.

The greenspace doubles as a regional swale, becoming the first in a series of projects to receive public funding, with Northlake Commons going above and beyond by cleaning over an acre of polluted roadway runoff and exceeding the site's stormwater mitigation code requirements through innovative design that showcases how public-private partnerships can dramatically improve regional water quality and community connectivity. Northlake Commons builds upon a public-private partnership that began with the nearby



Aurora Bridge, where the same private development team expanded their efforts to clean toxic runoff from the bridge using green stormwater infrastructure integrated into the public right-of-way and managed by private property owners, and for this project, the development team continued their partnership with Seattle Public Utilities by incorporating a regional swale into the private development, marking the first time Seattle's stormwater was diverted from a public right-of-way to a private site.

The swale cleans two point six million gallons of stormwater runoff annually, captured and filtered from three acres of surrounding public roadway by leveraging the significant thirty feet of grade change between the site's north and south edges through a diverter structure that allows over one hundred gallons per minute to bypass the storm pipe and make its way onto the private property, where the water traverses a vortex filter, treatment vault, and a series of open runnels culminating in a vegetated swale surrounded by a naturalized area for pollinators before rejoining the below-grade storm infrastructure in the public right-of-way. By filtering stormwater and removing

toxins before they flow into Lake Union, the Northlake Commons Regional Swale reverses the detrimental impacts of runoff on local salmon populations while improving regional water quality, and this new model helped Seattle Public Utilities define a legal, permitting, and operational process to partner with new developments, leveraging the installation of onsite stormwater infrastructure to include the treatment of public stormwater as well.

In alignment with Goal 6, Northlake Commons demonstrates sustainable management of water through its pioneering public-private partnership that redirects public right-of-way runoff onto private property for treatment, with the regional swale cleaning two point six million gallons of stormwater annually from three acres of surrounding public roadway through a sophisticated system that includes a diverter structure, vortex filter, treatment vault, and open runnels culminating in a vegetated swale before rejoining public infrastructure, ensuring that toxins are removed before reaching Lake Union and improving water quality for local ecosystems and communities.

Regarding **SDG 11**, the project makes cities and human settlements inclusive, safe, resilient, and sustainable by integrating the twenty-seven mile Burke Gilman Trail with a publicly accessible plaza that welcomes trail users to retail and open space bisecting the building while framing stunning views of Lake Union and Downtown Seattle, creating a vibrant public destination that enhances community connectivity and access to waterfront green space.

Northlake Commons' public-private partnership model, which reroutes public right-of-way runoff onto private property for on-site stormwater management, supports city infrastructure capacity during major storms and shows how development can contribute to climate resilience through creative water management strategies, addresses **SDG 13** by offering a replicable case study for integrating climate change measures into infrastructure planning.

By going beyond the building's footprint to clean three acres of neighborhood stormwater runoff through a bioswale that filters and removes toxins before they flow into Lake Union, the project directly reverses negative effects on local salmon populations and improves regional water quality in ways that protect and restore the health of aquatic ecosystems connected to oceans and seas, in line with **SDG 14**.

By converting an industrial site into a regional swale that offers vital habitat for pollinator species like swallowtail butterflies, bumblebees, and Anna's hummingbirds, Northlake Commons demonstrates how careful landscape design combined with stormwater infrastructure can enhance biodiversity and restore ecological function within urban environments while managing vital water resources. This is in line with **SDG 15**.



P71 LOOM HOUSE



Author(s): Architect: The Miller Hull Partnership, LLP / Interior Designer: Charlie Hellstern Interior Design / General Contractor: Clark Construction, LLC / Landscape Architect: Anne James Landscape Architecture LLC / Structural Engineer: Quantum Consulting Engineers / Mechanical Engineer: WSP / Water Consultant: Biohabitats / Civil Engineer: Seabold Engineering LLC / Geotechnical Engineer: Aspect Consulting LLC / Envelope Consultant: JRS Engineering / Lighting Consultant: Lighting Designs, Inc.

Professional Architectural

Organisation(s) of the Author(s): The Miller Hull Partnership, LLP

UIA Regions: Region III

Client Name(s): Confidential

Location: Bainbridge Island, Washington, United States of America

Geographic Coordinates (Latitude and Longitude): 47.6 / -122.5

Project/Intervention Area: 2.213m²

Status: Completed

Completion date: October 16, 2019

Image Author(s): Kevin Scott / Ben Schauland / The Miller Hull Partnership, LLP

Project Description: Loom House is located on a beautifully landscaped bluff overlooking Puget Sound. It consists of an extensive renovation of a classic 1960s mid-century home. The property includes both a main house and an office. The design respects the original architectural character of Hal Moldstad's mid-century home. This home now thrives within a rejuvenated Pacific Northwest landscape. The project achieved Living Building Certification through several key strategies. It operates with net positive energy and water systems. It incorporates food production on site. It adheres to a strict materials Red List. The design is inspired by weaving together people, place, community, and equity. Loom House provides owners with a prototype for renovating their homes using resilient retrofitting strategies.

The project's urban agriculture initiatives directly contribute to **SDG 2**. Fruit and vegetable plots are available to the community. Sustenance is provided by a mycological forage forest that complements the lowland forest



environment of Puget Sound. Rainwater collection and treated grey water supply all of the irrigation for these gardens. The net positive water system in the house helps achieve **SDG 6**. Rainwater is collected by the home and used for drinking. On-site, it contaminates stormwater. It is used for subsurface irrigation and treats both black and grey water. This lessens the burden on frequently failing municipal systems and encourages sustainable water management. By generating net positive energy, **SDG 7** is accomplished. More than all of the energy used in the house is produced by solar panels. During power outages, a battery storage system offers resilience. Any extra energy produced is returned to the local grid.

The project advances **SDG 13** through multiple climate action strategies. These include net positive water and net positive energy systems. They include responsible materials sourcing and waste reduction. They include embodied carbon reduction and resilience planning.

This renovated home serves as a model for how homeowners can take action to combat climate change.

Lastly, the integration of the home with the local ecology promotes **SDG 15**. Nestled among century-old cedar trees and Puget Sound's native woodlands lies Loom House. By providing pollinator habitats, it safeguards the native lowland ecology. It preserves native urban agriculture and mycological forage forests. The project uses only FSC-certified wood, which supports sustainable forest management.

SGDs considered





P98 ENVIRONMENT AND NATURAL RESOURCES 2



Author(s): Jim Richârd, FAIA + Stephen Kennedy, AIA + Andrew Timberg, AIA
Professional Architectural Organisation(s) of the Author(s): Richârd | Kennedy Architects + GLHN
UIA Regions: Region III
Client Name(s): University of Arizona
Location: Tucson, Arizona, United States of America
Geographic Coordinates (Latitude and Longitude): 32.23° North / -110.96° West
Project/Intervention Area: 14.028,25m²
Status: Completed
Completion date: May 1, 2015
Image Author(s): Exterior: Marion Brenner | Interior: Bill Timmerman

Project Description: The Environment and Natural Resources 2 building at the University of Arizona is a LEED Platinum-certified “living laboratory” for sustainability. Completed in 2015 in arid Tucson, its design is inspired by desert slot canyons. A central courtyard channels airflow and collects water, while curved aluminum scrims and native-plant terraces provide shade and habitat. The

building relies on passive design, using concrete walls for thermal mass and the courtyard to promote natural ventilation via stack effect. Solar chimneys and operable windows enable nighttime cooling. These are supported by efficient active systems like displacement ventilation, active chilled beams, and daylight-responsive lighting. Together, they achieve over 30% energy savings compared to typical labs.

Water use is reduced by over 40% through an integrated system that harvests 260,000 gallons of rainwater annually and recycles HVAC condensate for irrigation, which uses only reclaimed water. The facility also serves as an educational tool, with real-time building data available to students. An experimental rooftop agrivoltaic array combines solar panels with native plants for research. Public spaces like a café and classrooms encourage collaboration, while flexible office areas allow for future adaptation.



In addressing **SDG 3**, the building prioritizes occupant health and well-being through natural ventilation, daylighting, and non-toxic, low-emission materials that create healthy work and learning environments. Thermal comfort is enhanced through passive design strategies that moderate temperature swings without relying solely on mechanical systems, while underfloor displacement ventilation ensures fresh air is delivered efficiently to occupied spaces. Regarding **SDG 4**, the facility functions as an active teaching tool where real-time data from environmental systems integrates with interdisciplinary academic programs, supporting diverse research initiatives across climate science, water management, ecology, and sustainable design. Publicly accessible dashboards display performance metrics, making sustainability concepts tangible for students and visitors alike.

Through creative management systems that drastically lower the demand for potable water, the building tackles water scarcity for **SDG 6**. Sustainable water management techniques that can be used in water-stressed areas across the globe include rainwater collection, condensate recovery, and native desert vegetation that requires little watering. Addressing **SDG 7**, the integration of desert-specific passive and active systems, such as solar chimneys, thermal mass walls, and rooftop photovoltaic arrays with experimental agrivoltaics, shows how educational institutions can meet strict sustainability guidelines while supplying dependable energy that is suited to regional climates. The facility supports **SDG 8** by fostering a hub for research and innovation focused on environmental resilience, accommodating diverse academic and technical staff in flexible spaces designed for evolving research needs.

SGDs considered

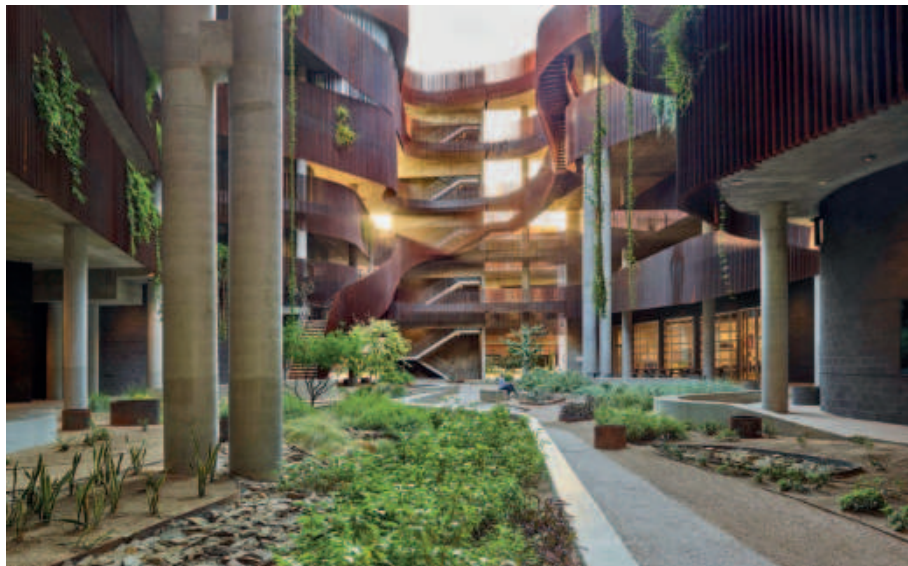


Its construction prioritized local materials and sustainable sourcing, supporting regional economies while preparing graduates skilled in climate science and sustainability for green industries. For **SDG 9**, the building exemplifies resilient infrastructure designed to withstand the challenges of an arid, climate-vulnerable region through durable materials, passive systems that reduce reliance on energy-intensive equipment, and flexible floorplates that enable adaptation as research needs evolve.

Regarding **SDG 11**, the building contributes to urban resilience by demonstrating how structures in extreme climates can mitigate heat gain, manage water sustainably, and reduce energy consumption. Its shaded courtyards and outdoor terraces improve thermal comfort and encourage

social interaction, while public spaces invite community engagement and promote knowledge exchange between the university and broader public. With long-lasting construction and adaptable spaces intended to reduce future waste from restorations, **SDG 12** is addressed through the use of low-impact materials, thorough waste management during construction, and effective operating systems that exemplify sustainable consumption patterns.

For **SDG 13**, the building directly addresses climate change through low-energy, low-water design tailored to regional vulnerabilities while supporting critical climate research across disciplines. Passive cooling and ventilation reduce greenhouse gas emissions associated with mechanical cooling, while renewable energy



integration and water harvesting reduce carbon footprints. Regarding Goal 15, the restoration and enhancement of native desert ecosystems through indigenous landscaping provides habitat for local wildlife, while site design mimics natural processes like water infiltration and soil preservation to mitigate land degradation and desertification.

Lastly, the facility empowers different perspectives in sustainable research by promoting diversity and collaboration across academic fields, which is relevant to **SDG 16**. It facilitates open access to data and instructional initiatives that increase institutional capacity to

fairly handle sustainability concerns while acting as a transparent center for knowledge sharing with community partners and encouraging responsible stewardship of environmental resources. This structure shows how architecture may actively contribute to knowledge and resilience in an area that is experiencing severe climate change-related difficulties, such as heat, drought, and water scarcity. Architecture serves as an ecosystem, a teaching tool, and a catalyst, promoting the 2030 Agenda for Sustainable Development and serving as an example of the important worldwide mission of ecological stewardship and climate adaptation.

P137 BORGO DEI FIORI



Author(s): Arch. Nicola e Arsenio Zanarini

Professional Architectural

Organisation(s) of the Author(s):

Concept Architettura stp soc. coop

UIA Regions: Region I

Client Name(s): Borgo dei Fiori srl

Location: Casalecchio di Reno, Italy

Geographic Coordinates (Latitude and

Longitude): 44.27.45 - 11.16.36

Project/Intervention Area: 8.300m²

Status: Under Construction

Completion date: July 31, 2027

Image Author(s): Zanarini Nicola

Project Description: The Borgo dei Fiori project represents an urban regeneration intervention deeply rooted in the history and territory of Casalecchio di Reno, transforming an ancient rural courtyard into a contemporary housing model that combines the memory of the past with the challenges of sustainability. This village, whose layout is already documented in maps from 1884, developed over the centuries around the Torre dei Roffeni, a fortified house dating back to the fifteenth-sixteenth century

that once served as a fortified outpost for the safeguard of the rural territory and control of the valley connecting the hills of Sasso Marconi to Casalecchio. From the seventies and eighties, the complex housed one of the most important plant nurseries in Italy, owned by the Betti Renato family. Today, the recovery intervention, carried out in compliance with architectural constraints, aims to restore value to this heritage through the typological restoration of the buildings, the recomposition of the openings to adapt them to contemporary living, and the recovery of the tower, destined to become a prestigious residence that will bring to light its ancient splendor.

The intervention is distinguished by a holistic approach to sustainability that integrates environmental, social, and cultural aspects. An element of extraordinary natural value is represented by the body of water originating from a natural spring that the nursery had channeled for irrigation purposes. Today, this basin, although no longer serving its original function,



has re-naturalized, becoming a precious habitat for local fauna. Its importance is such that the Societas Herpetologica Italica has notified the Municipality of the presence of several protected and declining species, including the Agile frog (*Rana dalmatina*), included in Annex IV of the Habitats Directive, and the Common toad (*Bufo bufo*), classified as vulnerable on the IUCN Red List. This makes this body of water a landscape and naturalistic element to be protected and enhanced. In line with **SDG 6** of the 2030 Agenda, the project guarantees sustainable management of water resources: rainwater is collected in cisterns for irrigation, supplemented during dry periods by water from the basin, and subsequently discharged into a natural ditch, avoiding discharge into the sewer system, thus contributing to the maintenance of the natural water cycle.

On the energy front, the Borgo dei Fiori responds to **SDG 7** through an innovative concept that involves the exclusive use of electricity for heating, cooling, and

the production of domestic hot water, powered entirely by renewable sources. The entire complex is conceived as a unitary energy condominium: on the roofs of the buildings, a distributed photovoltaic system with a capacity of 40 kWp is being built, which powers the heat pumps of the individual buildings, maximizing efficiency and self-consumption. This configuration, which brings the intervention to energy class A4, very close to NZEB (Nearly Zero Energy Building) standards, represents a replicable model of collective energy management from renewable sources.

The intervention fully embodies the principles of **SDG 11**, promoting inclusive, safe, and sustainable cities and human settlements. The choice to regenerate an ancient village rather than consume new land demonstrates a clear strategy of environmental resilience and land reuse. The village's location, on the edge of the urbanized perimeter but close to services and the sustainable mobility network—with cycle paths easily connecting it

SGDs considered



to Casalecchio and Bologna, public transport, and the planned roadway of the Nuova Porrettana—encourages low environmental impact lifestyles. The installation of two electric vehicle charging stations powered by the condominium's photovoltaic system further reinforces this orientation towards sustainable mobility.

The social and community dimension of the project, in line with the idea of contemporary co-housing, finds expression in the creation of a common communal space at the center of the village, evoking the ancient rural courtyard where inhabitants used to gather after work. This space harmoniously balances the modern need for private gardens with the recovery of collective memory, creating the conditions for new forms of coexistence based on sharing. Completing this vision are common services, including an underground storage area for condominium equipment and a dedicated area for separate waste collection, functionally positioned to facilitate both residents and the work of waste management operators, thus promoting virtuous waste management practices.



SDG 13 is pursued through an integrated package of technological and construction solutions aimed at reducing emissions and combating climate change. The buildings are characterized by thermal insulation achieved not with an external cladding system but with high-thickness brick blocks, which guarantee excellent insulation performance, thermal lag, and inertia, essential for both winter and summer energy savings. The windows are mounted on insulated pre-frames and equipped with room-by-room controlled mechanical ventilation systems, ensuring air exchange with heat recovery.

The integration of advanced home automation allows intelligent control of systems and energy consumption, while roller shutters with solar filtration function optimize thermal gains, reducing energy waste for cooling and heating. The homes thus become connected smart homes, where constant monitoring allows maximizing efficiency and living comfort.





7 AFFORDABLE AND CLEAN ENERGY

Goal 7 aims for clean and affordable energy—key to agriculture, business, education, healthcare, and transport. The world is advancing, but not fast enough. At the current pace, by 2030, about 645 million people will still lack electricity, and 1.8 billion will rely on polluting fuels for cooking. Energy consumption is the dominant contributor to climate change, accounting for two-thirds of global greenhouse gas emissions. On a positive note, from 2010 to 2023, access to electricity rose from 84% to 92% of the global population. Achieving universal access to affordable electricity by 2030 requires investment in solar, wind, and thermal energy, as well as infrastructure and technology upgrades in developing countries—supporting both growth and the environment.

- At the current pace, by 2030, about 645 million people will still lack electricity and 1.8 billion will lack clean cooking.
- In 2022, renewables powered 30% of electricity sector consumption, but challenges remain in transport.

- The share of renewables in total final energy consumption increased from 15.6% (2015) to 17.9% (2022).
- A total of 45 countries achieved universal access, but approximately 8% of the world's population (primarily in LDCs and sub-Saharan Africa) remain without access.
- 2.1 billion people still rely on unsafe and polluting fuels for cooking. Access to clean cooking reached 74% globally in 2023 (up from 64% in 2015), but sub-Saharan Africa lags as progress fails to keep pace with population growth.
- International financial support for clean and renewable energy to developing countries reached \$21.6 billion in 2023 (up 27% from 2022), but this is only about three quarters of the 2016 peak of \$28.4 billion.
- To ensure energy access for all by 2030, we must accelerate electrification, increase renewable energy investments, improve efficiency, and develop enabling policies.

Source: [The Sustainable Development Goals Report 2025](#)

SDG 7 TARGETS

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.

7.3 By 2030, double the global rate of improvement in energy efficiency.

7.A By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.

7.B By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.

For more information: <https://www.un.org/sustainabledevelopment/energy/>

P75 KENDEDA BUILDING FOR INNOVATIVE SUSTAINABLE DESIGN

7 AFFORDABLE AND
CLEAN ENERGY



Author(s): General Contractor
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– Civil: Long Engineering / Engineer
– Water and Ecology: Biohabitats /
Architect – Landscape: Andropogon
Associates, Ltd. / Architect – Prime: Lord
Aeck Sargent / Architect – Design and
Living Building Challenge: The Miller Hull
Partnership / Design – Interiors: Lord
Aeck Sargent / Engineer – Structural:
Uzun + Case / Engineer – MEP
(Design): PAE / Engineer – MEP (Prime):
Newcomb & Boyd Consultants and
Engineers / Biophilic Consultant - Sonja
Bochart Wellbeing+Design

Professional Architectural

Organisation(s) of the Author(s):

The Miller Hull Partnership, LLP in
collaboration with Lord Aeck Sargent
UIA Regions: Region III

Client Name(s): Georgia Institute of
Technology

Location: Atlanta, Georgia, United States
of America

**Geographic Coordinates (Latitude and
Longitude):** 33.8 / -84.4

Project/Intervention Area: 3.435m²

Status: Completed

Completion date: October 26, 2019

Image Author(s): Gregg Willett /
Jonathan Hillyer / The Miller Hull
Partnership, LLP

Project Description: The Kendeda Building for Innovative Sustainable Design at Georgia Tech is a multi-disciplinary education facility and a working model of regenerative architecture. Located in Atlanta, it anchors the eight-acre Eco-Commons, a restored green space reconnecting the urban campus with its ecological context. Drawing from Southern vernacular design, its west-facing Regenerative Porch provides shaded outdoor space and significantly reduces cooling loads through passive strategies, while also collecting solar energy and rainwater. The building is a fully integrated synthesis of the Living Building Challenge, serving as a living laboratory that demonstrates how buildings can act as agents of environmental restoration.



In alignment with **SDG 2**, the building actively promotes sustainable food systems. A rooftop farm, edible landscape plantings, and edible vine walls are integrated throughout the site, all actively managed by students. A rooftop apiary supports pollinators and enables research on urban bee populations. The fundamental goal is to reconnect students and the community with their food systems, fostering an understanding of sustainable food development and the relationship between human consumption and ecological health.

Addressing **SDG 4**, the building's principal aim is to teach people of all ages about sustainability while also serving as a research lab. The Kendeda Building democratizes sustainability education by making it accessible to all students, regardless of field, as well as the general public. Its systems are purposefully visible, transforming the building into

a teaching tool in which residents can learn about net-positive energy, water cycling, and regenerative design just by strolling about the area. It supports several degree programs across campus, encouraging interdisciplinary collaboration on environmental concerns.

The building functions as a net-positive water system in relation to **SDG 6**. The property eliminates reliance on municipal supplies by collecting and treating all rainwater that falls on it to supply all potable water needs. Infiltration techniques that replicate natural hydrological processes are used to manage stormwater, replenishing groundwater and lowering runoff.

Surprisingly, an integrated system that combines composting toilets and artificial wetlands treats all wastewater on-site, including black and grey water. By converting trash into resources, this

SGDs considered



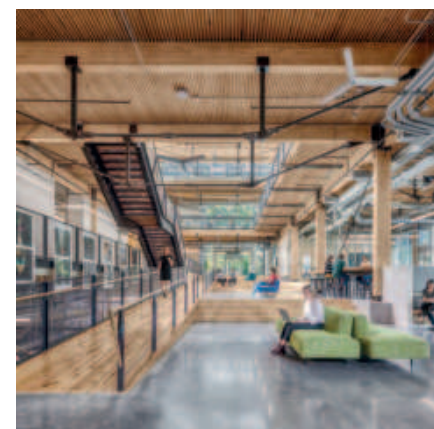
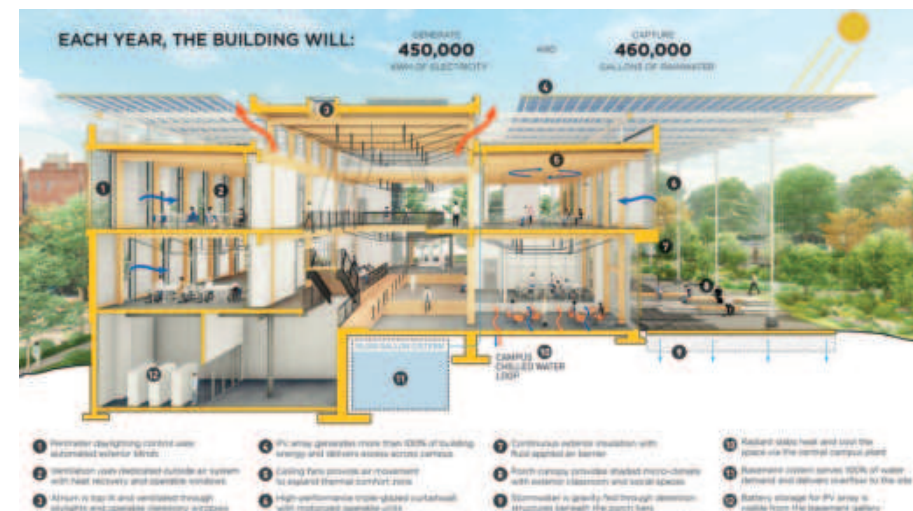
closed-loop method demonstrates safe sanitation without the need for traditional water-intensive infrastructure. With a full solar array integrated into the roof and porch, the building produces more than 100% of its annual energy consumption, achieving net-positive energy performance with zero on-site carbon emissions in accordance with **SDG 7**. Battery storage supports the larger campus energy infrastructure and improves resilience by guaranteeing electricity availability during grid disruptions. As an example of how distributed renewable generating might support community-scale energy solutions, excess electricity is sent back into the campus grid.

The building's regenerative operations directly support **SDG 9** by fostering innovation for generations of students. As an interdisciplinary education building, it provides a living laboratory for engaging with cutting-edge sustainable technologies. Its resilience features—including battery storage, on-site food production, and water self-sufficiency—demonstrate how buildings can maintain function during disruptions while contributing to community resilience, inspiring new approaches to sustainable development.

SDG 13 is addressed through a comprehensive portfolio of strategies. Net-positive operations eliminate climate contributions from building energy and water use, while on-site vegetation and responsible material choices sequester carbon. Embodied carbon is reduced through careful materials sourcing, including extensive use of locally available materials. The building's emphasis on durability and resilience ensures continued performance as climate conditions evolve.

Its demonstration and education mission multiplies its climate impact by inspiring others, creating ripple effects far beyond its physical footprint.

Finally, in alignment with **SDG 15**, the Kendeda Building actively protects and restores terrestrial ecosystems. Pollinator habitats are enhanced through native plantings that provide food and shelter for bees, butterflies, and other beneficial insects. The constructed wetlands that treat building wastewater create additional aquatic and riparian habitat, increasing biodiversity on a dense urban campus. The extensive use of Forest Stewardship Council certified timber promotes sustainable forest management by creating demand for responsibly sourced wood products. Through these integrated strategies, the building demonstrates how urban development can enhance ecosystem health, reversing land degradation and contributing to biodiversity conservation in the heart of a major metropolitan area.



P80 ECONE: ELECTRIC FUELING STATION OF THE FUTURE

7 AFFORDABLE AND
CLEAN ENERGY



Author(s): Sinan Gunay and Nurhayat Oz / SUPERSPACE
Professional Architectural Organisation(s) of the Author(s): Chamber of Architects Turkey (TMMOB Mimarlar Odası)
UIA Regions: Region II
Client Name(s): Electric Autonomy Canada
Location: Toronto Highway Route, Canada
Geographic Coordinates (Latitude and Longitude): no specific location
UIA Regions: Region III
Project/Intervention Area: 1.500m²
Status: Design Phase
Completion date: November, 2021
Image Author(s): SUPERSPACE

Project Description: eCone is a visionary modular electric fueling station that redefines sustainable travel through circular design, transforming utilitarian charging infrastructure into an opportunity for architectural expression, ecological restoration, and community building. Its radial glulam canopy, inspired by a cone seed, creates

a distinctive presence while sheltering up to twenty-two electric vehicles. The canopy integrates walkable solar panels that harvest clean energy, generating sufficient electricity to power 182 vehicles annually and offsetting 450 tons of carbon dioxide emissions each year.

Constructed using precision-fabricated, dry-assembled wooden modules, the eCone system minimizes waste during construction and significantly reduces embodied carbon. Integrated heating panels manage snow accumulation while collecting over one million liters of water annually from snowmelt and rainfall, which is stored and reused to nurture native plantings and support community spaces. More than a recharge hub, eCone blends architecture, nature, and technology into a resilient social landmark designed for Canadian highways and adaptable globally.

In addressing **SDG 3**, eCone contributes directly to healthy lives by replacing fossil fuel consumption with solar-powered electric vehicle charging, cutting urban



air pollution at its source. The annual offset of 450 tons of carbon dioxide is equivalent to removing 100 gasoline-powered vehicles from the road, demonstrating measurable public health benefits.

The shaded, walkable spaces support cleaner air quality and encourage active mobility, while integrated public amenities contribute to improved physical and mental health by transforming a functional site into a destination for social interaction.

The project advances **SDG 4** by functioning as a public, technology-integrated node that becomes a living classroom for clean energy and circular design. The rooftop functions as a compass, guiding visitors toward landmarks, while an integrated mini library enables book exchange, promoting spatial, ecological, and cultural literacy for all ages. This educational dimension ensures infrastructure communicates its

purpose, making sustainability principles accessible to the public. In alignment with **SDG 5**, eCone fosters inclusive design through careful attention to public amenities including seating, restrooms, and shaded spaces conceived as gender-neutral, accessible, and safe environments, promoting equal access and reducing barriers to participation.

With respect to **SDG 6**, eCone's ability to collect more than a million liters of water per year from precipitation and snowmelt using an integrated rooftop collection system is an example of comprehensive sustainable water management. By reusing this collected water for surface cleaning, toilet flushing, and native plant watering, the demand on municipal potable water systems is decreased, stormwater runoff is lessened, and the risk of flooding is decreased. By supporting urban vegetation, the water harvesting system generates numerous ecological and social advantages from a single infrastructure investment.

SGDs considered



Each twelve-module eCone configuration produces 554,137 kilowatt-hours of energy per year in response to **SDG 7**, which is enough to charge 182 electric vehicles and shows that transportation infrastructure has the ability to become energy self-sufficient. The system's modular, adaptable design enables it to grow in size and shape to serve different populations and increase access to clean transportation energy, while the walkable solar skin promotes energy generation while preserving canopy usability.

The project advances the green economy by increasing demand for clean technologies and climate-adaptive building practices, which advances **SDG 8**. It encourages circular innovation and generates jobs in the field of transportation infrastructure development. The viability of charging infrastructure as a community attraction is increased by the activation of commercial areas such as libraries, gyms, and cafés within eCone nodes, which creates additional economic activity. eCone is a scalable, reproducible solution that integrates

solar power generation, water reuse, and public space engagement into a single integrated module, all of which are in line with **SDG 9**. Its modular parts and circular design allow for quick deployment in a variety of settings, exhibiting sustainable innovation and showing how infrastructure can be both aesthetically pleasing and functional.

By granting equitable access to clean mobility infrastructure and public facilities in underdeveloped places that private investment might otherwise avoid, eCone addresses **SDG 10** and lessens inequality. The initiative improves the quality of life for various groups regardless of economic level by fostering inclusion and reducing spatial inequality through the integration of municipal amenities into regular transit stations. By converting abandoned roadside voids into lively, shaded, low-carbon charging plazas that serve as familiar and secure hubs within the urban fabric, the project responds to **SDG 11** and promotes resilient urban living while showcasing the positive impact that transportation infrastructure can have on neighborhood character.



The project embodies **SDG 12** through systematic application of circular design principles, utilizing locally sourced and recyclable materials including glulam timber from sustainably managed forests, modular dry construction techniques that minimize waste, and energy-positive systems that generate more power than they consume. This approach creates a resource-efficient model for sustainable urban service infrastructure that can be replicated across multiple contexts. In alignment with **SDG 13** (Climate Action), eCone directly addresses climate change mitigation through its annual offset of 450 tons of carbon dioxide emissions, equivalent to the sequestration capacity of 7,400 trees. By integrating



solar charging, water harvesting, and microclimate design, the project directly mitigates transportation emissions while encouraging sustainable urban behaviors.

Regarding **SDG 15**, eCone enhances urban biodiversity and soil health through native plantings irrigated exclusively by harvested rainwater. The project transforms paved, heat-absorbing surfaces into permeable, climate-adaptive zones that support habitat for pollinators and urban wildlife, prevent land degradation through improved stormwater management, and strengthen ecosystem resilience. Finally, in response to **SDG 16**, eCone fosters trust and civic inclusion by transforming public infrastructure into safe, transparent, open-access spaces that invite community participation. By making clean energy and climate solutions visible as integral parts of daily urban life, the project encourages cross-sector partnerships to scale low-carbon infrastructure, building institutional capacity and public will for sustained climate action.



P156 “TELLA THERA” NATURE-INSPIRED RESORT

7 AFFORDABLE AND
CLEAN ENERGY



Author(s): Constantinos Pieris, Stella Pieri, Pieros Pieris, Lydia Sklavou, Myrto Gatou, Evi Katsikoudi

Professional Architectural

Organisation(s) of the Author(s): Pieris. Architects, Elissaios Papatzanakis, G. Archontakis Techniki IKE, Dr. Agis M. Papadopoulos, Greenways Landscape Architecture Chanikian Ltd, NeaPolis Lighting, Homes S.A.

UIA Regions: Region II

Client Name(s): New Sage Ventures S.A.

Location: Chania, Crete, Greece

Geographic Coordinates (Latitude and

Longitude): 35.4747° N / 23.6673° E”

Project/Intervention Area: 3.000m²

Status: Under Construction

Image Author(s): Lydia Sklavou, Myrto Gatou, Evi Katsikoudi // Loom Design

Project Description: Tella Thera, under construction in Chania, Crete, is a boutique eco-resort with twenty-one villas and suites designed as a sanctuary where architecture, nature, and well-being converge to redefine sustainable Mediterranean tourism. The vision is deeply informed by the Cretan context,

with architecture shaped by the land’s natural contours through local materials, low-impact techniques, and passive strategies. The design allows the terrain to guide the built form, resulting in low-scale buildings positioned to maximize seclusion and sweeping views of the hills and Aegean Sea.

Biophilic principles drive every aspect, with each unit opening onto expansive vistas while integrating natural light and ventilation to reduce reliance on mechanical systems. Green roofs planted with native flora provide insulation, promote biodiversity, and visually tie buildings into the setting. Locally sourced stone and timber provide authenticity alongside lime-based renders that contribute to healthy indoor environments. Low-density site planning protects existing vegetation and prioritizes natural drainage, ensuring the development feels like an extension of the land.



Tella Thera promotes holistic well-being in line with **SDG 3** by immersing visitors in natural settings through biophilic architecture, which improves relaxation and reduces stress. A healthy and balanced lifestyle is produced by wellness initiatives, farm-to-table food, and outdoor pursuits like yoga and hiking. Reconnecting with nature is encouraged by open-air villas and wide vistas, which are reinforced by furnishings made of natural materials that put comfort first. Programs that emphasize mindfulness and conventional healing techniques promote emotional, mental, and physical rejuvenation in a tranquil environment intended to combat the stresses of contemporary life.

With reference to **SDG 7**, Tella Thera incorporates energy-efficient architecture and renewable energy into every aspect of its infrastructure. This includes passive approaches, high-performance windows, and solar panels, all of which significantly lessen dependency on non-renewable resources. Energy-efficient lighting, heating, and cooling solutions guarantee

that operations are fueled by clean energy while lowering emissions. High-performance insulation and earth-coupled ventilation are examples of passive techniques that show how luxury hospitality may be environmentally conscious without sacrificing the visitor experience.

The project is a prime example of innovation in addressing **SDG 9** by implementing sustainable infrastructure that uses contemporary technologies to lessen its impact on the environment and pioneers eco-friendly building methods that use locally produced materials. This infrastructure is supported by smart water systems including rainwater collection, greywater recycling, and environmentally friendly irrigation, and the project establishes new benchmarks for green building and sustainable tourism. With these projects, Tella Thera sets an example for future Mediterranean developments by proving that sustainability and luxury can coexist peacefully and build robust infrastructure.

SGDs considered



The resort enhances the local community in alignment with **SDG 11** by fostering cultural exchange, supporting local artisans, and sourcing food from nearby farmers, creating a sense of place through designs reflecting traditional Cretan architecture. Guests engage with the surrounding environment through cultural workshops, visits to the on-site organic farm, and learning about local heritage, ensuring tourism benefits the local population economically, socially, and environmentally. The resort serves as a cultural hub connecting visitors with Crete's rich traditions through workshops exploring local crafts, music, and cuisine, deepening understanding of the island's heritage and fostering respectful cultural exchange.

SDG 12 is addressed through circular economy principles in resort operations, ensuring responsible consumption through comprehensive recycling and composting programs, elimination of single-use plastics, and sourcing of

sustainable, eco-friendly products. The supply chain focuses on locally sourced and organic materials to reduce carbon footprints, while guests are encouraged to adopt environmentally responsible behaviors including waste reduction and water conservation. Material selection is guided by life-cycle analysis with preference for recyclable, durable, and locally sourced components, creating a model of responsible tourism and hospitality.

Tella Thera plays an active role in combating climate change in alignment with **SDG 13** through sustainable building techniques, energy-efficient systems, and renewable energy sources that minimize carbon emissions throughout construction and operation. Green roofs, natural insulation, and passive cooling strategies substantially reduce energy consumption, while solar power provides clean energy to the site. These efforts not only reduce the resort's carbon footprint but also raise awareness among guests

about climate action and sustainability in the hospitality sector, contributing to broader societal shifts toward climate responsibility.

In response to **SDG 15**, Tella Thera helps to preserve biodiversity and restore landscapes by designing landscapes that emphasize reestablishing native plant populations, improving soil health, and converting spaces into thriving ecological zones. Through native plants and pollinator-friendly areas, it revitalizes local ecosystems; on the other hand, green roofs, rewilding initiatives, and

sustainable landscaping techniques restore the land and sustain local wildlife. In order to preserve the surrounding ecosystem, meticulous precautions are taken throughout construction to stop soil erosion, save local species, and reduce noise and dust pollution. The team collaborates closely with local authorities and environmental specialists to ensure adherence to regional sustainability goals and best practices, establishing a paradigm for luxury travel in the future.



P164 CYNERGY BANK HQ

Author(s): Pieris.Architects
Professional Architectural Organisation(s) of the Author(s): Pieris.Architects, A.P Christou & Associates, Mitsides, Samuel + Associates, Dr. Matthaios Santamouris, Alexandros Vlachopoulos, G & N Schubert Consultants, MDA Cyprus LLC
UIA Regions: Region II
Client Name(s): Cynergy Bank
Location: Nicosia, Cyprus
UIA Regions: Region II
Project/Intervention Area: 22.000m²
Status: Design Phase
Image Author(s): LOOM Design

Project Description: Cynergy Bank Headquarters in Nicosia is a seven-story structure with five subterranean levels. Its white aluminum façade, perforated with patterns inspired by wheat fields, filters daylight and reduces solar gain while referencing the bank's Demeter logo. At the heart lies a concert hall within a convention center, serving as a cultural anchor. Six office levels surround a central atrium with vertical gardens and native plants that improve air quality

7 AFFORDABLE AND CLEAN ENERGY



and provide natural cooling. The atrium is crowned by a roof with transparent photovoltaic panels and daylight diffusers that generate energy and reduce artificial lighting.

The design responds to the evolving role of financial institutions where cultural heritage and environmental responsibility matter alongside economic performance. The five-hundred-seat concert hall opens the bank to the public, creating adaptable, inclusive spaces that serve both business and community functions.

By using the central atrium as an internal urban garden with native plants and vertical green walls that enhance air quality, control temperature, and offer psychological comfort, the project prioritizes human well-being in line with **SDG 3**. With natural lighting, healthful materials, and a visual connection to nature supporting both physical and mental wellness, biophilic design concepts lower stress, improve cognitive function, and increase productivity.



Employee health and productivity are improved by the six levels of open-plan offices placed around the atrium, which is surrounded by native Cypriot plants. These plants also lower stress levels, enhance air quality, and create a daily connection with nature. Through human-centered layout, the indoor plaza—which is accessible from several levels—becomes a living landscape that encourages unofficial mobility and interaction while promoting social cohesiveness and overall well-being.

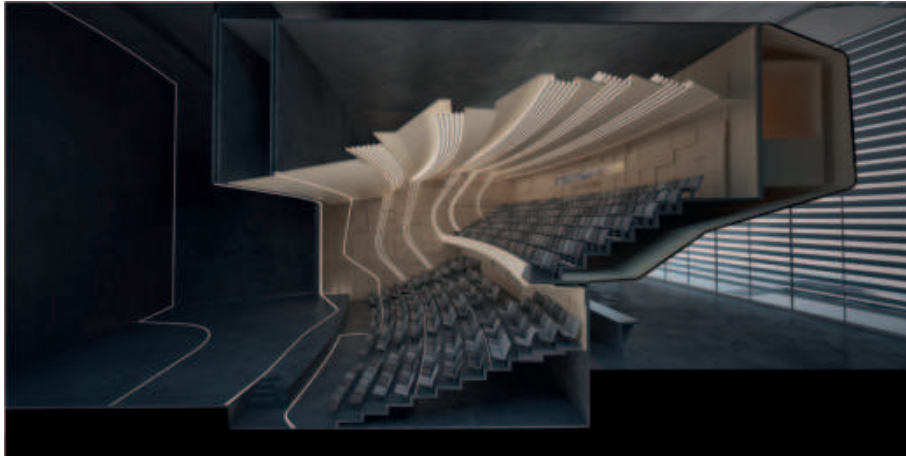
The headquarters' sculptural energy roof incorporates transparent photovoltaic panels to meet **SDG 7**, generating renewable energy on-site while lowering the requirement for artificial illumination with daylight diffusers. The building becomes more self-sufficient and less dependent on fossil fuels thanks to this hybrid strategy of active generation

and passive daylighting, which also improves energy performance and lowers operating costs. The energy roof immediately contributes to affordable and sustainable energy access by maximizing natural light and producing clean energy, acting as both a functional infrastructure and a sculpture. By using passive design techniques to minimize total demand and ensure that operations are supplied by clean energy sources, mechanical systems adhere to the ideals of efficiency and decreased environmental impact.

In response to **SDG 8**, the building fosters an inclusive, modern workplace by providing flexible, open-plan offices encouraging collaboration, adaptability, and innovation. Generous daylight, natural ventilation, and access to green communal areas support employee physical and mental well-being.

SDGs considered





The workplace strategy avoids rigid hierarchies in favor of open, daylit spaces fostering inclusivity, creativity, and professional growth, creating conditions where both people and ideas thrive while promoting sustained economic growth through enhanced productivity and job satisfaction.

SDG 9 is addressed through this forward-looking institutional infrastructure project integrating advanced technologies, smart building systems, and high-performance materials. Combining architectural innovation with civic functionality by housing both office spaces and a public-facing convention and concert hall, the project represents resilient, multifunctional infrastructure supporting economic development, knowledge sharing, and cultural engagement. Structural systems designed for durability and adaptability ensure long-term functionality and reduced lifecycle impacts, while collaboration with a multidisciplinary team demonstrates a comprehensive approach to resilient infrastructure serving both institutional and public needs.

The project's commitment to **SDG 12** is evident in resource efficiency and lifecycle thinking guiding material and systems choices. Prioritization of recyclable and locally sourced materials alongside efficient HVAC systems, low-flow plumbing fixtures, and rainwater harvesting demonstrates sustainable consumption and production practices. Designing for durability and adaptability reduces waste, prolongs functional lifespan, and ensures responsible resource use throughout construction and operation. Material selection guided by life-cycle analysis with preference for low-impact, durable components, while rainwater harvesting, greywater recycling, and native landscaping minimize resource consumption, creating a model for responsible consumption in institutional architecture.

The building uses low-carbon materials, on-site renewable energy production, and passive cooling techniques to address climate resilience and mitigation in line with **SDG 13**. While solar gain is minimized by building orientation and envelope design, integrated energy systems lower greenhouse gas emissions.

These initiatives show how financial institutions may set an example through their physical infrastructure by lowering their carbon footprint and supporting Cyprus's and the EU's climate goals. In addition to being a visible example of environmental commitment, the energy roof's clear photovoltaic panels, passive design techniques like the faceted aluminum façade that filters solar gain, and dedication to low-carbon operations all help to accelerate climate action.

In order to reduce irrigation requirements and maintain local biodiversity, indigenous and drought-resistant plants dominate the landscape design, addressing **SDG 15** through ecological sensitivity included into planting and landscape strategy. Even in a densely populated metropolitan area,

vertical gardens and planted atriums serve as micro-habitats that support biodiversity, strengthen the bonds between Cyprus's natural ecosystems and built environment, and support sustainable land use principles. The center plaza and vertical gardens are home to native plant species that support regional ecosystems and lessen the need for artificial irrigation, showing how urban development may increase rather than decrease biodiversity. By uniting design excellence with SDG principles, the project transcends conventional office typology to become not only a place of work but a cultural, ecological, and social catalyst anchored in heritage, shaped by innovation, and committed to the well-being of both people and planet.





8

DECENT WORK AND ECONOMIC GROWTH

Goal 8 promotes sustained economic growth, productive employment, and decent work for all. Progress faces challenges from COVID-19 aftershocks, trade tensions, rising debt in developing countries, and geopolitical conflicts. Global real GDP per capita rebounded in 2021 but slowed in 2022, and is projected to grow only 1.5% in 2025 due to trade tensions and policy uncertainty. The unemployment rate fell to a record low of 5.0% in 2024, yet nearly 58% of workers remained informally employed—with persistently high rates in LDCs and sub-Saharan Africa. Significant gender and age disparities persist. More progress is needed to boost youth employment, reduce informal work and labour market inequality (including the gender pay gap), ensure safe working environments, and expand access to financial services. Accelerating progress requires sustainable economic policies, support for entrepreneurship, formalizing the informal economy, protecting workers' rights, social justice, and inclusive employment—especially for women and youth.

- Achieving Goal 8 requires wholesale reform of the financial system to address rising debts, economic uncertainty, trade tensions, while promoting equitable pay and decent work for young people.
- From 2015 to 2023, the global average level of national compliance with labour rights declined by 7%.
- Real GDP growth in LDCs (3.1% in 2024) remains well below the 7% target.
- Labour productivity growth rebounded to 1.5% in 2024, still below the 2015–2019 average of 1.8%.
- In 2024, child labour fell to about 138 million children (down from 160 million four years earlier), but the world missed the 2025 elimination goal; meeting it in the next five years requires an elevenfold acceleration.
- Youth unemployment improved to 12.9% in 2024, but remains triple the adult rate of 3.7%. Young women are disproportionately impacted.
- In 2024, nearly 9 in 10 workers in sub-Saharan Africa and LDCs were informally employed, lacking adequate social security, legal protection, or workplace safety.

Source: The Sustainable Development Goals Report 2025

SDG 8 TARGETS

8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries.

8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.

8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training.

8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms.

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.

8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

8.A Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries.

8.B By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization.

For more information: <https://www.un.org/sustainabledevelopment/economic-growth/>

P81 REPURPOSING THE BARISAL RIVERPORT – FOR SOCIALLY INCLUSIVE AND SUSTAINABLE URBAN LIFE

8 DECENT WORK
AND ECONOMIC
GROWTH



Author(s): Aqib Mohammad Nibir
Professional Architectural Organisation(s) of the Author(s):
 Bangladesh University of Engineering and Technology (BUET)
UIA Regions: Region IV
Client Name(s): Barishal City Corporation
Location: Barishal Riverport, Barishal, Bangladesh
Geographic Coordinates (Latitude and Longitude): 22.699698748087226 / 90.37534099237988
Project/Intervention Area: 15.000m²
Status: Design Phase
Completion date: may 15, 2023
Image Author(s): Aqib Mohammad Nibir

Project Description: Once known as Gird-e-Bhandar during the Mughal period, the Barisal Riverport in Bangladesh, which serves as the nation's second-largest transit port, is gradually losing its prominence following the inauguration of the Padma Bridge, as travel between Barisal and Dhaka by river previously took seven to eight hours but the new road connection has reduced that journey to just three hours,

resulting in most commuters shifting to road transportation for time efficiency and slowly deserting the main driving force of this historic port. Despite being surrounded by dense commercial activity, the riverport is at risk of becoming obsolete and being consumed by unregulated commercial sprawl, prompting this proposal to reimagine the port's role not only as a transit hub but also as a civic and cultural landmark that preserves its one hundred fifty-four year legacy and adapts it to Barisal's evolving urban landscape, with growing economic development around the Payra Power Plant and an international tourism vision for Kuakata in the south positioning the riverport as holding strategic importance for both regional stakeholders and visitors.

Currently, a buffer of heavy commercial and administrative zoning isolates the riverfront from nearby residential areas, and the project aims to break this urban barrier and return valuable riverfront space to the people while retaining its operational port functions, by reconnecting key urban activity nodes



with the river and weaving the riverport back into the city's fabric. To encourage sustainable mobility, dedicated cycle lanes run alongside pedestrian walkways, linking active city areas to a rooftop riverfront promenade, which promotes healthier lifestyles, reduces future traffic congestion, cuts carbon emissions, and enhances air quality, and by making the waterfront part of daily life rather than merely an economic asset, the city cultivates a deeper appreciation for the river and promotes a collective sense of stewardship among its residents. A critical challenge in this reimagining is balancing public access with uninterrupted port operations, and the design addresses this by introducing a three-layer system that includes a rooftop level connected to major urban activity zones featuring a riverfront restaurant, open promenade, continuous pedestrian and cycle lanes, gathering spaces, and shaded seating areas that

activate the riverfront as a vibrant public realm, a port building level that ensures seamless transitions between roadways and pontoons facilitating smooth boarding and cargo handling without disrupting port functions, and a lower liminal level designed as a landscaped, accessible zone that welcomes the public to engage with the waterfront through boat rides, swimming, and other water-based leisure activities linked to adjacent riverfront areas.

In accordance with **SDG 8**, the project creates new routes connecting residential neighborhoods to the riverfront through commercial hubs by examining current merchant dynamics within the framework of the port's transformation. This improves sustainable livelihood opportunities at both individual and citywide scales and boosts local economic activity by fusing public space with economic function.

SGDs considered



Through democratic and inclusive urban interventions that promote equity in access to public amenities and economic opportunities, the design for **SDG 10** guarantees participation and access for people from all social strata, including residents, merchants, and visitors. This ensures that the revitalized riverfront serves as a space for all members of society regardless of their background or economic status.

In response to **SDG 11**, this proposal focuses on creating inclusive and accessible public spaces along the Barisal riverfront that revitalize traditional urban activities and encourage outdoor engagement, as well as strengthening community bonding and improving overall quality of life through thoughtful

urban design that transforms what was once a purely functional industrial site into a vibrant civic destination.

The project also supports **SDG 15** by expanding Barisal's total urban green space through the construction of riverbank parks and tree-lined public avenues. This not only enhances environmental quality but also creates a biodiversity passage from the city center to the riverbank, bolstering local ecosystems and climate resilience. Additionally, the project creates a continuous green corridor that links urban populations with the river's natural environment and exemplifies how infrastructure adaptation can support both ecological restoration and human needs.



P94

«FRITZ DISTRICT» MÜNCHEN-NEUPERLACH

8 DECENT WORK
AND ECONOMIC
GROWTH



Author(s): Architect: pool Architekten
Other architectural offices involved
in cooperative process: Site Practice,
Amsterdam und Mumbai ZUS [Zones
Urbaines Sensibles], Rotterdam Mad
arkitekten, Oslo ROBERTNEUN™,
Berlin Specialist Planners and Experts:
Bauingenieure: Prof. Feix Ingenieure
GmbH Brandschutz: Ramboll
Deutschland GmbH Mobilität: URBAN
STANDARDS GmbH Stadtklima:
Climateflux GmbH Lärmschutz: Imakum
GmbH Zirkularität: Zirkular GmbH

Professional Architectural

Organisation(s) of the Author(s): pool
Architekten

UIA Regions: Region I

Client Name(s): Hines Immobilien
GmbH, München

Location: Neuperlach Munich, Germany

**Geographic Coordinates (Latitude and
Longitude):** 48°06'15.9"N 11°38'46.6"E

UIA Regions: Region I

Status: Design Phase

Image Author(s): Model Photography:
Frans Parthesius, Rotterdam

Project Description: A nineteen-
seventies office complex in Munich's
Neuperlach district is being transformed
into a vibrant urban quarter through
a co-creative process involving four
architecture teams, with the design
preserving and reusing the existing
structure while adding new volumes to
accommodate a multiplicity of programs,
and building fragments seven and eight
by pool Architekten exemplify this
approach through additive intervention
to the existing fabric and a lightweight,
independent bridge structure offering
social housing and communal services
that expand the functionality of the
original complex. This transformation
demonstrates how adaptive reuse
can breathe new life into underutilized
postwar architecture, creating density
and mixed-use vitality without the
environmental cost of demolition and
new construction, while the collaborative
process ensures that diverse
perspectives shape the outcome.

Within the educational components of
the development, the project replaces
the traditional classroom layout with a



layered campus of terraces, bridges,
and atrium spaces in accordance with
SDG 4. This encourages exploration
and informal learning through spatial
composition that strengthens
interdisciplinary dialogue and anchors
education in architectural form, creating
environments where knowledge
exchange occurs naturally through
movement and encounter rather
than being restricted to traditional
instructional settings. By promoting
curiosity and idea sharing among
residents and students alike, the
architecture itself serves as a teaching
instrument that promotes lifelong
learning through spatial experience.

While the collaborative process that led
the transformation allowed for innovation
and created long-term value through
careful densification and sustained
local engagement with stakeholders
throughout the design and development
phases, the transformed district

supports resilient local economies
in terms of **SDG 8** by offering flexible
workspaces that can change with
changing employment patterns, housing
diversity that accommodates a range of
income levels and household types, and
inclusive public infrastructure that serves
the entire community. This strategy
guarantees equitable and sustainable
economic growth while offering
respectable employment possibilities in
a mixed-use urban setting.

In response to **SDG 11**, the project
turns a vacant office complex from the
1970s into a dense, inclusive urban
district with housing, public space, and
mixed uses that collectively create
a vibrant new neighborhood core. It
avoids urban sprawl by intensifying use
within the existing urban footprint while
strengthening neighborhood identity
through thoughtful design that respects
and enhances the character of the
surrounding context.

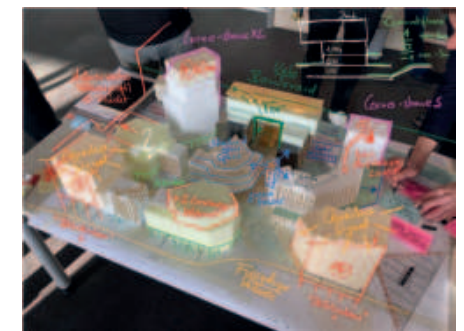
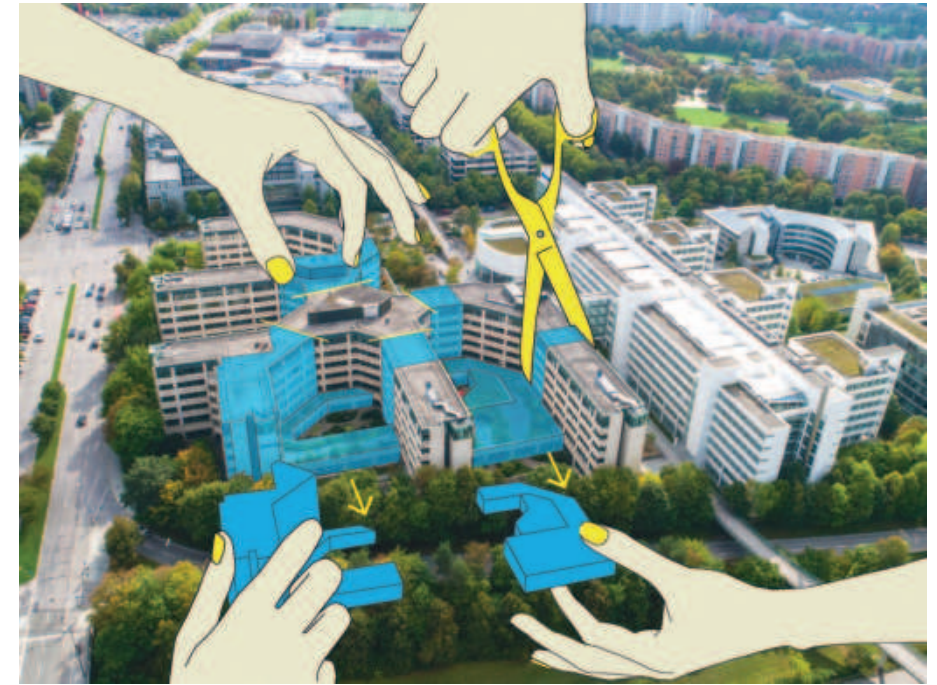
SGDs considered



All of this was co-designed through a collaborative process involving architects, city officials, technical experts, and members of the local community whose opinions influenced the final product.

SDG 12 is addressed through the fundamental decision to reuse existing structures and materials rather than pursuing demolition and replacement, with additive construction and circular design principles limiting waste and substantially reducing the need for new resources, demonstrating how careful transformation can extend the lifecycle of urban fabric while honoring the embodied energy already invested in the original buildings, setting a precedent for sustainable consumption and production patterns in urban development.

Reuse itself is a key climate strategy for future development, demonstrating that the most sustainable building is often the one that already exists, thoughtfully adapted to meet contemporary needs. In line with **SDG 13**, the project maintains the significant embodied carbon contained within the original concrete frames from the 1970s by preserving large portions of the existing structure and minimizing interventions wherever possible. Additionally, hybrid timber additions to the building fabric and the compact urban form achieved through densification further reduce operational and embodied emissions.



P134 THE ECOLOGICAL VICTORY: RESILIENT RURAL REDEVELOPMENT IN İKİZKÖY

8 DECENT WORK
AND ECONOMIC
GROWTH



Author(s): Elif Duru Alkazan
Professional Architectural Organisation(s) of the Author(s): Independent Researcher (Graduation Project, Bilkent University – Department of Architecture)
UIA Regions: Region II
Client Name(s): No formal client – Community-based conceptual design for İkizköy villagers
Location: Milas, Muğla, Turkey
Geographic Coordinates (Latitude and Longitude): 37.3287° N / 27.7600° E
Project/Intervention Area: 300.000m²
Status: Design Phase
Completion date: July, 2025
Image Author(s): Elif Duru Alkazan

Project Description: The Ecological Victory project addresses destruction from coal mining in Akbelen Forest, Turkey. Developed as a university project, it offers an approach to post-mining recovery that restores land, community, and culture. Since the 1980s, villages were evacuated for expanding coal fields.

Forests were razed, olive groves uprooted, and water sources jeopardized while residents were displaced without resettlement planning.

The proposal envisions saving the forest and providing displaced communities with sustainable life. The core design is a new village master-planned around modularity and ecological integration, drawing from traditional settlements to restore social cohesion through a central mosque, coffeehouse, bath, and square. Housing uses 3D-printed concrete cores designed to be affordable and adaptable, with connection points for attachable modules such as barns or coops. Low-carbon materials and local resources minimize environmental footprint.

Ecological restoration is informed by research on post-mining soil conditions. Reforestation includes resilient native species. Topsoil recovery and terrain stabilization prevent erosion and promote vegetation. Local economy



revitalization focuses on olive cultivation, pine honey production, fruit farming, and mushroom foraging. Agricultural zones adjacent to residential clusters empower residents through small-scale farming, with cooperative economies supported by shared infrastructure.

In fulfilling **SDG 6**, the initiative acknowledges that coal mining puts nearby villages' access to essential water from underground water wells that are naturally filtered by forest ecosystems at risk. By maintaining and restoring forested land through afforestation, erosion control, and sustainable land management that encourages groundwater recharge, the concept safeguards the natural hydrological cycle. Rainwater can percolate through porous circulation pathways and agricultural strips, while cluster housing reduces interference with natural water flows. Low-water-use toilets and greywater systems for landscape irrigation are features included in every dwelling unit, demonstrating how land-use and architectural policies ensure access to clean water while maintaining ecological integrity.

The project promotes a regenerative economic structure based on regional customs in order to achieve **SDG 8**. Villagers lived off of agriculture, olive oil production, beekeeping, cattle, and foraging before being uprooted. By designating fertile areas for organic farming and apiculture and utilizing a spatial structure that promotes cooperative economies with shared barns, storage, and processing facilities, the project reintroduces these industries. Attachable modules can be added to three-dimensionally printed dwellings to directly connect work and home life. A new generation of technologically literate rural workers is produced by construction methods based on three-dimensional printing and regionally adapted materials, which provide doors for skill development in digital fabrication and sustainable construction.

The project supports the creation of quick, inexpensive, low-waste, and low-carbon housing by introducing three-dimensionally printed concrete buildings as a key building technique for post-mining rural rehabilitation in response to **SDG 9**.

SGDs considered



By lowering labor costs, increasing precision, and avoiding site disturbance, digital manufacturing shows how cutting-edge technology may be transferred from extractive to regenerative sectors. Prefabricated steel modules, intended for quick deployment on difficult terrain, can be added to the modular housing system based on flexible concrete cores. Decentralized agricultural plots that guarantee food and employment security, dwelling clusters linked by pedestrian pathways, and rainwater management incorporated into the plan all contribute to infrastructure resilience.

SDG 11 is fundamentally addressed through this rural regeneration project that creates dignified living conditions for a fragmented community. The spatial plan draws directly from local typologies, placing communal elements at the center as traditional civic spaces fostering healing, memory, and interaction. Residential clusters of three-dimensionally printed homes are arranged in human-scaled units of

four with courtyards and pedestrian paths flowing into agricultural fields. Privacy is preserved while encouraging neighborliness, with accessibility ensured through low-barrier, single-story units adaptable to various household needs. The design considers energy efficiency, water conservation, and disaster resilience, allowing displaced people to return to a community, reconnecting individuals to place, land, and each other.

The project integrates circularity from land use to material selection in alignment with **SDG 12**. Through exact material control, three-dimensionally printed concrete is optimized for high efficiency and minimum waste, doing away with formwork waste. In order to lower embodied carbon, the concrete mix contains aggregates that are sourced locally. By minimizing hardscapes and adjusting construction footprints to the existing topography, land use methods prevent wasteful excavation. While agricultural zones



encourage local food production and lessen reliance on external supply chains, shared infrastructure lowers duplicate consumption. Processing modules that promote low-impact, culturally anchored production support traditional methods.

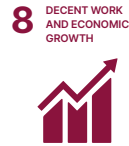
By stopping deforestation and emphasizing reforestation with native and drought-resistant tree species that absorb carbon, stabilize soil, lower local temperatures, and boost biodiversity, the project addresses **SDG 13**. In terms of architecture, modular housing enables material and energy efficiency, while three-dimensionally printed concrete lowers embodied emissions and construction waste. Reused greywater, effective insulation, and locally sourced materials all contribute to a smaller ecological footprint. Passive design techniques guarantee lower energy usage during occupation. With agricultural and forest buffers serving as carbon-absorbing zones, the spatial arrangement promotes walkability, avoids sprawl, and maintains existing green spaces.



The initiative suggests extensive ecological rehabilitation that addresses biodiversity recovery, forest management, and land restoration in response to **SDG 15**. Because they can adapt to damaged soils, natural species including *Pinus brutia*, *Eleagnus angustifolia*, and *Robinia pseudoacacia* are given priority for afforestation, according to scientific recommendations. In order to speed up plant regeneration, topsoil recovery involves both terrain adjustment and the thoughtful repurposing of stored soil.

Pollinators, birds, and native mammals are supported by forest patches and green corridors that maintain habitat continuity. Olive groves and agroforestry strips blur the boundaries between cultivated and natural areas, supporting traditional livelihoods on restored land. This illustrates how design can reverse land degradation, preserve biodiversity, and rebuild resilient ecosystems while emphasizing ecological and cultural continuity.

P167 GAIA



Author(s): Pieros Pieris, Alexandros Mimidis
Professional Architectural Organisation(s) of the Author(s): Pieris. Architects, Theodosiou Engineers, ConAP
UIA Regions: Region II
Location: Athens, Attiki, Greece
Geographic Coordinates (Latitude and Longitude): 37.9838° N / 23.7278° E
Project/Intervention Area: 43.500m²
Status: Design Phase
Image Author(s): Alexandros Mimidis, Loom Design

Project Description: Gaia is an innovative office building in preliminary design for Sigrrou Avenue, Athens, envisioned as the flagship headquarters for a leading technology company. With approximately 43,500 square meters, it aims to set a new standard for workplaces by combining human-centered design, sustainability, and technological innovation. The architectural concept balances contrasting materials, featuring elegant glass arches paired with strong

laminated wood structures, representing strength and transparency. Inside, expansive high-ceilinged spaces frame panoramic views of Athens, fostering openness and fluidity. A signature feature is the Garden in the Sky, an elevated indoor botanical retreat with water features that supports mental well-being through biophilic design. The interior layout offers flexible open-plan offices, quiet zones, and breakout areas, while the Lighthouse amphitheater serves as a multifunctional venue for knowledge sharing and community engagement.

Advanced air filtration, generous circulation, and smart technologies ensure health, safety, and future-proof resilience.

Gaia redefines the office as a location that promotes holistic wellness through improved air quality, ample circulation, and restorative areas like the Garden in the Sky, all of which are in line with **SDG 3**. Fitness and meditation areas are incorporated throughout, while low-emission materials, natural ventilation,



and daylighting all contribute to healthy indoor settings. The Garden in the Sky demonstrates how architecture must actively support human health in all its dimensions by bringing nature into everyday work life as a peaceful haven that promotes emotional resilience and cognitive regeneration.

By promoting social contact and knowledge exchange through open-plan architecture, Gaia promotes an inclusive and flexible work culture in line with **SDG 8**. The Lighthouse amphitheater, communal lounges, and quiet areas encourage a variety of work styles and professional growth. Economic resilience is strengthened by flexible office architecture that supports changing work practices, such as remote-ready and hybrid workspaces. With flexibility built into floorplates and infrastructure, the facility seeks to draw and keep top talent by offering a top-notch, forward-thinking workplace that supports local and regional economic growth.

In response to **SDG 9**, Gaia exemplifies technological integration through smart building systems that optimize energy use and monitor indoor conditions in real-time. Advanced mechanical and structural systems ensure efficiency and adaptability over time. Modular construction strategies and material lifecycle considerations reflect an innovative approach to long-term sustainability. The interdisciplinary, research-driven design process embodies the innovation-led values of the technology client, advancing new standards for office environments where innovation supports both performance and sustainability goals.

SDG 11 is addressed as Gaia contributes positively to the urban fabric of Sigrrou Avenue by introducing green spaces, enhancing the pedestrian experience, and creating a more vibrant public realm. Ground-level green spaces, water features, and pedestrian-friendly connections strengthen the interface

SDGs considered



between private enterprise and civic life. Bicycle facilities and electric vehicle charging stations promote alternative transportation. The building's openness and transparency blur the boundary between workplace and community space, making cities more inclusive, safe, resilient, and sustainable through thoughtful architectural intervention.

Gaia's all-encompassing environmental plan, which aims for a lower carbon footprint, addresses **SDG 13**. Carbon is stored by materials like laminated wood, and energy loads are decreased by high-performance glass. Green roofs, optimal orientation, and natural shading are examples of passive design concepts that reduce the need for mechanical heating and cooling. Water-saving techniques, smart energy monitoring, and on-site renewable energy systems all demonstrate proactive climate resilience through integrated architectural and engineering solutions, reinforcing dedication to resource conservation and climate mitigation.

Through biophilic architecture, such as vertical gardens, the Garden in the Sky, and a pond with floating vessels that promote urban biodiversity, nature is incorporated as a core component in accordance with **SDG 15**. Native and drought-tolerant plants improve habitat creation and reduce water consumption, strengthening the bond between residents and the environment.

Urban development may preserve and restore terrestrial ecosystems while encouraging sustainable use of biodiversity through architectural intervention, as seen by the numerous indoor and outdoor planted zones that support urban ecosystems and serve as pollinator habitats. Through design that is in line with the Sustainable Development Goals, Gaia redefines the office as a catalyst for social value, environmental stewardship, and long-term resilience, making it a significant template for sustainable urban development.





9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Goal 9 seeks to build resilient infrastructure, promote sustainable industrialization, and foster innovation — key drivers of economic development and a foundation for a sustainable future. Economic growth, social development, and climate action depend on investments in infrastructure, sustainable industrial progress, and technology. Even before COVID-19, global manufacturing was declining due to tariffs and trade tensions; the pandemic caused further serious impacts due to high inflation, energy price shocks, supply disruptions, and global economic deceleration. While least developed countries (LDCs) in Asia have made considerable progress, African LDCs would need to accelerate significantly to meet the 2030 target. On a positive note, medium-high and high-technology industries have shown robust growth rates.

- Global manufacturing growth slowed to 2.7% in 2022 (down from 7.4% in 2021), with an estimated 2.7% growth in 2024.
- Progress in LDCs is far from sufficient to double manufacturing's share of GDP by 2030. However, medium-high- and high-technology industries showed robust growth.
- As of 2024, 96% of the world's population was within reach of a mobile broadband network, but some areas remain underserved.
- In 2024, global CO₂ emissions from fuel combustion and industry surged to a new all-time high of 37.6 gigatons, reverting to a decade-long trend of decoupling emissions and economic growth.
- Manufacturing employment share in total employment was 14.2% in 2024, down from 14.3% in 2015.
- Global R&D expenditure as a proportion of GDP increased from 1.69% (2015) to 1.93% (2020). Researchers per million inhabitants rose from 1,022 (2010) to 1,160 (2015) to 1,342 (2020).
- To achieve Goal 9 by 2030, it is essential to support LDCs, invest in advanced technologies, lower carbon emissions, and increase mobile broadband access.

Source: The Sustainable Development Goals Report 2025

SDG 9 TARGETS

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.

9.A Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States 18.

9.B Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.

9.C Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

For more information: <https://www.un.org/sustainabledevelopment/infrastructure-industrialization/>

P65 UQ SOUNDSHELL

9 INDUSTRY,
INNOVATION AND
INFRASTRUCTURE



Author(s): Richard Kirk, Brendan Pointon, Catherine Liu, Fedor Medek, Michael Croft
Professional Architectural Organisation(s) of the Author(s): KIRK
UIA Regions: Region IV
Client Name(s): The University of Queensland
Location: Brisbane, Queensland, Australia
Geographic Coordinates (Latitude and Longitude): -27.498510, 153.015416
Project/Intervention Area: 72m²
Status: Completed
Completion date: September 20, 2024
Image Author(s): Christopher Frederick Jones

Project Description: The University of Queensland Soundshell is a vaulted diagrid timber pavilion that acts as a pivotal element within the recently revitalized Lake and Amphitheatre at the University of Queensland St Lucia precinct, responding to its sensitive and historically important site through simplicity of form and use of considered details and finishes while enriching the

on-campus experience and providing a new multimodal performance venue accommodating both small to large-scale events. Versatile in its design, the timber diagrid structure offers a shaded, functional space outside of performance times, with climate and acoustic analysis integrated to deliver optimal performance quality while maintaining weather protection and lakeside views, ensuring performers can hear themselves and others clearly as a key challenge to overcome for outdoor performances, while the thin shell copper clad form blends into the surrounding landscape with a soft vaulted form and natural material palette where thoughtfully crafted details result in a timeless and memorable structure that serves as both performance venue and everyday gathering space.

Utilizing locally sourced timber instead of globally sourced timber, the project's structure was made of engineered timber with GL21 spotted gum glue-laminated members forming the vaulted diagrid shell. The materials were sourced



and fabricated locally in Maryborough, and as a local species, their use supports regional forestry supply chains, reduces embodied transport energy, and contributes to resilient infrastructure and sustainable industrialization. This aligns with **SDG 9**. The engineered GL21 spotted gum glulam is unique to the Australian timber industry and the singular product available for external weather exposure, offering exceptional strength, durability, and dimensional stability that makes it ideal for the complex curved geometry of the vaulted shell, with its high strength-to-weight ratio allowing for slender, elegant structural members that minimize material use without compromising performance, while the precision of glulam fabrication enabled complex junctions and consistent quality across prefabricated components.

Prefabrication additionally minimized site disturbance and significantly reduced construction time and waste, with the off-site fabrication and assembly process requiring less on-site

labor, improving safety, and lowering emissions associated with transport and construction sequencing, demonstrating how innovation in construction methods can support sustainable infrastructure development through efficient processes and reduced environmental impact.

In relation to **SDG 10**, the project encourages participation by all members of the public, with access remaining open to the general public rather than just university personnel. Additionally, the stage design was carefully thought out to avoid any steps that could impede ambulation, guaranteeing that people of all physical abilities can take part in and enjoy the cultural and performance activities held at the venue, thereby reducing disparities in access to public amenities and cultural experiences. In addition to demonstrating how architectural design can actively work, this dedication to inclusive design guarantees that the Soundshell will be a truly public asset that welcomes a variety of users regardless of their physical capabilities, promoting more

SGDs considered



equitable access to university resources and public spaces within the larger community context.

Materials were chosen in response to **SDG 12** on the basis of structural performance, lifecycle durability, low embodied carbon, and end-of-life recyclability. The GL21 spotted gum glue-laminated timber was chosen because it can achieve member depth and structural loadings that are comparable to steel at a significantly lower embodied energy. This demonstrates responsible production and consumption by prioritizing resource efficiency and environmental performance in material selection. The engineered timber selected was the best suited product for external exposure without the need for over-cladding or continual maintenance, with careful consideration placed on how the spotted gum species would

age to ensure the material would meet ambitious life cycle goals for the project, as the selected timber ages gracefully over time in an exposed environment softening to a patina grey that enhances rather than diminishes its aesthetic qualities while eliminating the need for resource-intensive maintenance or replacement.

The diagrid system forms an entirely vaulted geometry eliminating the need for internal columns and enabling a generous and clear span over the stage, with the structure designed to evolve with changing event demands through stage design that accommodates a broad range of event sizes and formats, structural nodes included in the vaulted diagrid for elements to be attached, and flexible hard and soft infrastructure integrated for future utilization, ensuring the building can adapt to changing needs



without requiring new construction. The design makes use of the topography of the existing context as natural infrastructure for spectators, eliminating the need to build a material amphitheater and lowering material consumption.

Additionally, the construction strategy and materiality allow the project to be recyclable at the end of its life and to be disassembled or reused, further extending the lifecycle of the materials used and showcasing circular economy principles in architectural design through careful planning for future adaptation and material recovery.

By replacing a fully steel structure with locally sourced timber, the UQ Soundshell significantly reduces its carbon footprint while demonstrating urgent action to combat climate change through material selection and construction strategy. This is in line with **SDG 13** and demonstrates the strategic use of mass-engineered timber to achieve meaningful sustainability outcomes. The primary structure is made of prefabricated GL21 spotted gum



glue-laminated timber, a renewable, low-embodied-carbon material that actively stores carbon over its lifecycle.

The vaulted diagrid structure is inherently passive, providing extensive shade, ventilation, and protection from subtropical weather conditions that allow for open-air use year-round without mechanical conditioning, eliminating operational energy demand for climate control and demonstrating how passive design strategies can reduce greenhouse gas emissions associated with building operation. Computational design tools informed the geometry of the structure, optimizing performance across acoustic reflection, daylight access, and ventilation to create a high-performing space with minimal operational energy demand, showing how digital design methods can be harnessed to maximize environmental performance while minimizing resource consumption and contributing to climate action through intelligent, integrated design that works with rather than against natural forces.

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LEAFY: ARTIFICIAL GARDENS OF KINETIC LEAVES THAT HELP SHAPE ACTUAL PARKS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



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Professional Architectural

Organisation(s) of the Author(s):

Chamber of Architects of Turkey (TMMOB Mimarlar Odası)

UIA Regions: Region II

Client Name(s): The Department of Municipalities and Transport (DMT)

Location: Abu Dhabi, United Arab Emirates

Geographic Coordinates (Latitude and Longitude): 24.465039, 54.386198

Project/Intervention Area: 1.000m²

Status: Design Phase

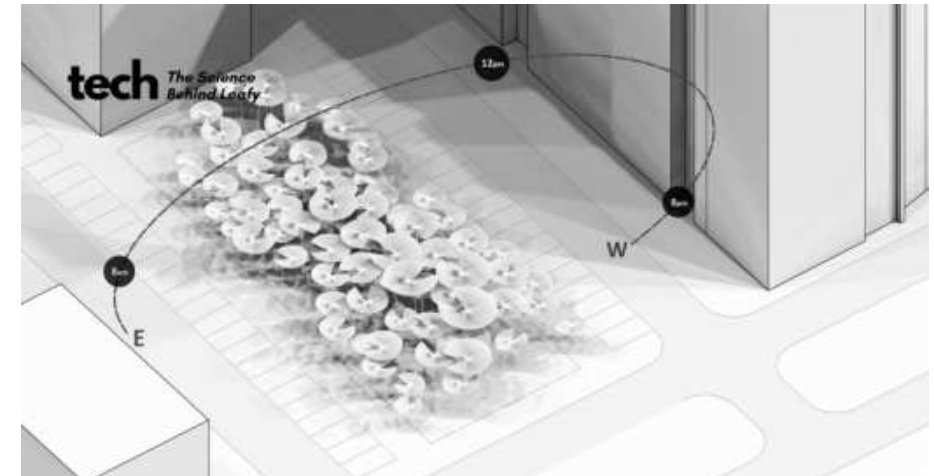
Completion date: August, 2020

Image Author(s): SUPERSPACE

Project Description: Leafy is an artificial garden of modular, kinetic leaves that mimic the intelligence of forest canopies, creating resilient, regenerative microclimates in heatwave-prone, water-scarce, hyper-arid cities by providing adaptive shade, evaporative cooling, and independent irrigation to help both people and plants thrive as a clean, passive climate-conditioning

system for public spaces. Addressing the ecological disconnection prevalent in urban environments, Leafy promotes public health, emotional well-being, and a renewed sensitivity to the fragility of both nature and human life, functioning as a climate-positive system that fuses industrial ecology with nature to reimagine public space as a living, responsive, and harmonious environment where technology and ecology work in concert to support urban resilience. The system's modular and kinetic nature allows it to respond dynamically to changing environmental conditions, deploying shade and cooling precisely when and where needed most, while its independent irrigation capabilities ensure that the vegetation integrated within the system can survive and thrive even in water-scarce contexts, creating pockets of biodiversity and comfort within the harsh urban fabric.

Leafy's edible gardens on heat islands address food security in line with **SDG 2**, with each hectare able to feed about 250 people a year. By reestablishing



urban residents' connections to food sources and plant development cycles, this integration turns heat islands into productive landscapes that support food production and urban cooling. In terms of **SDG 3**, Leafy reduces heat-related illnesses and creates safe, natural urban havens that promote both physical and mental health by offering cooling breezes and green shade during periods of excessive heat. The system protects vulnerable populations from the excessive heat effects that are becoming more common as a result of climate change by facilitating outdoor activities and social engagement during hot seasons.

Through interactive environmental education, Leafy's integrated Internet of Things platform encourages people to take care of living systems in response to **SDG 4**. It promotes ecological awareness and re-establishes urban inhabitants' connection to the natural processes that support urban life by facilitating hands-on interaction with food cultivation and local ecology. Creating safe, welcoming public areas that welcome all users, regardless of gender, and promoting women's

involvement in design and green occupations are ways to achieve **SDG 5**. The community-driven, open-source strategy breaks down barriers in the green economy and enables individuals of all genders to co-create resilient urban futures.

In relation to **SDG 6**, the dune pot irrigation technique uses up to 90% less water than traditional irrigation, whereas Leafy's dew collection system collects about 51,000 liters of water a year from atmospheric moisture. A sustainable water supply for the public and plants can be ensured by storing excess water and turning it into drinking fountains.

The canopy system reduces the need for mechanical air cooling by preventing about 47 megawatt-hours of energy usage per year through passive shading, which is in line with **SDG 7**. The municipal grid receives about 225 megawatt-hours of electricity per year from integrated solar thin film blades, which combine active renewable generation and passive reduction.

SDGs considered



Using locally sourced materials and modular systems that facilitate local manufacturing and assembly helps achieve **SDG 8**. Maintenance requirements create skilled job opportunities, such as smart systems technicians and urban farmers, bolstering regional supply networks and encouraging circular design principles. In response to **SDG 9**, Leafy functions as an autonomous, creative infrastructure that combines organic components, responsive control systems, and kinetic movement. It enables adaptive, intelligent, and ecologically integrated urban development by establishing a new type of urban infrastructure that challenges the boundaries between built and natural settings.

Leafy's open-source, modular, scalable approach to **SDG 10** enables deployment in underserved areas devoid of high-quality public space amenities. Inequalities in access to climate adaptation infrastructure can be decreased by making designs publicly

available so that communities with fewer resources can modify the technology to suit their capabilities. Leafy's creative green infrastructure, which cools areas while fostering biodiversity and community well-being, directly addresses **SDG 11** in the fight against urban heat islands. Encouraging outdoor recreation and social contact through the creation of cozy microclimates in public areas promotes environmental and social sustainability in the face of climate change.

Leafy uses closed-loop technologies, local material procurement, and modular reuse tactics to reduce resource consumption in line with **SDG 12**. Dune pots reduce irrigation, solar blades produce energy, and leaves gather dew to create circular, low-impact public space design. Materials can be recovered and used again thanks to disassembly-friendly design. By directly contributing to climate action, **SDG 13** is met. Each 1,000 square meter installation sequesters about 193 metric tons of



carbon dioxide per year. This offers tangible advantages to urban residents while combining carbon sequestration, emissions reduction through lower energy demand, and adaptive benefits.

By using green roofs and gardens that promote biodiversity, Leafy responds to **SDG 15** by establishing cozy microclimates that sustain a variety of ecosystems. It helps to restore ecosystem function and stop the loss of biodiversity by establishing habitat

connections inside the urban matrix, which benefits pollinators, birds, and other species. In terms of **SDG 16**, Leafy promotes inclusive, peaceful societies by converting public areas into accessible, secure, and climate-adapted settings. By encouraging community participation in planning and continuing care, its open-source, participatory design methodology fortifies social ties and empowers group action through shared engagement with living infrastructure.



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



P168 THE SPOT

Author(s): Pieros Pieris, Stella Pieri, Lydia Sklavou, Alexandros Mimidis, Theodora Telaki, Adela Bourspreni

Professional Architectural

Organisation(s) of the Author(s): Pieris.

Architects, Theodosiou Engineers, Simvoli – MEP Consulting Engineers, Agropolis, Dcarbon, NeaPolis Lighting

UIA Regions: Region II

Client Name(s): Heracles Group

Location: Rio, Achaia, Greece

Geographic Coordinates (Latitude and

Longitude): 38.28995° N / 21.78865° E

Project/Intervention Area: 175 m²

Status: Design Phase

Image Author(s): Lydia Sklavou, Theodora Telaki, Adela Bourspreni, Alexandros Mimidis

Project Description: The SPOT (Sustainable Practices of Tomorrow) is an innovative initiative by HERACLES Group redefining sustainable architecture in Greece. Currently in the design phase on the University of Patra campus, it will serve as a dynamic coworking hub embodying cutting-edge environmental principles and adaptable

design. With 175 square meters, The SPOT demonstrates how small-scale interventions can have outsized impact on sustainable construction.

As the first Greek building to integrate both Gantry Concrete and Robotic Arm 3D printing, it reduces concrete waste by 60% and shortens construction timelines. Low-carbon eco-cement emits 90% less CO₂ than conventional concrete. Its modular design allows interconnection with other units, creating flexible complexes that evolve with future needs. The project results from multidisciplinary collaboration including Theodosiou Engineers, DCarbon, Simvoli, Agropolis, and NeaPolis, delivering a climate-conscious model combining advanced construction with resilient design.

On the university campus, The SPOT functions as a living laboratory where students and professionals engage directly with cutting-edge sustainable construction techniques, building local capacity and supporting Greece's



green technology sector. Landscape design with Agropolis uses native plants to boost biodiversity, create wildlife habitats, mitigate urban heat islands, and provide inclusive outdoor spaces for recreation and social interaction. Smart building systems monitor and optimize energy use in real time, automatically adjusting lighting and ventilation to minimize consumption. Rooftop photovoltaic panels generate renewable energy while transparent feedback educates occupants about sustainable habits.

The adaptability and replicability of The SPOT are fundamental to its potential as a scalable solution for urban resilience and climate adaptation. Its modular design can expand or reconfigure to suit various spatial contexts and community needs, allowing flexible responses to demographic changes, evolving work styles, and climate-related challenges. This approach anticipates and mitigates future environmental pressures through thoughtful design that reduces greenhouse gas emissions

and enhances resilience, offering a scalable, repeatable template for environmentally responsible architecture in Greece and beyond while serving as an inspiring educational space for future generations of engineers, architects, and sustainability leaders.

With its orientation and building envelope optimizing natural ventilation and daylighting, high-efficiency mechanical systems further reducing energy loads, solar photovoltaic panels producing clean electricity on-site to lessen reliance on external energy sources, and a smart energy monitoring system that enables users to track and manage energy use in real time, the SPOT integrates both passive and active strategies to reduce energy consumption and promote the use of affordable, clean energy within small-scale, modular architecture, all of which are in line with **SDG 7**.

SGDs considered



Regarding **SDG 9**, as the first building in Greece to implement both Gantry Concrete three-dimensional printing and Robotic Arm printing, The SPOT represents a major innovation in construction that enables precise, efficient use of materials and significantly shortens construction time, introducing a new way to build that reduces waste, labor intensity, and environmental impact while integrating digital fabrication with sustainable materials like eco-cement to push the boundaries of what infrastructure can achieve, serving as a model for how the construction industry can innovate responsibly and support resilient, sustainable industrial development.

With its location on the University of Patra campus encouraging collaborative learning and public engagement while surrounding landscaped areas enhance social interaction, biodiversity, and well-being, The SPOT responds to **SDG 11** by providing a flexible, modular coworking space that can adapt to different urban or academic contexts

and function independently or replicated to form larger clusters ideal for scalable, sustainable community infrastructure. This illustrates how compact, adaptive buildings can support inclusive, safe, and sustainable urban growth.

SDG 12 is addressed by the project's emphasis on responsible resource use from material selection to construction techniques. For example, three-dimensional printing can reduce material waste by up to sixty percent when compared to conventional methods; the use of Lafarge's eco-cement reflects a shift toward low-impact materials; a full life-cycle assessment created in collaboration with sustainability consultant DCarbon ensures that all components are optimized for environmental performance; and the building is designed for future disassembly and reuse in accordance with circular economy principles to reduce environmental impact throughout its entire life cycle and directly support responsible production and consumption.



In accordance with **SDG 13**, the SPOT is essentially a climate-responsive building that lowers greenhouse gas emissions through low-carbon materials, minimal construction waste, and energy-efficient operation. On-site three-dimensional printing shortens construction timelines and reduces transportation-related emissions, while renewable energy systems further reduce the building's carbon footprint during its operational phase. Designed to remain functional under future climate conditions as an adaptable, resilient, and forward-looking model of climate-conscious architecture that not only mitigate environmental impact but also educate and motivate action. This real-world application of academic and industrial research directly contributes to the fight against climate change.



P170 SKYBLOX CO-LIVING HOUSING

9 INDUSTRY,
INNOVATION AND
INFRASTRUCTURE



Author(s): Ar. Rien Tan, Ar. Howie Lam
Professional Architectural Organisation(s) of the Author(s): TKCA Architects Sdn Bhd
UIA Regions: Region IV
Client Name(s): Skyworld Development Berhad
Location: Bukit Jalil, Kuala Lumpur, Malaysia
Geographic Coordinates (Latitude and Longitude): 3.1915° N / 101.7214° E
Project/Intervention Area: 11.088,39m²
Status: Completed
Completion date: August 3, 2023
Image Author(s): TKCA Architects Sdn Bhd, Pixelaw photography

Project Description: SkyBlox is Malaysia's first prefabricated co-living prototype in Kuala Lumpur, addressing urbanization and housing affordability through modular construction. Using Prefabricated Prefinished Volumetric Construction, modules are manufactured off-site and assembled on-site, reducing waste and construction time. Drawing from tropical modernism, its bold yellow form symbolizes

progressive living. Common areas are passively ventilated and naturally lit through operable windows, reducing mechanical system reliance. The 320 modular rooms are customizable, providing affordable homes for diverse residents.

The Back to Nature concept blends indoor and outdoor living through exposed brick, green courtyards, and sky gardens, creating shared spaces that enhance community bonds. Rainwater harvesting and low-flow fixtures reduce costs, while recycled materials and non-toxic finishes improve air quality. Universal design ensures accessibility for all. A participatory process with local authorities and residents shaped the development, addressing affordability and urban isolation. The master plan encourages interaction through communal kitchens, gardens, and open corridors where students, families, and professionals connect naturally. Biophilic elements like green balconies and courtyards soften the environment.



Passive design with deep overhangs and HVLS fans optimizes thermal comfort. Rainwater harvesting and low-carbon materials support ecological stewardship. The compact footprint enables high-density living without sacrificing quality, with shared resources reducing costs while increasing access to amenities.

By adopting cost-effective modular construction, SkyBlox addresses **SDG 1** by offering high-quality, reasonably priced housing that is accessible to low- and middle-income groups, lowering obstacles to homeownership, and promoting diversity while lowering homelessness and overcrowding. In relation to **SDG 3**, daylighting and natural ventilation improve interior air quality and thermal comfort, lowering stress and enhancing sleep, while green areas promote social contact and outdoor activities, building emotional resilience and a sense of belonging.

Diverse age groups and mobility requirements are accommodated via safe, accessible design.

With well-lit common areas, secure walkways, and safe access restrictions that address safety concerns that disproportionately affect women, the project promotes gender equality in accordance with **SDG 5** and allows for unrestricted participation in community activities. In addition to lowering housing instability and facilitating the pursuit of education and entrepreneurship, affordable housing offers stable homes for women-headed households, young female professionals, and single mothers. Women were consulted to make sure the design met their unique demands and to give them a say in choices regarding their living space. In terms of **SDG 6**, low-flow fixtures minimize daily water usage, which lowers utility bills and contributes to environmental goals, while rainwater

SDGs considered

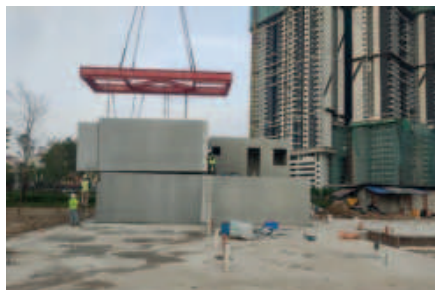


collecting gathers and repurposes water for landscape irrigation, relieving pressure on municipal supplies. Using locally sourced resources promotes the circular economy and minimizes water use during production by lowering embodied carbon and water-intensive processes. A culture of responsibility is promoted by educating locals about sustainable water use. Prefabricated prefinished volumetric construction reduces waste and embodied energy, while natural daylighting, passive ventilation, and optimal building orientation reduce the need for artificial lighting and mechanical cooling, thereby reducing operational energy consumption and carbon emissions. These measures are in line with **SDG 7's** energy sustainability goals.

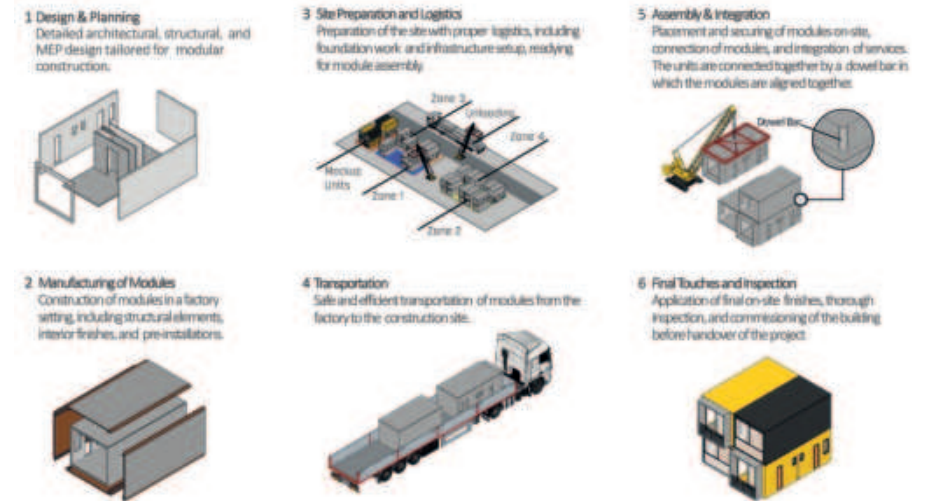
Goal 9 is embodied through pioneering modular construction, accelerating build times and improving quality control, transforming traditional practices, reducing material waste, minimizing disruption, and enhancing safety, providing a replicable model influencing industry standards and encouraging wider adoption of innovative, sustainable building techniques. Goal 10 is directly addressed through accessible, affordable housing catering to diverse

populations often excluded from mainstream markets. Co-living fosters inclusivity through shared spaces encouraging social mixing across cultural, economic, and age groups, reducing segregation. Participatory planning empowers marginalized groups by giving voice in shaping their living environment, with affordable housing mitigating housing insecurity and supporting social equity through diversity and accessibility.

SkyBlox is a prime example of sustainable urban construction in response to **SDG 11** because of its small footprint, which maximizes land use efficiency while maintaining green spaces. Through shared amenities that improve quality of life, community-centric design fosters social cohesiveness, safety, and accessibility. Climate adaptation and mitigation are supported by passive design and energy-efficient systems, while inhabitants' dependency on private vehicles is decreased by the strategic position that links them to public transportation. Sustainable building practices and effective resource management promote responsible consumption, which advances **SDG 12**. By reusing extra materials in controlled production environments,



Prefabricated Prefinished Volumetric Construction Method (PPVC)



prefabricated prefinished volumetric construction drastically lowers material waste. While design that prioritizes longevity, adaptability, and simplicity of maintenance prolongs building life cycles, lowering the need for expensive repairs and resource consumption, sustainable sourcing supports items with longer lifespans and lower environmental consequences.

Reducing the carbon footprint during construction and operation is one way to undertake climate action in relation to **SDG 13**. Shorter building times restrict emissions on-site, and prefabricated prefinished volumetric construction lowers embodied carbon through efficient manufacture and less material waste. By promoting social cohesiveness and climate-adaptive design, integrated vegetation enhances microclimates and carbon sequestration, while passive design lowers operating emissions. By incorporating native

plants and green spaces, **SDG 15** is met, promoting urban biodiversity and converting crowded residential areas into ecologically balanced settings. Tree-lined walkways and communal gardens improve habitat quality, counteract the urban heat island effect, and aid in natural air filtration.

By using community voices in its participatory design, SkyBlox builds a foundation of trust and accountability, promoting inclusive, peaceful communities in line with **SDG 16**. By empowering locals to oversee common areas and fostering social cohesion, inclusive governance improves community safety. By fostering harmonious relationships among varied residents, shared spaces help to lessen social fragmentation. In the urban setting, affordable housing helps to reduce inequality and advance justice by addressing socioeconomic differences that can cause conflict.



10 REDUCED INEQUALITIES

Inequality threatens social and economic development, poverty reduction, and people's sense of self-worth. Before COVID-19, the incomes of the poorest 40% had been growing faster than the national average in most countries, but the pandemic may have reversed this trend. The global refugee population has surged to 37.8 million—primarily from Afghanistan, Venezuela, Syria, and Ukraine—intensifying humanitarian pressures. Discrimination is rising worldwide, severely affecting urban residents, women, persons with disabilities, the poorest, and the less educated. Globally, 1 in 5 people report experiencing discrimination prohibited by international law within the last year, with rates highest in Least Developed Countries (averaging 24.3%). Youth (15–29) more often report discrimination based on migration status, ethnicity, and sexual orientation, while older adults (60+) face age, disability, and health-related discrimination.

- The incomes of the poorest 40 per cent of the population had been growing faster than the national average in most countries. But emerging yet inconclusive evidence suggests that COVID-19 may have put a dent in this positive trend of falling within-country inequality. The pandemic has also caused the largest rise in between-country inequality in three decades.
- One in five people worldwide has experienced discrimination in some form, with women and people with disabilities disproportionately affected.
- The year 2024 was the deadliest on record for migrants, with 8,938 fatalities. Reducing both within- and between-country inequality requires equitable resource distribution, investing in education and skills development, implementing social protection measures, combating discrimination, supporting marginalized groups and fostering international cooperation for fair trade and financial systems.

Source: [The Sustainable Development Goals Report 2025](#)

SDG10 TARGETS

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations.

10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions.

10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.

10.A Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements.

10.B Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes.

10.C By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent

For more information: <https://www.un.org/sustainabledevelopment/inequality/>

P44 SPREADSEOUL: THE CITY IS YOURS! SHAPE IT! SHARE IT!

10 REDUCED
INEQUALITIES



Author(s): Sinan Gunay and Nurhayat Oz / SUPERSPACE

Professional Architectural

Organisation(s) of the Author(s):

Chamber of Architects Turkey (TMMOB Mimarlar Odası)

UIA Regions: Region II

Client Name(s): Seoul Metropolitan Municipality

Location: Seoul / South Korea - Gukhoe Daero Road (8km)

Geographic Coordinates (Latitude

and Longitude): from 37.525671, 126.835230 to 37.531507, 126.920960

Project/Intervention Area: 260.000m²

Status: Design Phase

Completion date: November 2019

Image Author(s): SUPERSPACE

Project Description: spreadSEOUL is an ambitious urban proposal that reclaims an eight-kilometer highway, transforming it into a linear park that reconnects fragmented districts through community-driven design, creating a living infrastructure that weaves together the urban fabric of Seoul by adaptively reusing rooftops, playgrounds, and

courtyards to merge old and new around the holistic principles of body, mind, and soul, fostering spaces for movement, rest, learning, and care throughout the city. This transformative project harvests sun and rain through integrated systems, supports urban farming initiatives, and actively boosts biodiversity across the formerly barren transportation corridor, linking people to local resources and to each other while turning forgotten voids into shared, living infrastructure that evolves and grows with its community, reshaping the city into a productive and joyful backyard for all residents to enjoy and participate in shaping over time.

In accordance with **SDG 1**, spreadSEOUL suggests micro-infrastructure and inclusive public areas that promote local livelihoods and fair urban access. By fostering economic engagement and guaranteeing that all community members, regardless of socioeconomic background, benefit from urban regeneration, it helps reduce urban poverty. By allowing locals to grow their own food, lowering reliance



on outside food systems, and promoting group care for shared productive landscapes that provide observable nutritional benefits for participating communities, the linear park's integration of urban gardens and community-managed green patches promotes local food resilience in relation to **SDG 2**.

As a response to **SDG 3**, spreadSEOUL improves physical and mental health in crowded neighborhoods by reducing the urban heat island effect through thoughtful vegetation and shading, encouraging walkable, shaded spaces that promote outdoor recreation and active transportation, and fostering better cardiovascular health and stress reduction through regular time spent in nature. By educating citizens and young professionals about sustainable urban planning and living through participatory design workshops and public engagement processes, **SDG 4** is addressed. The project itself is transformed into a learning platform where communities gain a deeper understanding of ecological systems and urban resilience through active participation in shaping their environment.

With inclusive design strategies that take into account the varied needs and experiences of women and girls in the creation of safe, welcoming, and accessible public environments, the project's commitment to guaranteeing equal participation and visibility of women in design, planning, and public space use advances **SDG 5**. In relation to **SDG 6**, spreadSEOUL encourages decentralized water collection through integrated systems and permeable surface designs that support biodiversity through increased soil moisture, manage urban runoff, lower the risk of flooding, and lessen overall water stress on municipal systems by collecting and using rainwater where it falls.

Solar-powered street furniture and infrastructure prototypes that show how public space can produce and distribute clean energy fairly are incorporated into the project in accordance with **SDG 7**. These prototypes provide lighting, charging stations, and other renewable energy-powered amenities while educating the public about the potential of distributed energy. In order to support **SDG 8**, opportunities for green

SGDs considered



jobs, local makers, and circular design systems are created. SpreadSEOUL creates jobs in programming, maintenance, and small business while promoting sustainable local economies and traditional artisanship by incorporating locally made and crafted components.

By showing how flexible systems can react to local conditions and serving as a model for similar interventions in other contexts, the linear park's modular, replicable, and climate-responsive micro-infrastructure embodies **SDG 9** and promotes urban innovation and decentralized resilience. Regarding **SDG 10**, spreadSEOUL promotes equity in the distribution and access of public spaces by empowering marginalized neighborhoods and reducing spatial inequality through strategic investment in underserved areas. It also ensures that all communities, regardless of their location within the city or economic status, benefit from high-quality green infrastructure.

In order to create a network of public spaces that improve quality of life, social cohesion, and environmental performance, as well as to make cities and human settlements more inclusive, safe, resilient, and sustainable through deliberate intervention in the urban fabric, spreadSEOUL transforms unused spaces into shaded, inclusive, and community-driven nodes throughout Seoul. This approach directly addresses **SDG 11**. In keeping with **SDG 12**, the project makes use of locally sourced and recycled materials and encourages low-impact building techniques that reduce environmental impact. By providing a clear example of circular economy principles in action throughout the park's design and continuous operation, the project inspires residents to reconsider urban consumption and waste patterns.

By addressing heat islands and climate risk through spatial interventions that offer cooling, shade, and refuge during extreme weather events while lowering overall urban temperatures and



enhancing resilience to climate impacts, spreadSEOUL's direct action on climate adaptation at the scale of daily urban life advances **SDG 13**.

In relation to **SDG 15**, the linear park's green corridors and micro-forests protect urban soil, lessen habitat fragmentation, and restore local ecosystems and biodiversity. They also create ecological connections throughout the city that facilitate the migration of wildlife and the recovery of native species.

spreadSEOUL supports inclusive urban development through participatory decision-making that guarantees diverse voices are heard and respected in the park's ongoing evolution. It also builds inclusive, accountable, and effective institutions at the neighborhood level through cooperative stewardship of shared public resources. All of these initiatives are in line with **SDG 16** and encourage civic engagement, co-design processes, and transparent governance in shaping the urban commons.



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CHA KWO LING PROMENADE: ENHANCEMENT WORKS FOR KWUN TONG SEWAGE PUMPING STATION (BALANCING TANK)

10 REDUCED
INEQUALITIES



Author(s): Beh Kiang Hioke, Mok Chi Kin, Alejo Florentino Jr., Zhao Yiyun

Professional Architectural

Organisation(s) of the Author(s):

A.LEAD architects Ltd.

UIA Regions: Region IV

Client Name(s): Drainage Services Department, HKSAR Government

Location: Hong Kong SAR (China)

Geographic Coordinates (Latitude and

Longitude): 22.305718 / 114.224274

Project/Intervention Area: 10.000m²

Status: Completed

Completion date: 2023

Image Author(s): Atkinsréalis

Project Description: The Cha Kwo Ling Promenade project in Kwun Tong transforms a sewage pumping station into a vibrant public space inspired by the area's textile history. Its "dancing ribbon" design features fluid pathways and structures that reflect industrial heritage while symbolizing community and environmental interconnectedness.

Sustainability drives the project through advanced sewage treatment

technologies and a landscaped deck atop the pumping station, exemplifying the single-site, multiple-use model that maximizes land efficiency while integrating Blue-Green infrastructure. Since opening in August 2023, the promenade has become a beloved community hub featuring an eight-meter tree house tower, water play zones, and bouncing areas that stimulate children's imagination and physical activity.

The park's inclusive recreational design, which includes lawns, exercise equipment, shaded places, and a large children's play deck with more than sixty facilities, supports healthy lives in line with **SDG 3**. These facilities promote exercise and intergenerational interaction while offering psychological advantages through stress-relieving natural features. By converting a former industrial site into a breathable, green space that enhances urban air quality, accessibility guarantees that health benefits reach all members of the community, including the elderly, disabled, and children.



The balancing tank and sewage pumping station beneath it are essential for managing stormwater and wastewater, preventing overflows, and promoting the discharge of cleaner water into nearby bodies of water in pursuit of **SDG 6**. Urban water quality is maintained by improved landscaping that filters pollutants and reduces stormwater runoff using permeable surfaces and bioretention techniques. By placing a public park on top of operational infrastructure, one can raise awareness of water sustainability and highlight sanitation services as common community values. The promenade uses energy-efficient lighting and passive design techniques in accordance with **SDG 7**. In Hong Kong SAR (China)'s hot climate, passive cooling is achieved by the use of skylights, solar panels, shade structures, and flora, which reduces the need for mechanical cooling.

Innovative energy planning is reflected in LED lighting and infrastructure that is prepared for renewable energy sources, which lower operating costs and emissions without sacrificing accessibility or quality.

By striking a balance between practical utility and public value, **SDG 9** is expressed through creative reuse of existing infrastructure, exhibiting resilient development. Utility decks with integrated play areas and multi-level circulation are examples of clever design techniques that transform an industrial site into a community asset. Multidisciplinary cooperation maximizes land-use efficiency in densely populated areas by demonstrating that infrastructure need not be concealed or segregated. In reference to **SDG 10**, inclusive design principles guarantee that the park is accessible to individuals of all ages, backgrounds, and abilities.

Physical and social barriers are broken down via barrier-free access, age-appropriate equipment, inclusive play areas, and sensory-friendly elements, which allow kids with various needs to play together while offering rest areas for senior citizens and people with disabilities. Community input is incorporated into participatory design to guarantee that the area accurately represents user demands while fostering equity and dignity.

SGDs considered



By rethinking neglected infrastructure as a public asset, the initiative demonstrates inclusive, safe, resilient, and sustainable urban development in accordance with **SDG 11**. While substantial green covers, soft landscaping, and permeable surfaces reduce heat islands and control runoff, children's play areas, accessible walkways, locations for shaded relaxation, and areas for intergenerational gatherings foster social interaction. In metropolitan regions with limited acreage, integrating civic activities with infrastructure shows critical resilience. In order to demonstrate circularity and material responsibility, **SDG 12** is accomplished by adaptively reusing existing infrastructure rather than demolishing and rebuilding. Water and fertilizer inputs are reduced by using drought-tolerant native species and long-lasting, low-maintenance materials that are supplied

locally. Exposure to multipurpose infrastructure promotes cultural changes that value responsible systems and cultivate long-term and conservationist mindsets.

Climate-responsive design incorporates substantial green infrastructure to ameliorate microclimates and increase resilience to the effects of urban heat islands, which is relevant to **SDG 13**. In addition to reducing hard surfaces and facilitating improved stormwater management, meandering pathways allow vegetation to cool, promote biodiversity, and trap carbon through evapotranspiration. Converting infrastructure into green public space supports adaptable urban initiatives that use multifunctional design to build resilience. Within dense Kwun Tong, a seasonal biodiversity garden and a variety of native plant species create



urban ecological microhabitats in line with **SDG 15**. Seasonal flowering sequences encourage phenological awareness through signs and sensory pathways, while native and adapted species provide assistance for pollinators such as bees, butterflies, and birds. As an example of how ecological

restoration and infrastructure renewal can coexist within a single design vision, vertical greening, tree groves, and layered vegetation turn hard infrastructure into a living landscape that provides habitats, helps sequester carbon, and regulates temperature and air quality.



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UNBURDENED- A CAMPUS JOURNEY FROM PRESSURE TO PRESENCE, REDESIGNING EDUCATIONAL SPACES FOR STUDENT WELL-BEING AND SUSTAINABLE DEVELOPMENT.

10 REDUCED INEQUALITIES



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Professional Architectural

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UIA Regions: Region V

Client Name(s): Faculty of Engineering, Alexandria University

Location: Alexandria, Egypt

Geographic Coordinates (Latitude and Longitude): 31.2062° N / 29.9248° E

Project/Intervention Area: 113.312m²

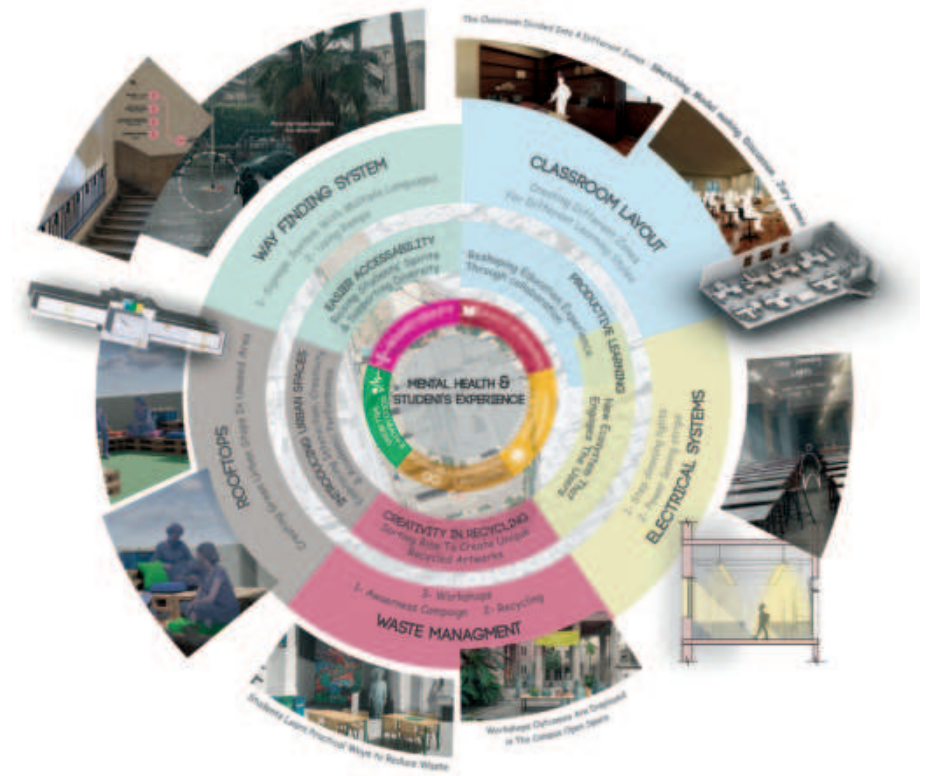
Status: Design Phase

Completion date: July 2025

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Project Description: A 2021 study by the American Society for Engineering Education found that one in three engineering students experience depression, a growing concern mirrored both locally and globally, yet most educational facilities are designed with efficiency as the primary driver, overshadowing students' emotional and psychological needs through a lack of green, open areas and communal environments that leads to burnout, dissociation, and disconnection, prompting this project to reimagine the campus as a new space that actively offers support to mental health by prioritizing student experience, connection with nature, and opportunities for interaction to improve emotional growth and embed a sense of comfort and relief throughout the learning environment.



In line with **SDG 3**, the new improved urban stops and campus-decorated rooftops encourage engagement, creativity, and academic achievement while also enhancing social ties and boosting students' morale and mental health by showcasing manufactured goods that connect them to nature. Physical interventions that actively promote healthy lives and well-being for all students, regardless of age or background, are created by directly integrating restorative environments into the campus fabric. Through the provision of easily accessible retreats where students can unwind, connect with peers, and interact with natural elements that have been scientifically shown to reduce stress and improve mental health outcomes, these spaces aim to counteract the

psychological pressures of demanding academic programs. This transforms the campus from a purely functional educational facility into a supportive environment that nurtures the whole person.

Regarding **SDG 4**, since collaboration helps students flourish both mentally and physically, new seating plans were designed to reshape the educational experience and provide distinct zones for research and drafting, common hands-on modeling, and presentation areas that raise a sense of community and interaction while creating experience-based spaces with natural movement patterns that support different learning modalities and encourage peer-to-peer knowledge exchange.

This reconfiguration of the learning environment recognizes that inclusive and equitable quality education extends beyond curriculum to encompass the physical spaces where learning occurs, with thoughtful design promoting lifelong learning opportunities by making education a more engaging, collaborative, and supportive experience that students are motivated to continue throughout their lives.

By introducing a new ecosystem that engages users and minimizes resource loss, the installation of adaptive lighting systems and smart plugs modernized the campus infrastructure in response to **SDG 7**. This increased the budget available for student satisfaction initiatives while also increasing daylight exposure to create uplifting, healthy spaces that promote mental health through improved environmental quality. This strategy shows

how inexpensive, dependable, sustainable, and contemporary energy solutions can be used to support both human well-being and environmental responsibility. Energy savings are reinvested in student programs, and the light itself helps building occupants feel better and regulate their circadian rhythms.

By taking into account international students on campus, **SDG 10** is addressed. By implementing multilingual signage and maps that cover all major movement zones, equity is promoted, spirits are raised, diversity is supported, and international students who might otherwise feel excluded or cut off from the campus community are given a sense of belonging. Regardless of a person's native language or country of origin, this intervention acknowledges that reducing inequality in educational settings necessitates deliberate design responses



Informal Learning & Collaboration: Students utilizing the modular seating for group discussions and outdoor study sessions.



Comfort & Community: Thoughtfully designed elements provide comfortable seating, encouraging prolonged engagement.



Connecting with Nature: Integrated planters offer green respite, promoting well-being and a connection to the



Vibrant Campus Life: Cultivating inviting outdoor settings that enhance the overall student experience and social engagement.

that acknowledge the diverse linguistic and cultural backgrounds of students, fostering an environment where everyone can navigate independently and feel valued as members of the community.

ensures sustainable consumption and production patterns. It also shows how environmental sustainability and human wellbeing can be pursued as integrated rather than separate goals through thoughtful programming that involves students in practical activities that benefit both themselves and their community.

In accordance with **SDG 12**, holding weekly awareness campaigns and interactive art shops gives students a place to express themselves and heal while working together and being creative in recycling and using campus waste material collected from sorting bins to create one-of-a-kind artworks that would cover the campus open area. This turns waste streams into chances for therapeutic expression and community building. By closing material loops on campus and simultaneously addressing mental health needs through creative engagement, this approach



P131 CASA MELANI

10 REDUCED
INEQUALITIES



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Professional Architectural

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UIA Regions: Region III

Client Name(s): Familia Melani

Location: Cintalapa, Chiapas, México

Project/Intervention Area: 64m²

Status: Completed

Completion date: August 3, 2019

Image Author(s): Fabio Chacon, Rolando Guillén

Project Description:

Casa Melani emerged after the September 7, 2017 earthquake in Mexico, one of the most intense in the last century, which left thousands of families homeless. The project provided a dignified living space for a family of four who lost their entire home and patrimony, forcing them to seek refuge in an improvised tent for several months. The design integrates bioclimatic characteristics and ecotechnological systems prioritizing occupant comfort,

with two distinct structures connected by an exterior portico ensuring ventilation and natural illumination. Strategic opening placement generates cross-ventilation mitigating the extreme local climate, achieving comfortable interior temperatures while maintaining abundant natural light.

A cornerstone of the project was active family and community participation in construction through an auto-construction method with technical-practical workshops in masonry, material fabrication, and carpentry. This approach reclaimed the concept of social production of housing, fostering collective ownership and transforming the structure into a true home. Currently, corn and squash cultivation on site strengthens its proposition as a Productive and Resilient Home, contributing to food security and self-sufficiency.

Casa Melani addresses poverty in accordance with Goal 1 by offering respectable homes as a material asset necessary for financial security.



It guarantees fair access to financial resources and essential services, providing secure housing that enables families to end cycles of poverty. By lowering susceptibility to economic shocks, the asset promotes long-term economic security. After an earthquake, constructing resilient dwellings lowers vulnerability to future calamities, and the social fabric that has been restored serves as a resilience pillar, enabling communities to take charge of their own lives. In relation to **SDG 3**, the project promotes improvements in quality of life by establishing criteria for healthy habitats that connect housing settings with improved health outcomes.

By achieving an indoor temperature differential of three to four degrees Celsius within an external range of eighteen to forty degrees, bioclimatic design contributes to both physical and mental well-being through thermal comfort and a connection to natural patterns. Indirect lighting also minimizes the need for artificial light until nightfall.

The project incorporates hands-on learning and capacity building in response to **SDG 4**, imparting new skills that promote trade diversification and the growth of local markets. Improving employability and entrepreneurial potential through direct talent transfer is especially important for informal economies. People can enhance their livelihoods and contribute to chances for lifelong learning outside of typical institutional settings by using the learning-by-doing approach, which offers usable technical skills that are directly relevant to local requirements. In order to achieve **SDG 8**, capacity transfer is used to promote trade diversification and the growth of local markets while fostering steady economic growth. Sustainable design maximizes agricultural work, increasing livelihood value and output. In order to diversify the economy and lessen reliance on a single source of income, new areas for alternative family and community economies are created. Entrepreneurship support and decent employment creation

SGDs considered



contribute to gradual formalization of micro-enterprises, moving communities toward dignified and sustainable livelihoods.

Resilient infrastructure that is cost-effective and aims for fair access for disadvantaged groups is an embodiment of **SDG 9**. In emerging situations, the reproducible, easily maintained construction method promotes local self-sufficiency by acting as a model for decentralized adaptive infrastructure.

Adoption of clean industrial technology and resource efficiency are implied by materials management and bioclimatic design. Infrastructure that is efficient, robust, culturally relevant, and environmentally sound is guaranteed by domestic innovation tailored to regional circumstances. Casa Melani focuses on dispersed communities and informal economies in rural Mexico in order to address inequality in accordance with **SDG 10**. While tactfully discouraging

forced migration as a result of inequalities, access to safe housing fights fundamental inequality. People can flourish in their communities when they are socially and economically included through respectable housing, skill transfer, and local business possibilities. Creating viable local opportunities reduces pressures of forced migration, strengthening community cohesion and preserving cultural heritage.

By providing decent housing in scattered rural settlements, **SDG 11** is addressed by ensuring that human settlements are inclusive, safe, resilient, and sustainable.

The project, which began as an earthquake response project, honors inhabitant identity, builds social self-esteem, and promotes resilience against natural calamities. Living conditions are successfully improved when vulnerable rural populations have access to sufficient housing. While fostering strong urban-rural connections promotes local economic development and discourages forced



migration, rebuilding resilient housing lessens the effects of future disasters. Sustainable production and consumption are achieved through effective resource and material management, which advances **SDG 12**. By utilizing natural climate conditions to maximize energy efficiency and minimize environmental impact, bioclimatic design exemplifies the circular economy. Pollution and hazardous waste are reduced when materials are chosen carefully. The sustainable approach and skill transfer increase awareness for adopting lifestyles in harmony with nature.

SDG 13 is addressed by making major contributions to climate action through bioclimatic design that is suited to high temperatures, achieving interior variations that significantly reduce the need for active heating or cooling, and lowering energy use and emissions. Optimized wind circulation controls excessive humidity while indirect lighting lowers electricity use, exhibiting an adaptive response to climate difficulties. By reducing energy consumption and improving thermal comfort, the design offers a dual climate solution that enables residents to endure extremes without sacrificing their health. A scalable model for climate action in housing is provided by the replicable building system.





11

SUSTAINABLE CITIES AND COMMUNITIES

Goal 11 promotes sustainable, inclusive, safe, and resilient cities. Over half of the world's population already lives in urban areas, and by 2050, 70% are expected to do so. However, rapid urbanization outpaces housing, infrastructure, and services, leading to a rise in slums. Urban sprawl, air pollution, and limited public open spaces persist. Since 2015, the number of countries with national and local disaster risk reduction strategies has doubled, yet in 2022 only half of the urban population had convenient access to public transport. Transforming urban spaces is essential for sustainable development, with focus on basic services, affordable housing, efficient transport, and green spaces for all.

- In 2022, only half of the world's urban population had convenient access to public transportation. Urban sprawl, air pollution, and limited open public spaces persist.
- Since October 2024, 131 countries reported having national and local disaster risk reduction strategies, up from 57 in 2015.
- Over 85% of slum dwellers are concentrated in three regions: Central and Southern Asia (334 million), Eastern and South-Eastern Asia (362 million), and sub-Saharan Africa (265 million).
- In the past five years, the number of countries tracking spending on protecting cultural and natural heritage tripled, jumping to 82 countries.
- To achieve Goal 11, efforts must focus on inclusive, resilient, and sustainable urban development policies that prioritize access to basic services, affordable housing, efficient transportation, and green spaces for all.

Source: [The Sustainable Development Goals Report 2025](#)

SDG 11 TARGETS

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage.

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.

11.A Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.

11.B By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.

11.C Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

For more information: <https://www.un.org/sustainabledevelopment/cities/>

P46 DUMLUPINAR URBAN DESIGN GUIDE



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Professional Architectural Organisation(s) of the Author(s): Design Guides R&D Association (TARGE)

UIA Regions: Region II

Client Name(s): Balıkesir Metropolitan Municipality

Location: Dumlupınar Neighbourhood, Karesi District, Balıkesir, Turkey
Geographic Coordinates (Latitude and Longitude): 39.6488075°N / 27.8800449°E

Status: Completed

Completion date: April 4, 2022

Image Author(s): Design Guides R&D Association (TARGE)

Project Description: The Urban Design Guide prepared for Dumlupınar Neighborhood proposes a place-based strategy for open public spaces and architecture in the historic center of Balıkesir Province. It frames urban design

as a critical tool for shaping resilient, inclusive, and culturally grounded environments by integrating architectural heritage, microclimatic sensitivity, and participatory place-making within a holistic framework aligned with the Sustainable Development Goals.

The project focuses on the reinterpretation of open spaces and neighborhood fabric through architectural typologies and street interface design. By examining building orientation, typological continuity, and parcel-scale uses, the Guide defines design principles that preserve morphological coherence while responding to contemporary sustainability challenges. It prioritizes passive climate control, the use of local materials, repair-oriented construction techniques, and energy-sensitive architectural approaches, thereby guiding both the restoration of historic buildings and their adaptation to evolving needs.



A key contribution of the Guide lies in its emphasis on the role of architecture in improving the quality of public space. Through active ground-floor façade strategies and stronger street interfaces, it aims to animate public life, support small-scale economic activity, and reinforce neighborhood resilience. The built environment is therefore approached not as a static heritage asset, but as a living cultural framework capable of supporting climate-adaptive and socially inclusive urbanism. In this context, the preservation of historic façades, the enhancement of walkability, and the increased visibility of local businesses become complementary components of a broader design strategy.

The proposed interventions seek to strengthen the cultural and spatial visibility of Dumlupınar while preserving neighborhood identity and encouraging community-based cultural tourism.

Human-scaled and legible public spaces are promoted through the coordination of architectural rhythms, street sections, vegetated landscapes, and microclimate-responsive materials. The Guide also encourages spatial ownership by integrating shaded gathering areas and edible landscaping into the built environment. These principles are articulated through a set of design codes prioritizing adaptive reuse, restoration, and passive conservation, while enabling small-scale architectural interventions compatible with the broader urban system. In this respect, the Guide presents a replicable model that reconciles environmental, cultural, and spatial priorities.

In line with **SDG 11**, particularly **Targets 11.4 and 11.7**, the Guide supports the protection of cultural and natural heritage while promoting safe, inclusive, and accessible public and green spaces. Within the Cultural Focus Area defined



Figure 1: Spatial niches; permeable surfaces and micro gardens

for Dum lupinar and its surroundings, the project establishes design standards aimed at protecting physical integrity, improving the visibility and accessibility of heritage assets, and advancing environmental and cultural sustainability together. These standards are supported by integrated themes such as green infrastructure, preservation of the historic fabric, landscape design, mobility networks, urban furniture, and public art, all addressed through a holistic and interdisciplinary approach.

The Guide also contributes to **SDG 8**, particularly **Target 8.9**, by supporting sustainable and beneficial tourism through informative and directional design interventions that highlight architectural heritage and increase awareness of local cultural values. By making heritage assets and local businesses more visible, it contributes to a tourism model that supports the

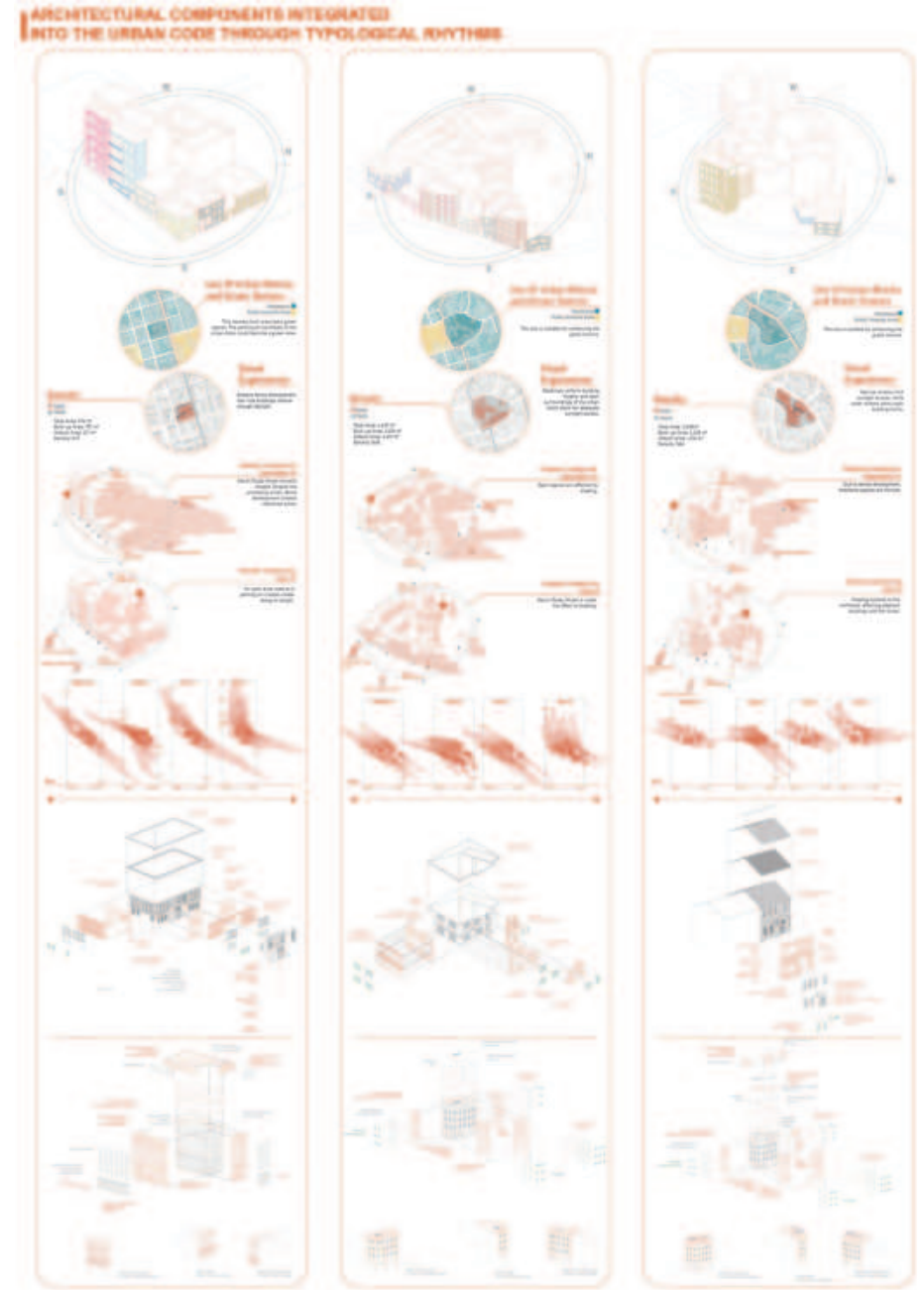


Figure 2: Architectural components integrated into the urban code through typological rhythms

neighborhood economy, sustains local livelihoods, and ensures that economic benefits remain rooted in the community rather than detached from it.

In relation to **SDG 13**, particularly **Target 13.2**, the Guide incorporates climate-responsive measures into planning and design through permeable surfaces, landscape strategies compatible with local vegetation, and architectural solutions that prioritize energy efficiency and environmental responsibility. In doing so, it demonstrates that heritage conservation and climate action can operate as complementary objectives.

The project shows how traditional knowledge embedded in historic urban fabric can inform contemporary climate-sensitive design while enhancing the neighborhood's adaptive capacity in the face of future climate challenges.



P96 YONGFENG STREET-CORNER TRANSFORMATION



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Professional Architectural

Organisation(s) of the Author(s):

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UIA Regions: Region IV

Client Name(s): Malianwa Street Office

Location: Haidian District, Beijing, China

Geographic Coordinates (Latitude and Longitude): 40.0326 / 116.273

UIA Regions: Region IV

Project/Intervention Area: 583m²

Status: Completed

Completion date: April 1, 2024

Image Author(s): Bo Lv, Guande Wu

Project Description: A previously desolate and enclosed street corner has been revitalized into an open, inviting park that offers picturesque mountain views, created to foster inclusiveness, equality, and sustainability as a lively public space for the surrounding community, transforming an area once choked with thick woods and weeds that not only hindered pedestrian access but also cut off local businesses from

the street into a vibrant communal asset. This initiative was collaboratively proposed and executed by street officials, urban planners, and architects to improve living conditions and restore dignity for residents and workers in the vicinity, with the design featuring a clear and accessible pedestrian pathway that reestablishes connections within the community while a pavilion outfitted with solar photovoltaic panels guarantees that the park functions with complete energy self-sufficiency, and at night, low-level induction lights gently illuminate the area to enhance safety and allow for extended use into the evening.

Regarding **SDG 10**, what was once a forsaken wasteland has been transformed into an inclusive and accessible leisure park providing sweeping views of the mountains, a change that tackles the inequalities in public facilities and enhances the dignity of communal spaces for the local community, as prior to the park's development the location was not pedestrian-friendly whereas now shops are visible from the street, the sidewalk



has been repaired, and employees have a designated area for lunch or relaxation, while children and seniors can enjoy a park within one and a half kilometers of their homes, directly addressing spatial inequality through thoughtful urban intervention that prioritizes equitable access to quality public space for all community members regardless of age or socioeconomic status.

In relation to **SDGs 11** and **13**, the park's center features a solar-powered pavilion that uses 100% zero-carbon energy to light the area at night and enhance user safety after dark. By carefully maintaining or moving existing trees and vegetation as well as using eco-friendly materials

and systems like terrazzo seating made from recycled aggregates, bamboo fiberboard, locally sourced stainless steel, and permeable paving bricks, the site's ecological continuity has been preserved. Through intentional action to combat climate change and its effects through integrated design, these solutions dramatically reduce embodied carbon during construction and promote long-term sustainability while making cities and human settlements more inclusive, safe, resilient, and sustainable.

SGDs considered





P159 METROPOLITAN SEAPLANE PORT, MSPA

11 SUSTAINABLE
CITIES AND
COMMUNITIES



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Professional Architectural Organisation(s) of the Author(s): Pieris.Architects
UIA Regions: Region II
Client Name(s): Hellenic Seaplanes
Location: Elefsina, Greece
Geographic Coordinates (Latitude and Longitude): 38°2'3.94"B/23°32'33.67"A
Project/Intervention Area: 15.690m²
Status: Design Phase
Image Author(s): Loom Design

Project Description: The Metropolitan Seaplane Port of Attica is a transportation hub on Elefsina's historic industrial coastline, redefining travel while fostering ecological regeneration and regional development. It connects Attica to Greece's island network while functioning as an immersive public space rooted in place and memory.

The design unfolds as a circular gesture along the pier, framing panoramic views of the Saronic Gulf. At its heart, a sunlit atrium features a floating sky garden with timber vessels holding native Mediterranean flora, recalling maritime

heritage while introducing calm and wonder. Mediterranean gardens with lavender and olive trees line the pier and courtyards, linking travel to Greece's natural landscapes. The material palette of timber, stone, and glass blurs interior and exterior thresholds, while passive cooling and natural ventilation enhance comfort and reduce environmental impact.

As an iconic public destination, the port catalyzes economic regeneration by introducing Elefsina to a broader audience, stimulating tourism and local enterprise. It transforms a neglected waterfront into accessible civic space with shaded walkways, gathering areas, and green courtyards where residents and travelers interact. Clear circulation seamlessly integrates public and operational zones while offering opportunities for pause.

Shaded terraces, outdoor decks, and planted courtyards create moments of engagement with the sea and the city, making the terminal feel open, breathable, and grounded in its context.



Beyond architectural language, the seaplane port is a civic project that tells the story of Elefsina's layered identity spanning mythic, industrial, and transitional phases. It reclaims a site long associated with degradation and neglect, reframing it as a place of memory, reconnection, and community life through an act of transformation that makes the port a symbol of resilience.

The port tells the story of Elefsina's layered identity, reclaiming a degraded site as a place of memory and community life. Strategically, it supports regional mobility by linking Attica to Greece's island network, expanding tourism beyond Athens to rebalance economic activity. Designed for everyday use, it becomes a shared civic space where nature is experienced along lavender-scented paths and olive-planted courtyards, making the terminal a familiar and inclusive part of Elefsina's public realm.

In accordance with **SDG 3**, the Metropolitan Seaplane Port's design prioritizes human well-being. The light-filled atrium that houses the suspended

sky garden, which features timber vessels filled with native Mediterranean plants like lavender, olive trees, and other healing flora that reduce stress, support emotional health, and enhance the sensory quality of the space. Access to daylight, fresh air, greenery, and natural materials encourages a slower, more human-centered travel experience that supports both physical and mental well-being. Public gardens and shaded rest areas also extend these health benefits to locals.

The Metropolitan Seaplane Port aligns with the concept of infrastructure as a platform for equitable, place-based economic growth that promotes sustained, inclusive, and sustainable economic development through decent work opportunities and productive employment generated by the port's operations and the economic activity it attracts to the region. In terms of **SDG 8**, the port represents a strategic investment in regional development that stimulates new forms of sustainable tourism and expands access to lesser-known island and coastal destinations, diversifying Greece's travel economy

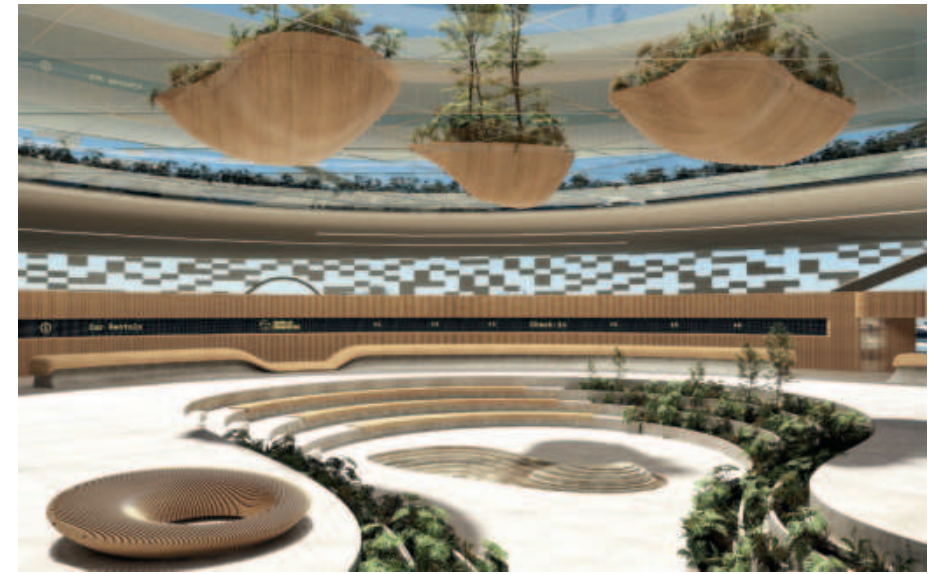
SGDs considered



while creating employment across sectors including construction, operations, logistics, hospitality, and culture. Additionally, the port's positioning as a new transportation and tourism gateway encourages long-term investment and innovation, supporting small businesses in Elefsina and surrounding communities.

The project addresses **SDG 11** by reclaiming an abandoned industrial waterfront in Elefsina and transforming it into a lively, inclusive civic space that opens access to the coastline through walkable paths, shaded areas, and public gardens that invite locals

and tourists to stay, congregate, and connect. This contributes to urban regeneration by reviving civic life in a post-industrial landscape and strengthening the relationship between the city and the sea. Additionally, accessible design, integration with existing urban infrastructure, and the creation of a new public destination that combines mobility with cultural and environmental value, making cities and human settlements more inclusive, safe, resilient, and sustainable through thoughtful waterfront regeneration that puts community benefit and public access first.



The Metropolitan Seaplane Port's landscape strategy places a strong emphasis on environmental restoration in line with **SDG 15**. This includes using native, drought-tolerant species that support biodiversity, lower maintenance requirements, and help to restore fragmented coastal ecosystems. Additionally, the use of permeable ground treatments, green roofs, and planted courtyards reduces stormwater runoff, supports urban cooling, and creates a gentle transition between the built environment and nature. This ecological approach reflects a deep respect for place and a commitment to working in harmony with the region's natural systems, which helps to preserve and regenerate life on land by integrating ecological principles into infrastructure development.



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ANTONIS TRITSIS METROPOLITAN PARK

11 SUSTAINABLE
CITIES AND
COMMUNITIES



Author(s): Pieros Pieris, Stella Pieri, Constantinos Pieris, Antonia Kolozi, Katerina Kalogridi, Alexandros Mimidis, Evi Katsikoudi

Professional Architectural

Organisation(s) of the Author(s): Pieris. Architects, Hellenic Republic Attica Region

UIA Regions: Region II

Client Name(s): Hellenic Republic Region of Attica

Location: Athens, Attiki, Greece

Geographic Coordinates (Latitude and Longitude): 38.04183° N / 23.72062° E

Project/Intervention Area: 120ha

Status: Design Phase

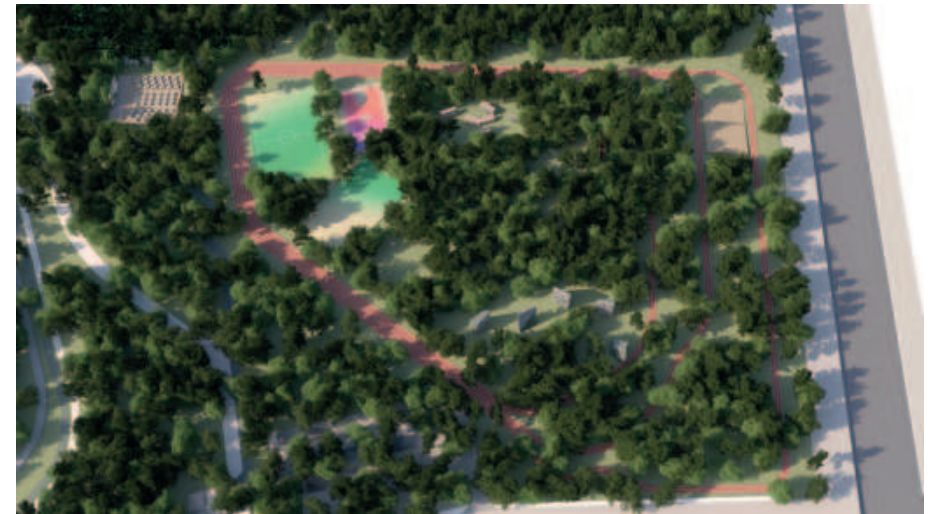
Image Author(s): Antonia Kolozi, Katerina Kalogridi, Alexandros Mimidis

Project Description: Antonis Tritsis Park is envisioned as a vibrant ecosystem where nature, community, and innovation converge in western Athens. This proposed redesign aspires to become a model of sustainability and public well-being across its 1,200 acres, inviting visitors into a dynamic environment where natural beauty and human

creativity thrive in harmony. A network of pathways meanders through lakes, wetlands, and wooded hills, encouraging exploration while welcoming cyclists, walkers, and runners. A redesigned central spine enhances accessibility, linking key entrances with thematic zones featuring climbing walls, inclusive playgrounds, and artistic installations that create opportunities for discovery and connection throughout the park.

At the heart of the transformation lies adaptive reuse of former INEDIVIM buildings as coworking hubs for digital nomads and local entrepreneurs, providing nature-connected workspaces that foster creativity and collaboration. Nearby designs include open-air cinemas and performance venues envisioned as future gathering points for cultural exchange, transforming the park into a productive landscape bridging nature with contemporary work and learning.

In the northern zone, historic structures are proposed to become botanical gardens, amphitheaters, and community



plots supporting ecological education and cultural memory beneath native trees. The southern section bursts with energy through athletic spaces including trampolines, basketball courts, football pitches, parkour trails, and climbing walls integrated into the terrain, inviting all generations to engage physically with the landscape. Sustainability is a core principle throughout the proposed design. Eco-conscious materials for pathways complement rainwater harvesting systems and renewable energy technologies discreetly embedded within the landscape.

Educational trails, edible gardens, and shaded rest areas offer both respite and learning, fostering environmental stewardship through interpretive trails, community gardens, and participatory workshops about ecology, urban farming, and climate resilience.

The masterplan envisions thematic zones catering to diverse user needs. Recreational areas support active lifestyles through multi-use sports courts, cycling paths, walking trails,

and nature play spaces. Restorative environments such as sensory gardens, shaded groves, and tranquil lakeside clearings promote mental well-being and social inclusivity, particularly for children, seniors, and individuals with limited mobility through barrier-free circulation, inclusive play areas, and universal design principles ensuring the park can be enjoyed by all community members regardless of age, ability, or background.

As per **SDG 3**, Antonis Tritsis Park prioritizes public health in its redevelopment strategy by providing large walking, cycling, and running paths, sports courts, and outdoor fitness zones that promote daily physical activity.

Additionally, parkour trails, climbing areas, and nature-based playgrounds are designed to be enjoyable and challenging while encouraging lifelong healthy habits across all age groups. Additionally, quiet zones, wetlands, and sensory gardens offer spaces for relaxation, reflection, and nature therapy that support stress reduction and mental well-being, which is especially valuable

SGDs considered



in densely populated urban settings. Additionally, community gardens and nutrition education programs further improve health outcomes by educating visitors about the advantages of eating healthily and supporting local food production through hands-on experience with growing food.

In terms of **SDG 9**, the redevelopment integrates smart, sustainable infrastructure and fosters opportunities for innovation by transforming existing structures, like the former INEDIVIM buildings, into coworking hubs for digital nomads, small businesses, and local creatives. This creates a unique environment for innovation and entrepreneurship within a public space, while infrastructure upgrades prioritize environmental and technological resilience through eco-friendly materials used in construction and paving, renewable energy solutions like solar power that lessen the park's carbon footprint, rainwater harvesting systems, and low-energy lighting.

By providing a free, high-quality public space, Antonis Tritsis Park directly contributes to the livability and resilience of the city, reducing inequality in access to nature and recreation and strengthening social cohesion through cultural infrastructure integrated as low-impact, open-air structures that blend into the landscape while offering year-round programming that minimizes environmental disruption. In response to **SDG 11**, the park is envisioned as a model for inclusive, sustainable urban development with full accessibility in mind, featuring barrier-free paths, adaptive recreational equipment, and amenities for people of all abilities.

SDG 13 is addressed through climate mitigation and adaptation, which are central to the project's ethos. The park's ecological design minimizes the effects of urban heat islands through strategic planting and tree canopies; the use of native and drought-resistant plants reduces water consumption while maintaining biodiversity;



rainwater harvesting systems with sustainable irrigation practices minimize environmental impact; visitors directly engage with climate education through interpretive signage, guided tours, and learning trails that highlight the significance of ecosystems, sustainable living, and personal accountability in the face of climate change; and the promotion of car-free access to the park via bike and pedestrian pathways, which support low-carbon urban mobility.

initiatives, which encourage active community participation in habitat protection. These activities foster a culture of care for urban biodiversity and reinforce the park's long-term ecological value through programs that help visitors gain a deeper understanding of the natural systems that sustain urban life.

With regard to **SDG 15**, the project serves as a significant reservoir of biodiversity within the Athens urban fabric. Its diverse habitats, such as wetlands, grasslands, and woodlands, support native flora and fauna through restoration efforts aimed at protecting and expanding these ecosystems. Special attention is given to ecological zoning, which preserves sensitive areas and permits the natural regeneration of plant and animal life. Additionally, environmental stewardship is incorporated into the park's programming through volunteer-led conservation days, school-led biodiversity projects, and citizen science





12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Goal 12 ensures sustainable consumption and production patterns — key for current and future generations. If the global population reaches 9.8 billion by 2050, almost three planets' worth of resources will be needed to sustain current lifestyles. As of 2024, 530 sustainable consumption and production policies were submitted across 71 countries — a 6% increase from 2023. Global fossil fuel subsidies fell by 34.5% in 2023 (from \$1.68 trillion in 2022 to \$1.10 trillion), but remain nearly three times 2020 levels. Sustainability reporting has nearly tripled in a few years, showing greater business commitment. Food waste remains staggering: 931 million tons are wasted annually, despite widespread hunger. Tackling food loss requires data-driven policies, investments in technology, infrastructure, education, and monitoring.

- By 2030, e-waste generation is projected to increase to 82 billion kilograms, up from 62 billion kilograms in 2022.
- The material footprint per capita in high-income countries is 10 times the level of low-income countries.
- The world is seriously off track to halve per capita food waste and losses by 2030, with 1 billion meals of edible food wasted every day.
- Global crises triggered a resurgence in fossil fuel subsidies, which remain nearly three times 2020 levels and well above historical averages.
- Recent trends in corporate sustainability reports show a slight decline in setting SDG-based targets, including for sustainable consumption and monitoring sustainable tourism.
- Responsible consumption and production must be integral to pandemic recovery and SDG acceleration plans. Policies are crucial to support sustainable practices and decouple economic growth from resource use.

Source: The Sustainable Development Goals Report 2025

SDG 12 TARGETS

12.1 Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries.

12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

12.A Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production.

12.B Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products.

12.C Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities.

For more information: <https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>

P25 RUPGAON KNOWLEDGE EXCHANGE CENTER

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Author(s): Fatiha Polin
Professional Architectural Organisation(s) of the Author(s): Perceive
UIA Regions: Region IV
Client Name(s): Aminul Islam
Location: Jangir, Rupganj, Narayanganj, Bangladesh
Geographic Coordinates (Latitude and Longitude): 23.8161° N / 90.5374° E
Project/Intervention Area: 930m²
Status: Completed
Completion date: January 13, 2022
Image Author(s): Perceive

Project Description: The Rupgaon project embodies a research-driven architectural methodology, beginning with an in-depth systematic study upon commission that thoroughly investigated the site and its surrounding context and community, analyzing various structures from traditional mud and bamboo homes to hybrid bamboo-mud constructions and buildings with locally sourced precast columns, with each element evaluated based on material availability, sourcing distance, and local

artisans' expertise alongside critical environmental considerations such as reusability, ecological impact, and the consequences of resource extraction. The site, situated nine feet below road level, required careful deliberation regarding land-filling, with the potential environmental repercussions such as increased carbon emissions and displaced earth rigorously assessed while placing strong emphasis on preserving local microorganisms, vegetation, and trees throughout the decision-making process.

Material choices prioritized sustainability, flood resistance, and cost efficiency, with natural materials elevated to prevent ground moisture damage and each component pre-processed to determine its optimal structural role, while the project's complexity demanded collaboration among artisans, local communities, and management teams to address key challenges such as constructing a two-story bamboo-mud hybrid structure with sufficient strength to support a suspended earthen double



floor, achieved by slightly raising the plinth to mitigate environmental risks and protect against erosion, water damage, and natural disasters.

The site's elongated north-south orientation, measuring one hundred ninety-two feet in length, ninety-five feet in width, and nine feet in depth, accommodated a one hundred eighty-five foot by twenty-two foot double-storied structure with an upper level including an administrative office, seven multipurpose classrooms with four convertible to accommodations, and a dual-purpose library and meditation space, while the lower floor features a display center, a seminar hall or multipurpose hall, a dining nook with outdoor cooking area, and caretaker or service staff quarters, with universal accessibility prioritized through a front ramp connecting both levels and future expansions such as a secondary ramp or staircase on the west corridor designed for integration without structural compromise.

To preserve authenticity, the project avoided iron nails and pins, instead relying on skilled artisans to bind the bamboo-mud framework with locally sourced recycled plastic ropes, reducing plastic waste while maintaining structural integrity, while the reinforced bamboo-mud flooring not only ensures sustainability but also offers superior thermal insulation, enhancing indoor comfort through traditional craftsmanship and eco-conscious techniques that honor local building wisdom.

In connection with SDG 3, Rupgaon considerably lowers the temperature compared to any other comparable brick or concrete structure. It is warmer in the winter and at least six to eight degrees colder in the sweltering summer thanks to the bamboo jali screen, which allows the center to breathe through self-ventilation inspired by the human body's natural system for regulating temperature. These bamboo fences are also stronger, more natural, less expensive, and more environmentally

SGDs considered





friendly than traditional bricks. The large openings inviting light and fresh air also help to reduce electricity consumption, whereas modern buildings require lighting devices and air conditioning throughout the year, thus significantly increasing electricity load, while all the bamboo used here is naturally treated for longer lifespan but ensuring chemical-free healthy living, with the floor made of mud-straw mix bringing back age-old traditional flooring to reduce the use of cement as additive and create healthier indoor environments for occupants.

With respect to SDG 12, the Rupgaon project is more than just an architectural endeavor; it is a way of life. The owner grows rice, fruits, vegetables, and other herbal ingredients on the property to guarantee a healthy future for future generations, and anyone who wants to learn about ecological living and building eco-friendly structures can visit and take

in this stunning bamboo-mud building that blends in with the surrounding environment. All the food consumed in Rupgaon is produced locally, all the materials used to build are sourced locally and consulted with local artisans, thus ensuring skills are transformed to the next generation of architects, builders, and people interested in building such environment-friendly adobe for their own homes, creating a living laboratory for sustainable consumption and production patterns that demonstrate circular economy principles through local sourcing, traditional knowledge transfer, and integrated agricultural production.

Bangladesh, the world's seventh most climate-vulnerable country with the third highest temperature, necessitates urgent consideration of what type of architecture should be practiced, as the desire for a Paka Bari or brick

permanent house has resulted in over 7,000 conventional brick kilns generating 17% of the country's total carbon dioxide emissions while contributing significantly to poor air quality in response to SDG 13. Traditional structures using local materials and techniques were much more comfortable as they were the true reflection of the climate and culture of this land, therefore a holistic approach is needed to tackle all these challenges by building a structure suitable for rain or shine, flood or drought, a hybrid structure that is contemporary but incorporates all the ecological wisdom to combat climate change and its impacts.

Rupgaon is one such innovative infrastructure that trains people in sustainable building materials like adobe blocks, wattle-daub, and cobe as

alternatives to brick, the firing of which contributes twenty percent of harmful black carbon emissions, with such approach not only reducing emissions and cutting construction costs by up to seventy percent but also creating disaster-resilient, eco-friendly homes, and replicating this model can provide affordable, comfortable, and sustainable housing for those affected by floods and cyclones across climate-vulnerable regions, demonstrating urgent climate action through built form that mitigates emissions while adapting to inevitable climate impacts through traditional wisdom applied to contemporary challenges.

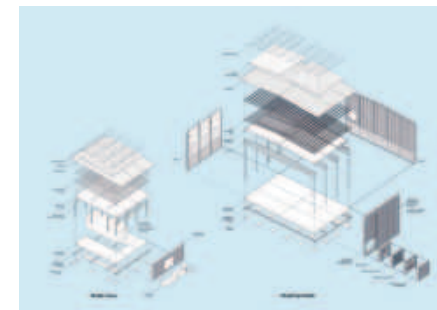


but also making sure those facilities convey dignity and respect for all users regardless of the provisional nature of their context.

By using low-impact materials and reusable modules, **SDG 12** is achieved. These sports halls are made to be disassembled and relocated in a circular fashion, allowing for up to 30 years of use across multiple locations without material waste or demolition. This is an example of sustainable consumption and production patterns through built form, which views buildings as material banks rather than single-use items, extending lifecycle value while reducing environmental impact. As the buildings avoid new emissions-heavy construction through prefabrication, renewable timber, and reduced transportation needs, SDG

13 is advanced. The low-carbon profile is completed with passive climate strategies and Minergie-A-ECO energy standards, demonstrating urgent climate action through design decisions that minimize transportation impacts, operational emissions, and embodied carbon while maintaining high performance standards.

The project demonstrates how effective, accountable, and inclusive institutions can respond to citizen needs with dignity and care regardless of resource constraints, strengthens institutional trust through quality design even under temporary conditions, and builds social cohesion through dependable delivery of public goods—all of which are in line with **SDG 16** as public educational infrastructure.



P153 OXYGEN

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Author(s): Stella Pieri, Pieros Pieris, Constantinos Pieris, Romina Routsi, Aggeliki Xronopoulou, Lydia Sklavou, Maria Antonogiannaki, Marilena Maragkaki, Polykarpos Kotsidis
Professional Architectural Organisation(s) of the Author(s): Pieris. Architects, Georgios Vroxidis, Temek SA, Agropolis, Ecoveritas, Sustain
UIA Regions: Region II
Client Name(s): Patmou S.A.
Location: Athens, Attiki, Greece
Geographic Coordinates (Latitude and Longitude): 38.0305° N / 23.7762° E
Project/Intervention Area: 5.700m²
Status: Completed
Completion date: 2023
Image Author(s): Romina Routsi, Aggeliki Xronopoulou, Lydia Sklavou, Maria Antonogiannaki, Marilena Maragkaki, Polykarpos Kotsidis // Gavriil Papadiotis

Project Description: Oxygen is a pioneering residential development in Marousi, Athens, completed in 2023 as Greece's first BREEAM-certified residential project. Spanning 5,700

square meters, it features twenty-seven residences inspired by water, earth, and sky through wave-like building volumes that optimize green spaces, while Y-shaped columns evoke tree structures reinforcing its biophilic ethos. The design prioritizes sustainability through environmentally conscious materials, advanced water and waste management systems, and energy-efficient technologies. Every unit maximizes natural light and ventilation with private balconies or terraces, fostering connection to nature. Communal spaces include a sheltered outdoor gym and vertical gardens promoting physical well-being and social connection, catering to post-pandemic demand for flexible living that balances privacy, comfort, and community.

Perched above Athens' Olympic Stadium, Oxygen's undulating forms create a dynamic profile while carving out green spaces and delineating private and communal zones. Residences feature flexible layouts accommodating remote work and multi-functional needs.



Sustainability integrates life-cycle thinking to reduce embodied carbon and optimize resource use through prefabricated components, smart water systems, and advanced lighting technologies. Oxygen represents a holistic approach where architecture responds to the needs of people, nature, and the planet.

In accordance with **SDG 3**, Oxygen fosters a lifestyle that supports mental clarity, physical health, and a sense of community by providing a healthy living environment that prioritizes natural light and ventilation in each unit to ensure optimal air quality and connection to nature. Spacious outdoor areas, including private terraces and communal green spaces, encourage outdoor activities and social interaction, and the year-round sheltered outdoor gym offers an opportunity for physical exercise amid lush greenery. As for **SDG 9**, Oxygen is a prime example of innovative sustainable architecture, incorporating state-of-the-art technologies like energy-efficient systems, sophisticated water

management systems, and renewable energy sources to minimize the building's environmental impact. Its structural and mechanical systems showcase the application of contemporary engineering techniques that optimize resource efficiency and resilience, demonstrating how infrastructure innovation can support sustainable urban living and establishing a standard for residential developments in the future.

While avoiding urban sprawl by making the most of an existing urban area and lowering the demand for new land use, the development exemplifies sustainable urban living principles by revitalizing an urban site with an emphasis on energy efficiency, green spaces, and adaptable design. Green spaces give residents access to nature, encourage community interaction, and provide a high quality of life through a balance between private living and shared public spaces, offering a sustainable approach to urban housing in an increasingly dense city environment. This is in response to **SDG 11**.

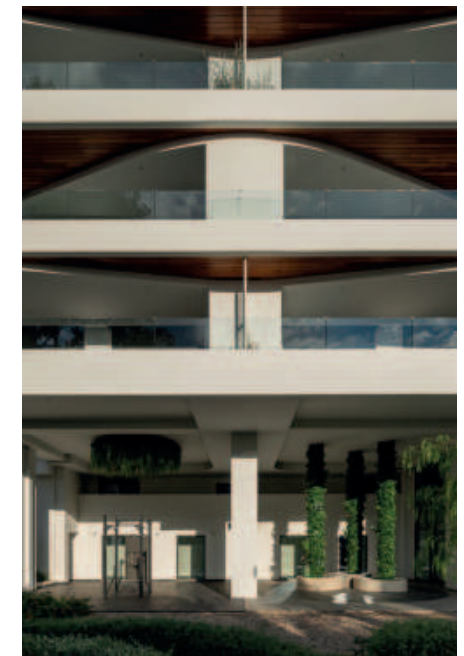
SGDs considered



With a lifecycle approach to construction and material use, Oxygen addresses **SDG 12** by reducing waste and environmental impact, prioritizing locally sourced, sustainable materials that contribute to a low carbon footprint, and incorporating smart water conservation and waste management systems into the design to reduce resource consumption. The landscape design's use of vertical gardens and drought-tolerant plants also reduces water usage, demonstrating how urban projects can maximize sustainability and functionality while minimizing ecological footprint.

The building incorporates solar panels and high-performance insulation to reduce overall energy consumption and greenhouse gas emissions, while passive design strategies like optimizing natural light and ventilation minimize reliance on artificial heating and cooling to further lower energy demand. Additionally, the project mitigates the urban heat island effect through green roofs,

landscaped areas, and vertical gardens that cool the surrounding environment and improve air quality, contributing to a sustainable urban future. Oxygen's active contribution to climate action through energy-efficient design and use of renewable energy sources advances **SDG 13**. By integrating native and drought-tolerant plant species that reduce the need for excessive water consumption while promoting local flora and fauna, Oxygen's landscape design prioritizes biodiversity and the integration of nature into urban life in line with **SDG 15**. Additionally, vertical gardens, green walls, and communal garden spaces provide habitat for birds and insects to support biodiversity even in urban settings, while these green spaces also improve air quality, reduce noise pollution, and create a more pleasant microclimate for residents, fostering a closer connection to the natural world and supporting sustainable land use practices through the careful incorporation of ecological principles into residential design.



P155 “OLIVIA ETERNA” URBAN HOTEL

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Author(s): Constantinos Pieris, Stella Pieri, Pieros Pieris, Margarita Varla, Ilektra Kefalloniti e Romina Ruci

Professional Architectural

Organisation(s) of the Author(s): Pieris. Architects, Lontos & Associates, IT KV Consulting Engineers e NeaPolis Lighting

UIA Regions: Region II

Client Name(s): Novard Estate Management Ltd.

Location: Omonoia, Athens, Greece

Geographic Coordinates (Latitude and Longitude): 37.9762° N / 23.7306° E

Project/Intervention Area: 1.300 m²

Status: Under Construction

Completion date:

Image Author(s): Margarita Varla, Ilektra Kefalloniti, Romina Ruci // Loom Design

Project Description:

Olivia Eterna is a boutique eco-conscious hotel under construction in Omonia, Athens, reimagining a former office building through adaptive reuse. Rather than demolishing, the project preserves the existing structure, reducing waste and retaining embodied

carbon while improving energy performance and visual character. It responds to tourism challenges without contributing to gentrification or loss of local identity. The design draws inspiration from the sacred olive tree, symbolizing protection and wisdom. A reimagined façade features timber and custom-cut metal panels with olive leaf motifs. Inside, earthy tones, organic textures, and locally sourced materials bring the Attican landscape into the building, creating a grounded guest experience.

Olivia Eterna partners with local artisans, retailers, and producers to create an authentic Athenian experience that supports the surrounding economy, contrasting with chain hotels that extract value without giving back. Sustainability is embedded through improved insulation, high-efficiency systems, natural light, ventilation, and materials selected for low environmental impact and circular potential.



Guest well-being is prioritized through biophilic design fostering calm and connection with nature. NeaPolis Lighting designed a scheme supporting circadian rhythms, enhancing sleep and comfort while reducing energy consumption. Smart systems automate lighting and climate control efficiently. The hotel's limited rooms allow intimate attention and quiet luxury. Energy-efficient HVAC, smart lighting, water-saving fixtures, and responsible waste management align with circular economy principles. Furnishings are repurposed or locally crafted, and amenities are chosen for ecological footprint.

Unlike short-term rentals that strain housing supply, Olivia Eterna operates within a formal framework, preserving housing for locals and supporting regulated tourism growth. It integrates into Omonia's social context by sourcing from neighborhood artisans and

vendors, encouraging cultural exchange and deeper tourism. As Athens redefines its urban core, Olivia Eterna offers a model for hospitality rooted in context, inclusive by design, and grounded in ecological responsibility, proving that hotels can regenerate rather than deplete their neighborhoods.

According to **SDG 3**, Olivia Eterna promotes well-being through both experiential and spatial design. Biophilic interiors with lots of natural light, greenery, and earthy materials create a peaceful atmosphere that improves mental and emotional well-being. Quiet, comfortable guest rooms are designed with healthy sleep and relaxation in mind, supported by NeaPolis Lighting's circadian-friendly lighting. The absence of synthetic finishes and ventilation systems prioritize indoor air quality, which lowers the presence of volatile organic compounds.

SGDs considered



This encourages slower, meaningful experiences and a strong connection to nature, which helps to promote a culture of restorative travel that supports both individual wellness and community vitality.

In terms of **SDG 8**, rather than functioning as a closed hospitality system, Olivia Eterna is deeply rooted in its local context through active partnerships with local businesses, support for local artisans, and prioritization of local hiring and sourcing. This contributes to the resilient growth of the small business ecosystem in Omonia, an area that has historically faced economic challenges. Additionally, the hotel's human-scale operation encourages ethical labor practices and fair wages and promotes sustainable tourism that respects both place and people, which helps diversify and revitalize the urban economy in opposition to extractive global tourism models.

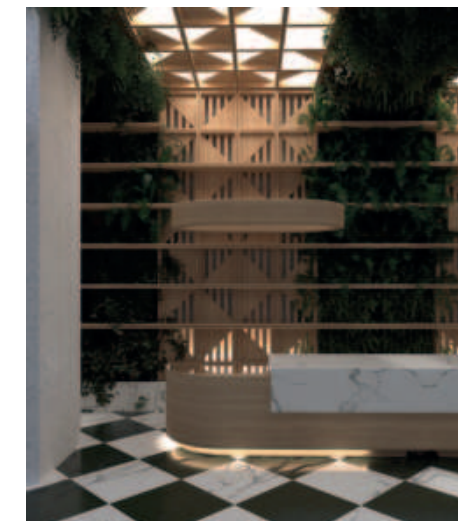
With the integration of smart building systems, low-energy HVAC, and responsive lighting, Olivia Eterna demonstrates innovative approaches to urban sustainability and demonstrates innovation through adaptive reuse in response to **SDG 9**. The use of laser-cut wood panels for passive shading reflects a thoughtful fusion of traditional symbolism and technical function, representing a forward-looking infrastructure strategy for dense aging cities through small-scale, efficient, and adaptable interventions.

In contrast to unregulated short-term rentals, which frequently drive up housing costs, Olivia Eterna is designed to coexist with the neighborhood rather than displace it through modest scale, cultural integration, and regulatory compliance, supporting inclusive and sustainable urban development through an equitable model of tourism in city centers.

As a result, **SDG 11** is addressed as the project makes a significant contribution to the urban regeneration of Omonia, one of Athens' most complex and transitional districts.



Olivia Eterna adheres to the principles of resource efficiency and low environmental impact from construction to operation in alignment with **SDG 12**. The renovation uses locally sourced and reused materials, low-waste construction techniques, and long-lasting, timeless finishes. In daily operations, the hotel avoids single-use plastics, uses biodegradable amenities, and practices waste separation and reduction. Guest education plays a role by sharing information about local sourcing, water and energy conservation, and waste practices to encourage responsible behavior among travelers and encourage a shift toward conscious consumption in hospitality where guests are not just passive users but active participants in sustainability through their choices and engagement with the hotel's environmental ethos.





13 CLIMATE ACTION

Every continent is impacted by climate change, caused primarily by burning fossil fuels. Rising emissions are intensifying extreme weather events and sea levels. Currently, the planet is about 1.2°C warmer than in the late 1800s. To meet the Paris Agreement goal of limiting warming to 1.5°C, emissions must be cut by nearly half by 2030 (compared to 2019 levels). The World Meteorological Organization confirmed 2024 as the hottest year on record, at approximately 1.55°C above pre-industrial levels. There is an 80% chance that at least one of the next five years will surpass 2024 as the hottest on record.

- According to UNEP's Emissions Gap Report 2024, global GHG emissions hit a record high of 57.1 gigatons of CO₂ equivalent in 2023, up 1.3% from 2022 (above the 0.8% annual average from 2010–2019).
- Current climate action plans are wholly insufficient. Increasingly frequent and intense extreme weather events are already impacting every region, with rising temperatures escalating risks.
- The IPCC emphasizes that deep, rapid, and sustained GHG reductions are essential in all sectors, starting now and continuing through this decade.
- To limit global warming to 1.5°C, emissions must already be decreasing and need to be cut by almost half by 2030.
- Urgent, transformative action is crucial: raising ambition, covering entire economies, moving towards climate-resilient development, and outlining a clear path to net-zero emissions. Time is running out.

Source: The Sustainable Development Goals Report 2025

SDG 13 TARGETS

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

13.A Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible.

13.B Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.

For more information: <https://www.un.org/sustainabledevelopment/climate-change/>

P104 INFRAESTRUTURA SUSTENTÁVEL E REGENERAÇÃO PAISAGÍSTICA DA ÁRVORE DO AMOR

13 CLIMATE ACTION



Author(s): Thiago Frizon, Fernanda Rabelo, Thiago Brito, Artur Souto, Hélika Limeira, Laura Nomizo e Heloisa Farache

Professional Architectural

Organisation(s) of the Author(s):

Quintau Arquitetura Paisagística

UIA Regions: Region III

Client Name(s): Prefeitura Municipal de Maxaranguape

Location: Maxaranguape / Rio Grande do Norte / Brasil

Project/Intervention Area: 5000 m²

Status: Design Phase

Completion date: July 14, 2025

Image Author(s): Quintau Arquitetura Paisagística

Project Description: The Quintau Landscape Architecture project for the Árvore do Amor, or Tree of Love, in Maxaranguape, Rio Grande do Norte, encompasses five thousand square meters of sustainable infrastructure and landscape regeneration focused on valuing the natural and tourist heritage while articulating environmental conservation, social inclusion, and community development, addressing

existing degradation through accessible paths, educational signage, low-impact structures, and native vegetation regeneration of dunes and restingas with species such as guajiru and mandacaru-da-praia. The project includes permeable parking, viewpoints, an elevated walkway, the Árvore do Amor core with interactive elements, and a restored kiosk, with lighting following ecological guidelines using eighteen hundred to twenty-two hundred Kelvin color temperature, full cut-off fixtures, sensors, and nighttime shutdown to minimize impact on fauna and comply with CONAMA regulations, all aligned with Sustainable Development Goals 11, 13, and 15 while aiming to be a benchmark in coastal green infrastructure through innovative nature-based solutions that promote local ecological balance and community well-being.

In accordance with **SDG 1**, the project promotes local economic development and community-based tourism, creating opportunities and revenue for the people of Maxaranguape through



the development of a destination that draws tourists while guaranteeing that economic benefits go to local communities rather than outside interests, and reducing poverty through the creation of sustainable livelihoods. At regards to **SDG 3**, the project enhances local environmental quality by restoring degraded landscapes and providing areas for outdoor recreation, relaxation, and social interaction that support both physical and mental health outcomes. It also promotes well-being and health by facilitating contact with nature and creating accessible social spaces.

SDG 4 is accomplished by promoting environmental education through educational totems, interactive equipment, and informative signage that encourage learning about local flora, fauna, and ecosystems. This turns the site into an outdoor classroom where guests of all ages can gain knowledge that supports long-term conservation values while also developing an appreciation and understanding of the distinctive coastal environment.

With permeable parking that encourages rainwater infiltration, lowering runoff and promoting groundwater recharge, the project ensures sustainable water management in response to **SDG 6**. It also provides sanitation facilities through accessible restrooms integrated into the renovated kiosk, meeting both water management and sanitation needs in a coordinated way.

SDG 7 is furthered by the use of low color temperature lighting, sensors, and nighttime shutdown procedures that encourage sustainable and effective energy use in this vulnerable coastal region, minimize disturbance to nocturnal fauna, reduce light pollution, and show how ecological sensitivity can influence technical infrastructure choices. **SDG 8** is aided by the promotion of responsible and community-based tourism, which fosters local economic growth and creates jobs in tourism, maintenance, hospitality, and related services while making sure that tourism development stays in line with environmental constraints and community values.

SDGs considered



The project uses regional materials to build resilient, low-impact infrastructure such as walkways, viewpoints, and permeable parking, promoting sustainable construction innovation through designs that reduce environmental footprint while increasing durability and adaptability to coastal conditions. In, according to **SDG 9**.

Promoting social inclusion through accessible paths and social spaces designed for all users, regardless of physical ability, lowering barriers and inequalities in access to natural heritage, and ensuring that everyone can experience and benefit from the restored landscape addresses **SDG 10**.

As the project promotes coastal resilience in an area susceptible to climate impacts and establishes a model for how development can improve rather than worsen environmental quality, it directly advances **SDG 11** by supporting sustainable human settlements through low-impact infrastructure, accessibility, and natural heritage valuation. By utilizing local resources and low-impact environmental solutions that reduce waste and ecosystem pressure, **SDG 12** is supported. This shows how building and continuing operations can be in line with the principles of the circular economy.



In relation to **SDG 13**, the project increases coastal resilience to climate impacts like sea level rise and increased storm intensity through nature-based solutions that work with ecological processes. It does this by regenerating native vegetation, which sequesters carbon while offering protection against erosion and marine intrusion. By preserving and rehabilitating restinga and dune habitats, which act as barriers between land and water, reducing coastal degradation, and guarding against marine incursion while preserving the ecological integrity of the coastal zone, **SDG 14** is addressed through contributions to marine conservation.

The protection and restoration of terrestrial ecosystems with native restinga vegetation regeneration, which fights soil erosion, degradation, and biodiversity loss, restores ecological function to degraded coastal

landscapes, provides habitat for native species, and shows how landscape architecture can support ecosystem recovery, directly advances **SDG 15**. In keeping with **SDG 16**, the project encourages social inclusion and community-based tourism, giving the locals a voice and access to sustainable development through programming and design that prioritizes community needs and creates areas where a variety of users can engage with and profit from the restored landscape.



P113 DEEP FLOW

13 CLIMATE ACTION



Author(s): Sümeyye Özelçi
Professional Architectural Organisation(s) of the Author(s): Freelance Architect
UIA Regions: Region II
Client Name(s): Sümeyye Özelçi
Location: Gölbaşı, Ankara, Turkey
Geographic Coordinates (Latitude and Longitude): 39.803520 / 32.708365
Project/Intervention Area: 9.100m²
Status: Design Phase
Completion date: July 26, 2025
Image Author(s): Sümeyye Özelçi

Project Description: This proposal reimagines social housing in Ankara's İncek-Gölbaşı region through a climate-resilient and community-oriented design, emphasizing passive systems, permaculture-based green roofs, and shared spaces to support local food production, water reuse, and bioclimatic comfort. Modular layouts and nature-integrated strategies foster social ties and low-impact living while aligning with multiple Sustainable Development Goals. The project was further developed through the guidance and technical

expertise of Bilal Gökgün, Certified Passive House Designer, and Sustainable Architect/ Circular Regenerative Designer Özgül Öztürk.

Their contributions strengthened the project's passive performance strategies, material circularity approach, and long-term environmental resilience framework.

Green roofs and shared gardens promote local food production, raise awareness about food sustainability, and reduce dependence on external food systems. Through permaculture principles, building surfaces are transformed into productive landscapes, enabling residents to directly engage in food cultivation while reinforcing ecological cycles within the housing community.

SDG 2 is supported by the project's shared gardens and green roofs, which encourage local food production, increase awareness of food sustainability, and lessen reliance on



outside food sources through integrated agricultural systems that supply fresh produce, teach locals about ecological food cycles, and foster community food sovereignty. In order to achieve **SDG 3**, the design incorporates natural ventilation, green spaces, and community farming to enhance residents' physical and mental well-being through access to wholesome food, social interaction, and cleaner air. This creates environments that promote holistic well-being through community involvement in productive landscapes and a connection to nature.

In order to support inclusive lifelong learning for residents of all ages and promote sustainability and community knowledge exchange through programs that develop skills in permaculture, crafts, and ecological living while fortifying social ties through collaborative education, **SDG 4** is addressed through the inclusion of shared learning spaces and workshops. Rainwater harvesting and greywater reuse systems are

incorporated into the design in response to Goal 6, guaranteeing effective and sustainable water use for sanitation and gardening through closed-loop systems that lessen pressure on municipal water supplies while enhancing resilience to water scarcity.

The integration of passive cooling through ground-fridge shafts, optimized building orientation, and shading elements to reduce energy demand advances **SDG 7**. Solar panels on rooftops provide clean energy for shared functions and lighting, and passive design strategies that work with rather than against local climate conditions ensure energy resilience and affordability. **SDG 8** is aided by the project's promotion of the circular economy and local production through urban farming and craft-based recycling programs, which creates jobs locally, develops community skills, and lessens reliance on outside economic institutions.

SGDs considered



The project uses on-site soil and rammed earth and compressed brick techniques to reduce construction emissions. In accordance with **SDG 9**. Modular construction allows for flexibility and future adaptation, and low-tech, locally sourced solutions ensure inclusive, resilient infrastructure that residents can maintain using easily accessible materials and skills. In order to achieve **SDG 10**, inclusive design principles guarantee accessibility for all users, especially those from marginalized groups. They also promote social cohesion and equitable opportunity in shared spaces by creating barrier-free environments that welcome a varied user base and encourage interaction across social barriers. By encouraging mixed-use, shared resources, and collective living models that support sustainable, inclusive urban development through design that prioritizes community interaction, resource sharing, and environmental responsibility as foundations for social housing, this resilient urban community

directly advances **SDG 11**. By employing recycled materials, canned goods, and locally produced food that encourages sustainable consumption habits and waste reduction, **SDG 12** is supported. This illustrates how housing may integrate circular economy ideas through material selection and operational systems.

SDG 13 is met by the project's use of passive cooling, ground-fridge air shaft cooling, green roofs, and biodiversity-supporting landscape techniques to minimize operational emissions and increase climate resilience through ecological integration and passive comfort. Native and permaculture-based planting techniques support local ecosystems, increase biodiversity, and improve soil quality within the housing site in accordance with **SDG 15**. This turns residential landscapes into ecological corridors that connect residents to the natural systems that support urban life and serve as habitat for native species.



P133 URUAPAN 2033 PLANEANDO EL FUTURO

13 CLIMATE ACTION



Author(s): Joanna Margarita Moreno Manzo, José Manuel Cervantes Molina, José Juan Chora Sandoval, Mario Alberto Figueroa Pérez e Roberto Flores Chávez

Professional Architectural

Organisation(s) of the Author(s):

Instituto Municipal de Planeación de Uruapan Michoacán

UIA Regions: Region III

Client Name(s): Instituto Municipal de Planeación de Uruapan Michoacán

Location: Uruapan, Michoacán, México

Geographic Coordinates (Latitude and Longitude): 19°25'6.29"N / 102° 3'2.23"O

Project/Intervention Area: 954,17km²

Status: Completed

Completion date: April 6, 2021

Image Author(s): Instituto Municipal de Planeación de Uruapan Michoacán

Project Description: The Municipal Institute of Planning of Uruapan, Michoacán, presents Plan Uruapan 2033: Planning the Future, a pioneering strategic initiative for the city's urban and social development. Forged with a long-term vision extending to the

quincentenary of the city's Hispanic foundation, it is distinguished by its comprehensive and participatory approach. This is the result of an unprecedented collaboration with citizens to address contemporary challenges through four transformative pillars: Human-Social, Economic, Administrative, and Environmental-Territorial. Each component is aligned with the Sustainable Development Goals of the 2030 Agenda, demonstrating a commitment to a globally responsible future.

Plan Uruapan 2033's Human and Social Transformation pillar addresses poverty elimination in line with **SDG 1** by enhancing access to health, education, and basic services. In the meantime, its economic pillar boosts the local economy and generates good jobs. Additionally, it guarantees administrative openness, encourages equitable territorial development that breaks poverty cycles through coordinated and participative initiatives, and encourages the inclusion of disadvantaged groups.



In relation to **SDG 2**, the Plan promotes sustainable agriculture and agricultural development for farmers in order to alleviate hunger and food security. In order to promote food security and nutrition for the entire municipality's population, it aims to boost the avocado value chain as a local economic driver, increase incomes, assure the supply of nutritious food, and enhance climate resilience.

In order to achieve **SDG 3**, the Plan prioritizes the restoration of rivers and forest areas to ensure a clean environment while also enhancing health and sanitation facilities. Through the link between environmental quality and human health, it concurrently aims to lessen inequities and promote healthy public spaces that have a favorable impact on the population's overall

well-being. Prioritizing investments in educational infrastructure and technology access, promoting the inclusion of vulnerable groups in school, and supporting ongoing education and the development of work skills all help to advance **SDG 4**. This acknowledges education as the cornerstone of sustainable development and guarantees high-quality learning opportunities for everyone throughout life.

By incorporating a cross-cutting administrative pillar that supports equality and inclusion, the Plan advances **SDG 5**. By ensuring their involvement in development, eradicating prejudice, and advancing fair access to social, economic, and educational opportunities that support their complete development, it aims to

SDGs considered



empower women and girls. In reference to **SDG 6**, the Plan prioritizes the restoration and cleanliness of rivers and ravines, effectively managing water, and ensuring that everyone has access to sanitation services. This is accomplished by enhancing the municipality's infrastructure and water quality, acknowledging water as a vital resource for growth and existence.

Promoting the growth of sustainable energy and fair access to contemporary energy services helps achieve **SDG 7**. As a basis for social and economic advancement, it aims to enhance infrastructure and energy

efficiency to ensure that all residents of the municipality have access to inexpensive and dependable energy. By creating full and productive employment, encouraging decent work, and diversifying the economy, the Plan supports inclusive and sustained economic growth in line with **SDG 8**. In order to guarantee prosperity and well-being for everyone in Uruapan through local economic development, emphasis is placed on bolstering value chains like the avocado industry.

In order to achieve **SDG 9**, resilient infrastructure and sustainable urban growth are encouraged, along with

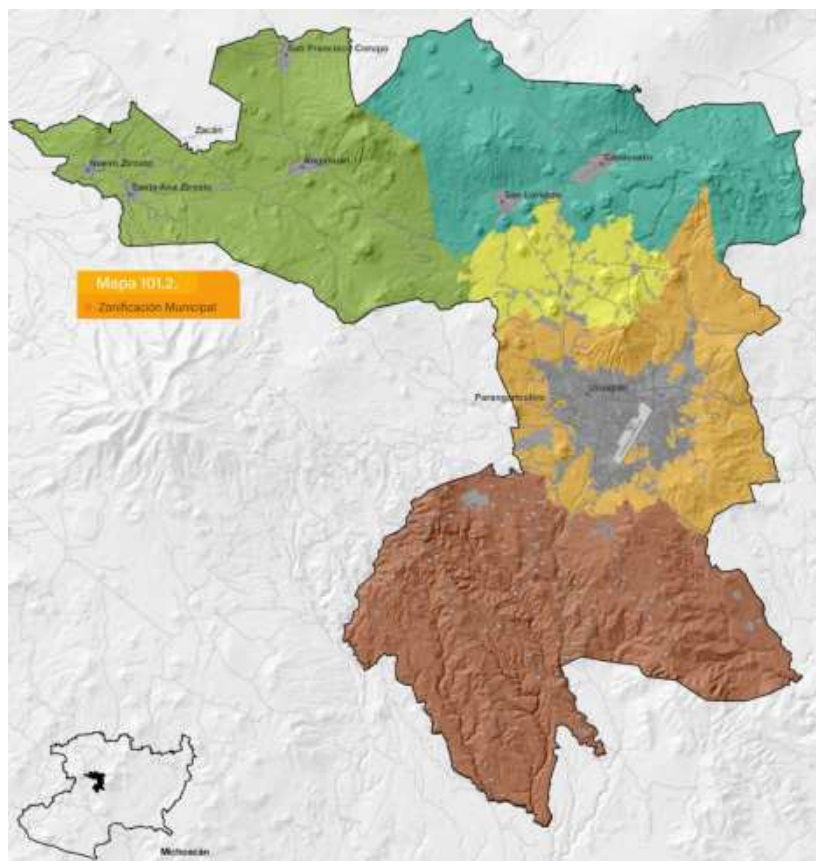
inclusive industrialization, innovation, and economic diversification. This increases the municipality's ability to produce goods and fosters an atmosphere that is conducive to technical advancement, which benefits everyone. With regard to **SDG 10**, the Plan places a high priority on the participation of disadvantaged groups, including women and indigenous peoples, in an effort to lessen inequalities in access to social and economic opportunities as well as services. This is accomplished through equitable planning that uses focused interventions to foster a more equitable and less unequal society within the municipality.

The Plan's primary objective, which aims to build inclusive, secure, resilient, and sustainable cities, is **SDG 11**. In order to provide livable and equitable settings for all residents of the municipality, this is encouraged through sustainable urban development, enhanced infrastructure and risk management, the restoration of public spaces, and environmental cleanliness. In accordance with **SDG 12**, the Plan encourages resource efficiency and waste reduction, as well as sustainable agriculture techniques like responsible avocado management. Through sustainable value chains, this promotes ethical manufacturing and consumption practices that reduce the municipality's environmental effect.

By incorporating climate action management as a key pillar of the Plan, **SDG 13** is addressed. In order to prevent climate change, it places a high priority on protecting biodiversity and restoring forests. It also strengthens the municipality's resistance to extreme events and lowers vulnerabilities through planned adaptation.

In relation to **SDG 15**, the Plan places a high priority on the monitoring, conservation, and restoration of forest areas and biodiversity, using sustainable land use management to fight deforestation and land degradation.

Uruapan's important terrestrial ecosystems, such as its priceless woods that offer vital environmental services, are to be preserved. Plan Uruapan 2033 promotes a contemporary, competent, and accountable administration that places a high priority on social inclusion and public participation in order to create a peaceful society, in line with **SDG 16**. Through efficient municipal institutions, it aims to improve open government and access to justice.



P152 URBAN FOREST RESIDENCE

13 CLIMATE
ACTION



Author(s): Constantinos Pieris, Stella Pieri, Pieros Pieris, Nadia Lazaridou, Lydia Sklavou, Evi Katsikoudi

Professional Architectural

Organisation(s) of the Author(s):

Pieris.Architects, Eirini I. Michail, IT KV Consulting Engineers, Ecoscapes Landscape Architecture, NeaPolis Lighting, Vector

UIA Regions: Region II

Client Name(s): Private Client

Location: Kefalari, Kifissia, Greece

Geographic Coordinates (Latitude and

Longitude): 38.0748° N / 23.8125° E

Project/Intervention Area: 350m²

Status: Under Construction

Image Author(s): Nadia Lazaridou, Lydia Sklavou, Evi Katsikoudi / Polikarpos Kotsidis

Project Description: The Urban Forest Residence in Kefalari, Athens, redefines modern living by forging an intimate bond between architecture and nature. Designed as a sanctuary from urban life, it celebrates tranquility, sustainability, and emotional well-being while enhancing its forested environment. Existing

mature trees were preserved during construction, while native Mediterranean species like lavender, rosemary, and olive trees were introduced to strengthen biodiversity and create sensory connection to the land. Landscape design by Ecoscapes blends seamlessly with architecture, inviting nature into daily life.

Drawing from Scandinavian hygge principles, the design focuses on comfort and mindfulness. Light wood dominates interiors, complemented by natural fabrics and soft lighting by NeaPolis Lighting, creating a warm, calming atmosphere.

Floor-to-ceiling windows and sliding doors dissolve boundaries between inside and out, allowing the pool, patio, and garden to become natural extensions of living spaces. The house features a high-performance envelope and efficient mechanical systems by IT KV Consulting Engineers, ensuring thermal comfort with minimal energy use. Solar panels, natural ventilation,



and water-efficient landscaping minimize ecological footprint. Structure engineered by Eirini I. Michail optimizes insulation and structural integrity.

The project demonstrates how low-density residential architecture can contribute to urban sustainability by maintaining a small footprint and prioritizing green space. Locally sourced materials, durable finishes, and low-waste construction methods reflect environmental responsibility. The home's compact yet generous design minimizes embodied energy while operational systems ensure long-term efficiency and resilience. The Urban Forest Residence stands as a testament to how architecture can foster joy and serenity while responding responsibly to environmental challenges.

In alignment with **SDG 3**, the Urban Forest Residence is purposefully designed to support mental and physical wellness through spatial, material, and atmospheric strategies that draw from Scandinavian principles

of hygge to emphasize comfort, calm, and emotional balance. Natural light, biophilic views, low-toxicity materials, and ventilation systems ensure a healthy indoor environment, while floor-to-ceiling windows and direct access to gardens and the pool area create a daily connection to nature that has been scientifically linked to reduced stress and elevated mood. In terms of **SDG 9**, the project's high-performance building envelope, effective mechanical systems, and use of renewable energy technology show how to enhance resilient infrastructure and innovation.

By revitalizing a residential plot through tree preservation and avoiding overdevelopment while adding to the overall green fabric of the Kefalari neighborhood, the Urban Forest offers a compelling model for sustainable suburban living in response to **SDG 11**.

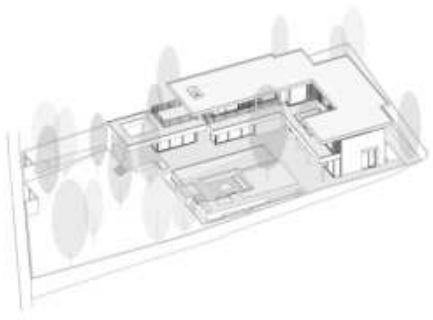
The project's respect for local character and landscape-integrated design challenges conventional suburban sprawl to suggest an alternative

SGDs considered



where built and natural environments coexist, supporting the creation of inclusive, resilient, and human-scaled communities rather than isolated residential enclaves. **SDG 13** is addressed as climate responsiveness is ingrained in the project's DNA through a low-carbon construction strategy, passive solar design, and renewable energy generation; solar panels provide electricity, the building is oriented to maximize winter sun while minimizing summer heat gain, and durable materials are chosen.

In accordance with **SDG 15**, the Urban Forest Residence takes seriously its role as steward of the local ecosystem by maintaining mature trees and enhancing the landscape with native and aromatic plants that draw pollinators and support biodiversity. Hardscape areas are minimized in favor of permeable surfaces and living soil, while protecting and enhancing natural habitat contributes to healthy local ecologies, fights the effects of urban heat islands, and acts as a micro-refuge for flora and fauna. This serves as a reminder that even private residences can support biodiversity and enhance urban ecosystems by carefully integrating architecture and landscape in a way that respects the natural world.





14 LIFE BELOW WATER

Goal 14 aims to conserve and sustainably use oceans, seas, and marine resources—essential for human existence. The ocean covers three-quarters of the Earth's surface, contains 97% of its water, and represents 99% of its living space by volume. It provides food, medicines, buffers storms, and acts as the planet's largest carbon sink. Marine pollution is reaching extreme levels: over 17 million metric tons clogged the ocean in 2021, a figure set to double or triple by 2040, with plastic being the most harmful type. Only 8.4% of the ocean is designated as marine protected areas—far below the 2030 target of 30%—and just 46% of marine key biodiversity areas are under formal protection. Ocean acidification has made the ocean about 30% more acidic than in pre-industrial times (average pH 8.1), threatening marine life, food webs, and food security. Current conservation efforts are insufficient; needed actions include more ocean science funding, intensified protection, and urgent climate action.

- As of May 2024, 8.4% of the ocean is protected through 18,200 marine protected areas and 199 other area-based conservation measures (more than tenfold increase since 2000).
- The Kunming-Montreal Global Biodiversity Framework commits to protecting 30% of oceans by 2030.
- The ocean is in a state of emergency: increasing eutrophication, acidification, ocean warming, plastic pollution, and overfishing (depleting over one third of global fish stocks).
- Despite some progress (expanding MPAs, combating illegal fishing, banning fishing subsidies, supporting small-scale fishers), action is not advancing at the speed or scale required to meet Goal 14.
- Swift, coordinated global action is imperative: increase funding for ocean science, intensify conservation, advance nature-based solutions, address human-induced pressures, and turn the tide on climate change.

Source: The Sustainable Development Goals Report 2025

SDG 14 TARGETS

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.

14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.

14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.

14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing

and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.

14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism.

14.A Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.

14.B Provide access for small-scale artisanal fishers to marine resources and markets.

14.C Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want.

For more information: <https://www.un.org/sustainabledevelopment/oceans/>

P2 PARQUE BIOCULTURAL DE LOS CERROS ORIENTALES DE BOGOTÁ



Author(s): Estúdio Lava (Brasil): Julia Reis, Lucas Bueno, Aline Gaspar, Daniela Gerbasi/ Ensamble de Arquitectura Integral (Colômbia): Juan Pablo Pardo, David Moreno, Simón Fique, Wendy Mendoza e Juliana Sáenz

Professional Architectural

Organisation(s) of the Author(s):

Estúdio Lava + Ensamble de Arquitectura Integral

UIA Regions: Region III

Client Name(s): Secretaría de Ambiente, Secretaría de Planeación de Bogotá

Location: Bogotá, Cundinamarca, Colombia

Geographic Coordinates (Latitude and

Longitude): 4°43'49.3"N 74°01'14.5"W

Project/Intervention Area: 390.000m²

Status: Design Phase

Completion date: December 9, 2022

Image Author(s): Estúdio Lava

(Brasil): Julia Reis, Lucas Bueno, Aline Gaspar, Daniela Gerbasi/ Ensamble de Arquitectura Integral (Colômbia): Juan Pablo Pardo, David Moreno, Simón Fique, Wendy Mendoza e Juliana Sáenz

Project Description: The Cerros Orientales Biocultural Park is a nature-based metabolic infrastructure that activates the edge of the city of Bogotá with a character that is simultaneously environmental, productive, and sociocultural, creating a landscape of articulation that expands the network of relationships between rural and urban areas while increasing the city's resilience to climate change challenges through a program that proposes to convert degraded spaces and environments into environmental, cultural, food production, and memory scenarios for the hills, integrating agroecological and agroforestry systems that combine food production strategies with environmental recovery of degraded sectors and the creation of networks and public spaces that transform pathways into educational experiences for all who traverse them.

SDG 2 is aligned with the productive axis, which includes the food system in the context of the metropolitan area. By articulating the city's biological and



social values, bolstering rural culture, and bringing the urban population closer to food production through direct engagement with agricultural processes and landscapes that reconnect city dwellers with the sources of their sustenance, the productive axis helps to consolidate an agroecological agenda for the city. In relation to **SDG 3**, the Plazas facilitate community gatherings across the park by connecting various programs that are defined by their areas and purposes. These programs are configured based on local context to promote low-impact intervention that offers the possibility of activating relationships founded on collective perception and shared experience, creating spaces where social interaction supports mental and physical well-being through connection with others.

The Aulas, which are small-scale spaces that relate the educational and social aspects of the landscape to the vocations defined within the park, addresses **SDG 4**. They serve as multifunctional and transitory spaces that encourage small gatherings for the transmission of knowledge among the park's diverse agents, from farmers and ecologists to students and visitors, fostering lifelong learning through informal exchange and direct experience with ecological and Management of water resources while improving habitat quality and lowering erosion and sedimentation downstream. In order to achieve **SDG 6**, the project proposes to restore watercourses and bank vegetation using species appropriate for soil stabilization. This will ensure sustainable management of water resources, improve habitat quality, and lessen erosion and sedimentation downstream. The project also addresses

restoration of water bodies through specific actions for the water system that drains the Cerros toward the city's plateau.

SDG 11 is advanced because the park functions as a cross-sectional ecological corridor connecting the hills and the city, improving community connection routes and pointing toward the transformation that the Mariposa neighborhood will undergo with the implementation of the aerial cableway, expanding the transformations promoted by the park throughout the territory to make cities and human settlements more inclusive, safe, resilient, and sustainable through integrated green infrastructure. The park serves as infrastructure that strengthens the rural relationships typical of the urban-rural frontier, demonstrates sustainable consumption and production patterns through local food systems and circular economies, and links with the food systems of the metropolitan area while acknowledging the experiences of community peri-urban gardens, all of which support **SDG 12**.



The environmental axis contributes to urgent climate action through ecosystem restoration that improves carbon sequestration, water regulation, and biodiversity while building resilience to climate impacts. In line with **SDG 13**, the environmental axis recovers and conserves the natural system through strategies to improve riparian vegetation and recover water via phytoremediation processes, restore native flora by gradually eliminating exotic species, and recover soils degraded by anthropogenic processes using species that stabilize the soil. **SDG 14** is addressed by floodable squares, which serve as blue infrastructure that permits regulated water flow drained to streams via filter gardens. This creates water features that manage water in a variety of ways while improving recreational, educational, and environmental infrastructure opportunities, supporting aquatic ecosystem conservation and sustainable use of water resources.



The restoration of the Cerros Orientales' native flora through the planting of native species in place of previously introduced exotic species directly advances **SDG 15**. This conversion recovers the ecosystem's environmental values as well as cultural values that influence perceptions of the local landscape identity, protecting and restoring terrestrial ecosystems while stopping the loss of biodiversity through intentional ecological management. In order to strengthen the park's transformative nature and create peaceful, inclusive societies through participatory governance of shared ecological and cultural resources, the Park connects to landscape agents through collective equipment, promoting institutional

and social management processes in a co-management framework based on social agreements, situated in the most vulnerable territories with the least equipment. This is in line with **SDG 16**.

P15 MASTERPLAN FOR SUSTAINABLE ECONOMIC DEVELOPMENT SOLUTIONS IN UMM AL QUWAIN MPA



Author(s): Pedro Lira, Manoela Machado (Team Leaders), Julia Ximenes (Project Leader), Pedro Norberto, Cauê Marins, Luan Neske, Jean Fortes (Team) and Luciana Sagi (Tourism Specialist).

Professional Architectural

Organisation(s) of the Author(s):

Natureza Urbana

UIA Regions: Region III

Client Name(s): Emirates Nature / WWF

Location: Umm Al Quwain, United Arab Emirates

Geographic Coordinates (Latitude and Longitude): 25°31'57.8"N / 55°34'58.1"E

Project/Intervention Area:

152.000.000m²

Status: Design Phase

Completion date: July 2024

Image Author(s): Natureza Urbana

Project Description: Natureza Urbana was responsible for developing a strategic plan for the regulation of ecotourism in one of the country's last remaining preserved Marine Protected Areas, with the plan aiming to structure ecotourism activities in the lagoon in a sustainable way that prioritizes the connection between visitors and the natural environment, achieved through successive phases including territorial diagnosis and analysis, future visioning, use programming, carrying capacity studies, and benchmarking, all culminating in the development of a detailed Masterplan intended to enhance the visitor experience and create a long-term legacy of environmental preservation through thoughtful management of human interaction with sensitive ecosystems.

The proposal supports orderly and resilient tourism that respects the territory and contributes to more sustainable communities by ensuring that development does not compromise ecological integrity while providing



meaningful access to natural heritage for present and future generations. This is in line with **SDG 11**. The project encourages sustainable occupation in a sensitive natural area through low-impact infrastructure, the use of local materials, and the organization of visitation flows. In terms of **SDGI 12**, the project minimizes environmental impacts by encouraging resource efficiency, water reuse, and sustainable energy and sanitation solutions that show how tourism infrastructure can operate within ecological limits while supporting visitor needs through circular systems that reduce waste. The use of local materials, off-grid systems, and low-consumption techniques reinforces a commitment to responsible practices.

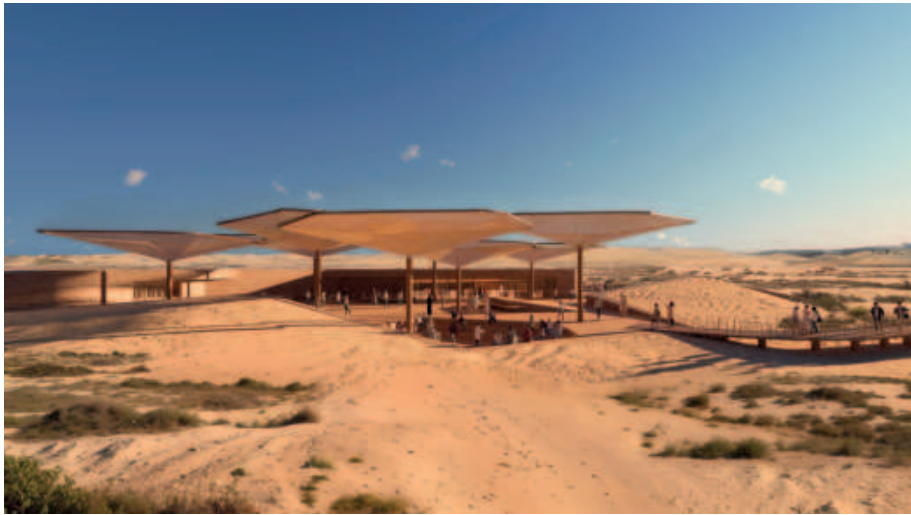
In order to achieve **SDG 13**, the plan incorporates strategies that reduce emissions, increase resilience, and support the territory in dealing with the effects of climate change through adaptive design that prepares both

infrastructure and ecosystems for changing environmental conditions. These strategies include elevating buildings to minimize soil impact, using prefabricated materials, implementing solar energy systems, incorporating green roofs, and designing for natural ventilation. Finally, the project places a high priority on the conservation of marine ecosystems through regulations that prevent dredging, manage light and noise pollution, and control habitat occupation in accordance with **SDG 14**.

These measures guarantee the sustainable use of coastal areas and contribute to the long-term preservation of marine biodiversity by shielding the delicate lagoon environment from the potentially harmful effects of unregulated tourism while permitting responsible access that promotes appreciation and stewardship of these vital marine resources.

SGDs considered





P58

1 HOTEL HAITANG BAY, SANYA

14 LIFE BELOW WATER



Author(s): Architectural Design Consultant: The Oval Partnership, Director in-charge: Dr. HAO Lin, Design Team: Peaker Chu, Ray Wong, Bill So, Giuliano Gatti, Norman Li, Rachel Guo, Ciara Lo, Krystal Tsui, Victor So, Kenny Chau, Local Collaborating Architect: Beijing Institute of Architectural Design Co, Ltd. (BIAD), Interior, Signage and Soft Furnishings Design: FARMWORK PTE. LTD, Guangzhou Jimei Design Engineering Co.,Ltd., Landscape Consultant: Coopers Hill, GVL Greenview Landscape International Design Group, Lighting Consultant, Lighting Planners Associates(s) PTE LTD(LPA), Facade Consultant: Inhabit Group, MEP Consultant: WSP (Beijing)

Professional Architectural Organisation(s) of the Author(s): The Oval Partnership Ltd., Beijing Institute of Architectural Design Co, Ltd. (BIAD), FARMWORK PTE. LTD, Guangzhou Jimei Design Engineering Co.,Ltd., Coopers Hill GVL Greenview Landscape International Design Group, Lighting Planners Associates(S) PTE LTD(LPA), Inhabit Group, WSP (Beijing), CKP

Hospitality Consultants (Shanghai), Aon-COFCO Insurance Brokers Co., Ltd. e SPA Venture Group Limited(GOCO)

UIA Regions: Region IV

Client Name(s): Sunshine Insurance Group Co. Ltd, SH Group

Location: Hainan, China

Geographic Coordinates (Latitude and Longitude): 18.40203° N / 109.74836° E

Project/Intervention Area: 60.087m²

Status: Completed

Completion date: February 24, 2022

Image Author(s): The Oval Partnership Ltd., Xia Zhi Pictures, Terrence Zhang

Project Description: 1 Hotel Haitang Bay on Hainan Island features 294 rooms, suites, and villas with views of gardens, pools, and the sea. As the world's first mission-driven, nature-inspired lifestyle hotel brand, it cultivates environmentally conscious design while encouraging eco-awareness and wellbeing. The project renovates an existing Balinese resort to create a sustainable tourism model fostering guest connection with nature. The design draws from Hainan's rugged beauty using local and reclaimed



materials while optimizing natural energy sources. An off-site farm showcases seasonal produce, reducing food-mile footprint through farm-to-table dining.

Verdant landscaped gardens with mangrove courtyards and living green walls populate the grounds. Warm timbers, weather-resistant metals, and local lava stones form a harmonious composition celebrating humble natural materials. Green roofs totaling 4,640 square meters enhance insulation through timber screening and vertical planting. Natural ventilation systems cool public spaces while deeply recessed balconies wrap around guestrooms. The hotel broadens into nature-based exploration attracting eco-conscious travellers seeking meaningful experiences aligned with their values.

In accordance with **SDG 3**, the hotel uses eco-friendly goods and sustainable materials, such as native

landscaping, low-VOC paints, and recycled materials. Recycled hardwood key cards, biodegradable laundry bags, repurposed cork coasters, drinking glasses made from recycled wine bottles, and seed cards that visitors can plant are examples of in-room sustainability features that foster a long-lasting connection to the natural world. In reference to **SDG 6**, a 125 cubic meter per day gray water harvesting system gathers and repurposes water from toilet flushing, washing, and landscape irrigation. Mangrove trees are planted along the coast to stop erosion and preserve the purity of the water. In order to reduce energy-intensive ways, a 780-square-meter solar water heating system provides hot water.

SDG 7 is addressed by passive solutions that optimize energy efficiency through daylighting, natural ventilation, green roofs, and shade vegetation. Electricity and hot water can be produced sustainably with solar energy systems. These programs put an emphasis

SGDs considered



on dependable, reasonably priced sustainable energy solutions while improving visitor comfort. Eco-tourism projects that draw ethical tourists and support Hainan's sustainable tourism growth help achieve **SDG 8**. The demand for jobs in water-saving systems, eco-friendly materials, and renewable energy is driven by green technologies. Training the local workforce in sustainable practices guarantees equitable economic growth and community benefits.

Resilient infrastructure made of locally obtained lava stones, worn steel, certified sustainable hardwood, and repurposed fishing boat wood embodies **SDG 9**. By controlling runoff and lowering heat, the Mangrove Tree Courtyard and Viewing



Farm Garden Pavilion improve resilience. The hotel is positioned as a paradigm for sustainable tourism innovation thanks to its comprehensive conference facilities and Bamford Wellness Spa. The hotel draws eco-aware tourists looking for meaningful experiences that are consistent with sustainability standards, which is in line with **SDG 11**.

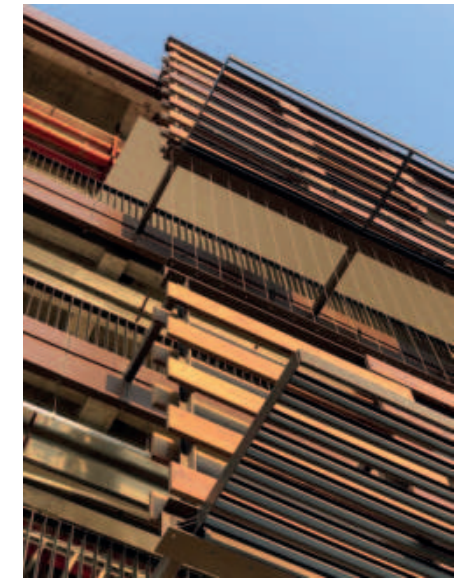
An old building is thoughtfully renovated to become a hub for sustainable tourism and a hub for community interaction. Space that supports long-term community health is created using eco-friendly systems, sustainable materials, and local cultural influences.

Eco-timber screens, lava stone gabions, and living plant walls are examples of raw materials that celebrate the imperfect beauty of nature and advance **SDG 12**. Over 75% of construction trash was recycled, all materials were found within



500 miles, and low-VOC products were employed. Through collaborations with nearby farmers and fishermen, the on-site organic farm offers fresh herbs and vegetables. Climate-responsive design that incorporates passive cooling and ventilation techniques addresses **SDG 13**. Skylights increase daylight, natural ventilation captures coastal breezes, and green roofs offer insulation. Energy efficiency is improved using certified sustainable cedar lumber panels and local lava stone. Over 13,000 square meters of vegetables are grown on the 180,000-square-meter organic farm, supporting sustainable food production.

Design that embraces Hainan's tropical vernacular along the seashore, where areas are stacked and sheltered by native flora, supports **SDG 14**. Seasonal organic products from the local farm reduces carbon emissions and



guarantees a sustainable food supply. Responsible behavior promotes the preservation of the area's maritime resources and safeguards regional marine ecosystems. The Mangrove Tree Courtyard and Living Green Walls are two lush gardens that support local ecosystems and celebrate biodiversity in accordance with **SDG 15**. The One Hundred Plus Gardens, which are situated 22 meters above sea level, incorporate lush vegetation inside the building to support sustainable management and restoration. By integrating local elements throughout the property, climate-responsive design, which includes passive cooling, guarantees that the building is in harmony with the surrounding environment while preventing biodiversity loss and fighting land degradation.

P118 BELVÈDÈRE POOL: A REVIVAL OF ARCHITECTURE IN THE HEART OF NATURE

14 LIFE
BELOW WATER



Author(s): Command and Supervision: Head Office of Military Engineering
Financing and coordination : BIAT - Client / Project Owner: Municipality of Tunis - Design Team: Maken Architects: Salma Ben Tanfous & Afef Mejri - (clearly separate the two offices , use a line break, or Leave space if possible)
Office Issam Ben Ayed, Architects.
- Project Management: Hafedh Keskes - Engineers: Rachid Nouri, Fredj Maatouk, Kais Tabka, Béchir Ben Zaied, Ahmed Adjam - Lighting Design: Amira Ghorbel - Landscape Architect: Mohamed Mrabet, SOPAT - Technical Control Office: Veritas - Contractors: Veritas 3D Topography : TOPO-PLUS - Contractors: SBF, SOTUFIS, SOGELEC, PROTECFER, KCM, SOFIB, MAS, RUSPINA, HOMYLUXE, SOPAT, TUNISIE-CAROTTAGE, POLYNET, SOLUTION SURFACE, SIGNO.
Professional Architectural Organisation(s) of the Author(s): Maken Architects: Salma Ben Tanfous & Afef Mejri - (clearly separate the two offices, use a line break, or Leave space

if possible) Office Issam Ben Ayed, Architects.

UIA Regions: Region V

Client Name(s): The Municipality of Tunis

Location: Parc du Belvédère, Place Pasteur, Tunis, Tunisia.

Geographic Coordinates (Latitude and Longitude): 36°49'19"N / 10°10'40"E

Project/Intervention Area: 8.540m²

Status: Completed

Completion date: October 21, 2024

Image Author(s): Antigone Consulting for recent photos - Abdelrahmen Ezzine for 3d image - Maken for site photos

Project Description: The Belvédère Pool, an emblematic Art Deco landmark built in 1933 in Tunis, was abandoned for decades with 95% of its structure no longer meeting safety standards. The project dismantled and reconstructed the pool while preserving its iconic silhouette through advanced 3D laser scanning and point cloud modeling. Missing decorative elements like candelabras and perimeter fencing claustras were reconstructed using



archival photographs and Glass Reinforced Concrete for enhanced durability.

Spanning 8.000 square meters with over 40% green space, the facility preserves century-old trees and introduces native species. The main pool depth was reduced from 4,48 to 2,1 meters using a box-within-a-box structural system. The iconic diving board was preserved with a transparent glass enclosure. The pool deck was repaved with Gioia white Carrara marble from the original quarry. Foundations accommodate a future roof for year-round use. Accessibility features include ramps, PRM-adapted facilities, and separated circulation paths. The venue now offers 700 seats for diverse activities.

SDG 1 is supported by the project's rehabilitation of existing infrastructure, which makes it affordable and available to people of all economic levels. In relation to **SDG 3**, the pool's hygienic, easily accessible setting promotes both physical and emotional well-being. A new kids' wading pool was added, and the depth was lowered to a safe

0,9 – 2,1 meters. Hygiene is ensured by a sophisticated eight-filter purification system. The facility can be used year-round thanks to heating. Accessibility for individuals with limited mobility is ensured with ramps, adapted showers, and sanitary spaces. Shade and greenery provide a tranquil setting for exercise, socializing, and mental rest.

By providing informal instruction on ecological design and restoration techniques, the site advances **SDG 4** by acting as a living learning environment for heritage advocates, sustainability researchers, and architecture students. **SDG 5** is supported by facility design that guarantees equal access and safety for all genders, including toilets and changing areas that are modified to comfortably and confidently accommodate a variety of users. The contemporary eight-filter filtration system, which ensures pure water, addresses **SDG 6**. To preserve cleanliness and guarantee sustainable water resource management, shower and restroom areas are divided into wet and dry zones.

SGDs considered



SDG 7 is aligned with the heated pool's year-round usability. Solar panels are already integrated above the car shelter and could be incorporated into the foundations for future roof installation, showcasing a dedication to reasonably priced, dependable, and environmentally friendly energy options. **SDG 8** is accomplished since the project restored a cultural landmark that boosts the local economy through tourism while creating jobs for local engineers, artisans, and construction teams. Completion in less than six months demonstrates operational effectiveness. The box-within-a-box structural approach, which demonstrates technical innovation where historical conservation interacts with current infrastructure, embodies

SDG 9 by guaranteeing safety without changing the original Art Deco shape. In order to ensure equal usefulness, safety, and dignity for all users, **SDG 10** is achieved by completely accessible design for individuals with decreased mobility through inclusive circulation systems, ramps, and modified restrooms and showers. Reviving a famous public area next to Tunisia's biggest park immediately advances **SDG 11**. Mature trees are preserved and native plants that improve biodiversity are introduced on more than 40% of the property.

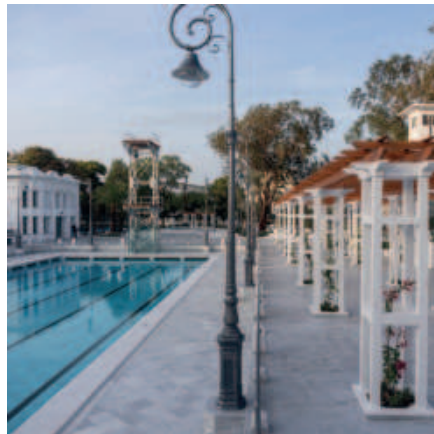
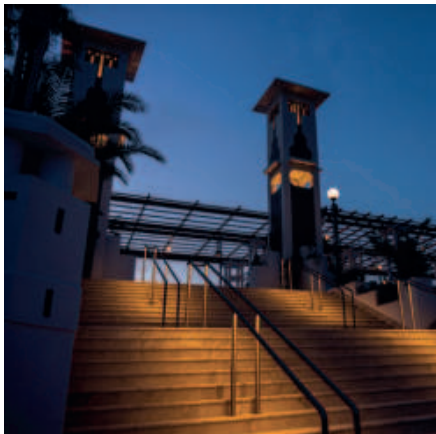
Rethinking public access included pleasant entrances and areas for both swimmers and guests. An inclusive and resilient urban environment is

supported by the cultural and ecological landmarks created by the old kiosk, wooden pergolas, and rebuilt fence. Sustainable material use helps achieve **SDG 12**. The original quarry's white Carrara marble was used for paving. In order to reduce construction waste and show responsible production and consumption, a large portion of the old structure was adaptively repurposed. Ecological landscaping using native plants and trees that promote local biodiversity and carbon capture helps achieve **SDG 13**. Heat island impacts are lessened by vegetation and shading factors.

Through integrated design, prepared roof infrastructure can assist control future energy performance and support climate action. The sophisticated filtering system helps achieve **SDG 14** by guaranteeing clean water discharge, reducing adverse effects on nearby

groundwater, and promoting water resource conservation. By maintaining century-old trees and including native species that support urban biodiversity, landscape design directly advances **SDG 15**. By creating habitat, lowering noise levels, and improving air quality, plantings help create a natural buffer that preserves and replenishes terrestrial ecosystems.

in alignment with **SDG 16**, the project reflects renewed public trust in institutions and effective governance of shared spaces. Its completion demonstrates how public architecture can symbolize civic pride, social order, and historical continuity while promoting peaceful and inclusive societies through accessible, well-maintained public infrastructure serving all community members.





15

LIFE ON LAND

Goal 15 aims to protect and restore terrestrial ecosystems, sustainably manage forests, combat desertification, halt land degradation, and stop biodiversity loss. Earth's ecosystems contribute to over half of global GDP. However, the world faces a triple crisis of climate change, pollution, and biodiversity loss. In 2020, forests covered about 4.1 billion hectares (31% of land surface). From 2000 to 2020, forest coverage shrank by about 100 million hectares. Between 2015 and 2019, the global proportion of degraded land increased from 11.3% to 15.5%, affecting 3.2 billion people. Agricultural expansion drives nearly 90% of deforestation (oil palm accounted for 7% from 2000–2018). Deforestation is slowing—from 12 million hectares per year (2010–2015) to 10 million (2015–2020)—but at this rate, halting deforestation would take another 25 years. Terrestrial ecosystems are vital for human life, contributing to over half of global GDP and encompassing diverse cultural, spiritual, and economic values.

- The world faces a triple crisis of climate change, pollution, and biodiversity loss. Escalating forest loss, land degradation, and species extinction pose severe threats.
- Despite some progress in sustainable forest management, protected areas, and natural capital accounting, most improvements have been modest.
- The Kunming-Montreal Global Biodiversity Framework provides renewed impetus for Goal 15, with four outcome-oriented goals for 2050 and 23 targets for 2030.
- Meeting the Framework's financing targets will require greater mobilization of both private and public flows.

Source: The Sustainable Development Goals Report 2025

SDG 15 TARGETS

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed.

15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products.

15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species.

15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

15.A Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.

15.B Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation.

15.C Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities.

For more information: <https://www.un.org/sustainabledevelopment/biodiversity/>

P8

ARMANDO DE HOLANDA CAVALCANTI PARK

15 LIFE
ON LAND



Author(s): Pedro Lira, Manoela Machado (Team Leaders), Camila Sanches (Project Leader), Laís Pimentel, Pedro Norberto, Pedro Borba, Robert Borba, Breno Pilot, Luan Neske, Maria Caterina di Spigna, Júlia Ximenes (Team), BRL, Geonoma, Fredrico Queiroz, Clívia Borba and Daniel Figueiredo (Partnerships).

Professional Architectural

Organisation(s) of the Author(s):

Natureza Urbana

UIA Regions: Region III

Client Name(s): Suape / UNESCO

Location: Cabo de Santo Agostinho, Pernambuco, Brazil

Geographic Coordinates (Latitude and Longitude): 8°21'01.0"S / 34°57'08.7"W

Project/Intervention Area: 2.642.400m²

Status: Design Phase

Completion date: May, 2022

Image Author(s): Natureza Urbana

Project Description: The Armando de Holanda Cavalcanti Metropolitan Park, known as PMAHC, is a key environmental and cultural asset with unique historical and geological features that mark the final rupture

point between the South American and African continents approximately one hundred two million years ago, possessing exceptional landscape and cultural value that attracts many visitors despite facing infrastructure challenges, with the masterplan focused on three pillars including Illumination to highlight natural and built assets such as religious buildings, military ruins, and geological richness, Connection to improve accessibility and foster contact with nature and water, and Tourism to add support points, food services, leisure and educational areas, mobility solutions, and a Geopark museum that together transform the visitor experience while protecting the site's significant heritage.

Through trails, internal transportation, and public facilities that value heritage and promote inclusion, mobility, and leisure in a territory of high cultural and environmental significance, the redevelopment of PMAHC, in line with **SDG 11**, transforms a degraded environmental and historical area into an accessible, safe, and well-structured



park. By investing in public space quality that serves both visitors and local communities while preserving the unique geological narrative embedded in the landscape, cities and human settlements become more inclusive, safe, resilient, and sustainable.

In order to achieve **SDG 12**, the proposal uses low-impact strategies like restoring ruins, building in existing clearings, and integrating with topography. It also introduces infrastructure that prevents erosion and encourages the thoughtful use of natural resources. Finally, it promotes sustainable tourism practices that exhibit responsible consumption and production patterns through minimal intervention approaches that work with rather than against the site's natural systems and historical fabric.

And in alignment with **SDG 15**, the project directly addresses environmental degradation processes such as gully erosion and deforestation through restoration efforts, water control systems, and the promotion of reconnection with the landscape, contributing to the protection of terrestrial ecosystems and the sustainable use of land by reversing damage, stabilizing soils, and creating conditions for native vegetation recovery while educating visitors about the ecological and geological significance of this unique place where continents once divided.

SGDs considered





P62 BIOREGIONING MEPZ

15 LIFE
ON LAND



Author(s): Cruz Dennis Sam Shaju, Nishrin S B, Sudha Thangavel, Tanushree H, Srivani Lakshmi K, Monika Valase, Nitesh Ingle

Professional Architectural Organisation(s) of the Author(s): LOCUS

UIA Regions: Region IV

Client Name(s): Alex Paul Menon, Zonal Development Commissioner, MEPZ

Location: Chennai, Tamil Nadu, India

Geographic Coordinates (Latitude and Longitude): 12.9249° N / 80.1000° E

Project/Intervention Area: 1.060.276m² (262 acres)

Status: Design Phase

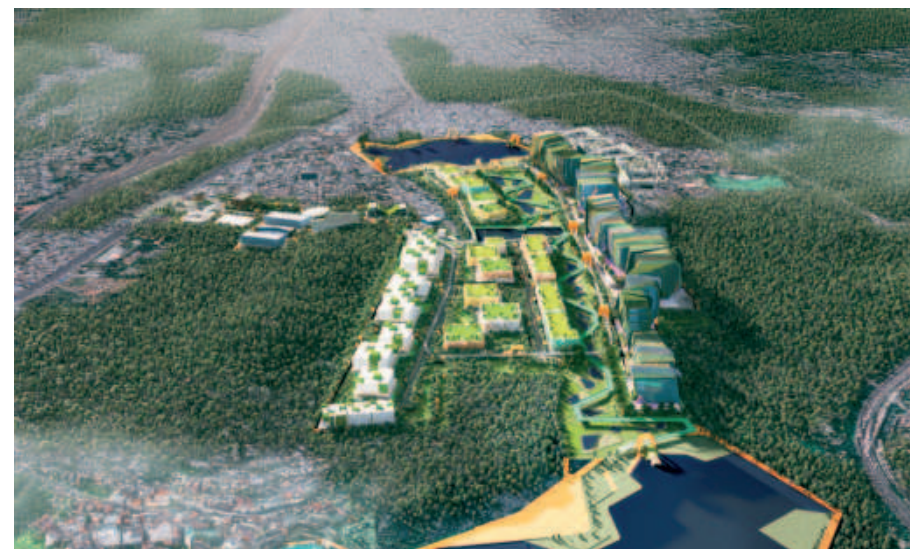
Completion date: April 22, 2027

Image Author(s): Cruz Dennis Sam Shaju, Nishrin S B, Tanushree H, Srivani Lakshmi K, Monika Valase, Nitesh Ingle

Project Description: The Madras Export Processing Zone (MEPZ) is a 262-acre industrial estate established in 1984, located between hillocks in a natural valley forming part of the Adyar river catchment. Four decades of development have caused systemic

ecological degradation, making MEPZ flood-prone with underutilized infrastructure and unsafe buildings. In 2023, the project was re-visioned as “Bioregioning MEPZ,” an ecological regeneration aimed at reversing nature-insensitive development and creating a resilient, planet-friendly business destination. Strategies include restoring natural ecosystems, repositioning infrastructure, and using green interventions to alleviate flooding.

Built environment strategies reduce footprints and realign infrastructure to the periphery. Transit-Oriented Development integrates multimodal systems supporting a net-zero journey. Ecological interventions reconnect three lakes, extending benefits to the surrounding 3.000-acre Tambaram neighborhood. These include ecoscapes, rain gardens, 9 km of bioswales, deep recharge pits, and floodable areas that manage floods while attracting migratory birds. Miyawaki forests add 150.000 trees, increasing green cover to 73%. Architecture



features breathable high-rise towers with solar veils generating 10 megawatts of energy and vertical green skins providing nature connection. The design draws inspiration from Kancheepuram sarees, aiding ventilation in the humid climate. An elevated public podium connects the blocks. Economically, Floor Area Ratio increases from 1,5 to 3,65, expanding the labor force from 30,000 to 100.000 workers. Export revenue is targeted to increase by 350% through a new trade facilitation center, administrative building, and cultural spaces including freedom plaza. Social spaces interspersed with green platforms enhance well-being, safety, and inclusivity. Multimodal transport integrates pedestrian walkways with pause points within a five-minute radius. Placemaking pockets serve as shaded cultural rooms promoting joy and well-being. The project transforms MEPZ into a resilient, nature-connected workplace that balances ecological restoration with economic growth.

In keeping with **SDG 3**, the project revitalizes the ecologically degraded industrial export processing zone with a transformative eco and employee-friendly vocabulary, replacing the concrete footprint with oxy-rich lung spaces by rewilding 150.000 native tree species and breathing structures that promote physical and mental well-being. Additionally, a network of shaded cultural spaces and public spaces connected to pedestrian paths boost happiness, creating a resilient, oxy-rich, safe, and health-focused workplace that empowers 100.000 workers. In order to achieve **SDG 6**, bioregioning opens twenty-seven point four three acres of lacustrine basin to collect runoff and allow deep percolation through a matrix of 6,54 km of bioswales, 254 recharge systems, 370 granular pits, and softscapes that turn MEPZ into a sponge campus, enhancing flood resilience, reestablishing ecology, and sustaining biodiversity through extensive water management infrastructure.

SGDs considered

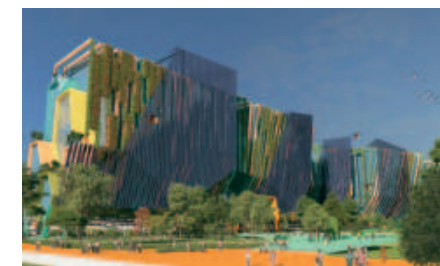


SDG 7 is met by MEPZ's integration of a solar veil that generates fourteen megawatts of clean energy from the signature facade, breathable buildings that lower heat loads, and elevated podiums with green skins that improve energy efficiency. All of these features ensure dependable sustainable power for a contemporary, environmentally conscious workplace that shows a dedication to clean, affordable energy through integrated renewable generation. Targets of 45,000 jobs, 10,000 crore rupees in export earnings, and 20 million m² of manufacturing by 2030 are used to advance **SDG 8**.

Future-ready infrastructure, industry 4.0 technologies, and dynamic workspaces that redefine an inclusive zone where opportunity is shared through design that promotes sustained inclusive economic growth and decent work are used to foster growth.

The expansion of industrial space from 7,6 to 20 million m², housing 150 flatted factories and 8,6 km of trunk lines for integrated future-ready services, equitable densification that accommodates both white-collar and blue-collar jobs to foster inclusive growth through mixed-use clusters for anchor industries and startup communities, and the construction of resilient infrastructure that supports inclusive and sustainable industrialization are all examples of **SDG 9** densification strategy reduces inequality in the area and guarantees a variety of employment options and inclusive access to the renovated campus, thereby addressing **SDG 10**.

With restored lakes, green infrastructure, and inclusive planning, Bioregioning MEPZ directly advances **SDG 11** by transforming not only its 262-acre campus but also three thousand acres



of nearby high-density neighborhoods that lack breathing space. This creates a safe, resilient, and sustainable urban ecosystem for people and nature, making cities and human settlements more inclusive, safe, resilient, and sustainable through regional ecological restoration. **SDG 12** is supported by sustainable consumption through the use of open wells and greywater recycling, while eco-sensitive planning promotes resource efficiency and bioregioning revitalizes landscapes throughout the campus and its two thousand-acre neighborhood, encouraging long-term sustainability through responsible production and consumption patterns.

The restoration of 120 million liters of lacustrine basin and bioswale network, which prevents flooding and permits percolation, and the planting of 150,000 trees, which lowers temperatures by 6° Celsius to counteract the effects of urban heat islands, are two ways that **SDG 13** is addressed. Additionally, nature-based design strengthens climate resilience throughout the campus and its 2,000-

acre impact zone, taking immediate action to combat climate change and its effects through integrated ecological infrastructure. Goal 14 is accomplished as bioregioning revitalizes dying lake ecosystems, reestablishing 192 acres of water habitat with seventeen species of aquatic life. Reconnected lakes are breathing life into native water species and migratory birds, and clean, thriving waters now anchor biodiversity, reversing decades of ecological neglect and aiding in conservation.

MEPZ demonstrates a comprehensive commitment to protecting, restoring, and promoting sustainable use of terrestrial ecosystems through integrated landscape-scale restoration that turns an industrial zone into a biodiversity haven. In line with **SDG 15**, MEPZ restores ecosystems with six-meter-wide Miyawaki rings surrounding plots and green roofs, increasing the campus green cover by 26%. Rejuvenated lacustrine basins attract migratory birds as native flora and green corridors.

P88

URBAN AND LANDSCAPE REDEVELOPMENT OF NICOLAU CESARINO AVENUE AND CONSTRUCTION OF NEW GATEWAYS - EXTREMA MUNICIPALITY

15 LIFE ON LAND



Author(s): Edwiges Leal, Danila Ferreira, Marco Antônio Nieves Cardoso e Lucas Lima Leonel Fonseca

Professional Architectural

Organisation(s) of the Author(s):

CAU/MG – Conselho de Arquitetura e Urbanismo de Minas Gerais

UIA Regions: Region III

Client Name(s): Prefeitura Municipal de Extrema

Location: Extrema, Minas Gerais, Brazil

Geographic Coordinates (Latitude and Longitude): -22.863465 / -46.342227

Project/Intervention Area: 248.000m²

Status: Design Phase

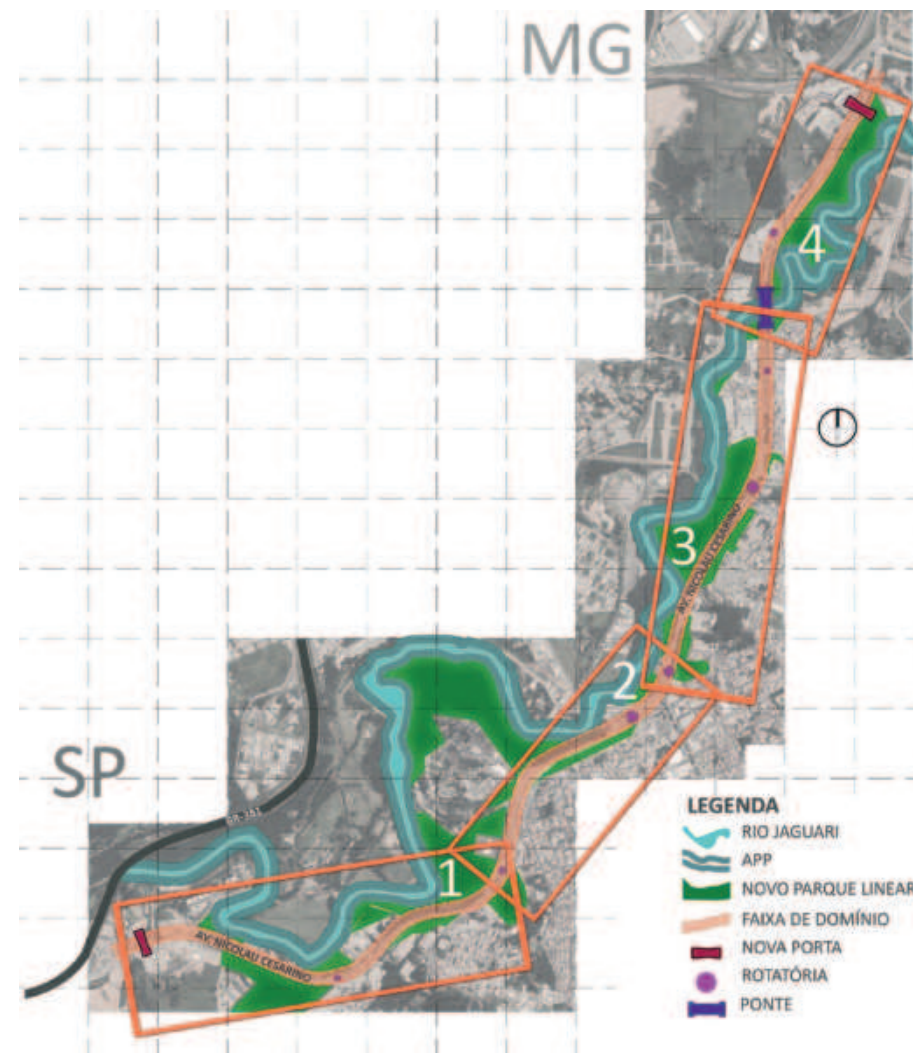
Completion date: March 25, 2023

Image Author(s): Danila Ferreira

Project Description: The project will revitalize Nicolau Cesarino Avenue, Extrema's main gateway, transforming it from a highway into an urban boulevard that prioritizes pedestrians, cyclists, and public transit through widened sidewalks, dedicated bike lanes, upgraded drainage, sustainable lighting, and native landscaping, complemented by architectural gateways reflecting

Minas Gerais' heritage, while a linear park along the Jaguary River will integrate leisure spaces, dining venues, and local commerce to enhance tourism and community life, reducing heavy industrial presence near the urban core to support small businesses and cultural activities while reinforcing local identity and advancing socio-environmental sustainability through comprehensive streetscape transformation.

In line with **SDG 3**, the initiative reduces environmental health risks and creates inclusive public spaces that improve residents' physical and mental well-being. It also provides safe, appealing environments for active transportation and recreation that support cardiovascular health, stress reduction, and social connection in community members' daily lives. These goals are achieved through green spaces, reduced industrial pollution, and walkable infrastructure. In terms of **SDG 8**, the riverfront parks and local business zones are in line with objectives to support sustainable tourism that



generates jobs, promotes local culture and goods, and establishes Extrema as a destination that honors regional identity while creating economic opportunities for small businesses and cultural producers through increased visitor engagement and community activity.

With improved drainage systems addressing flood resilience, sustainable lighting lowering energy consumption,

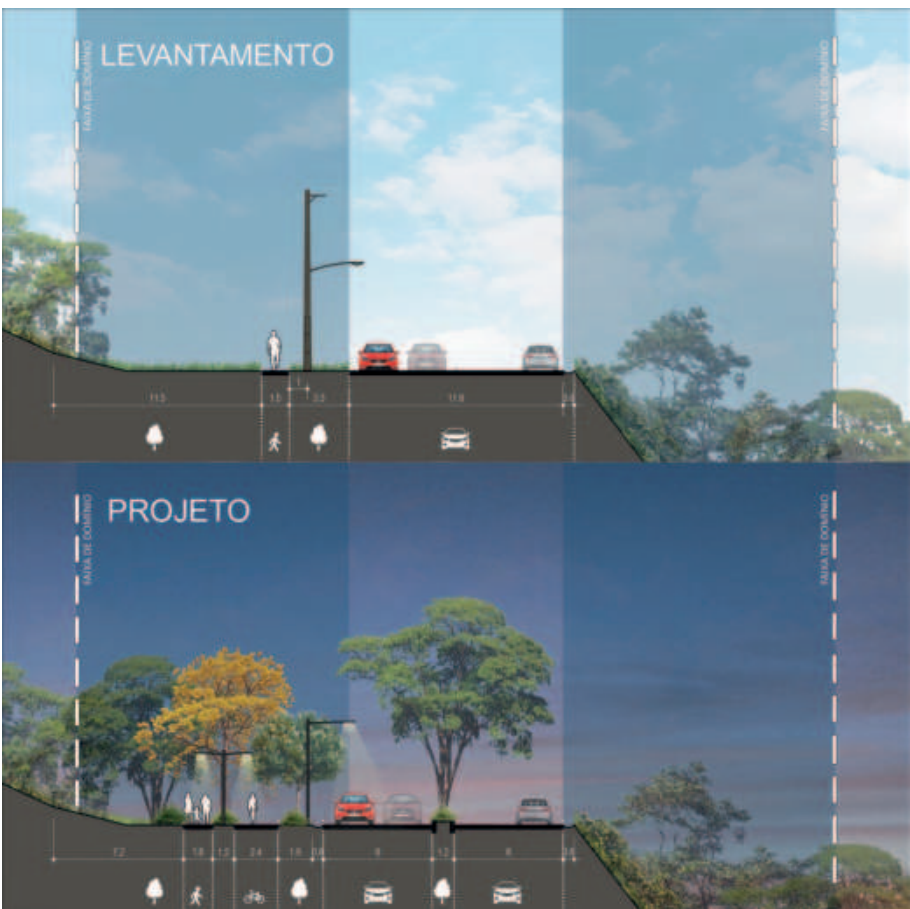
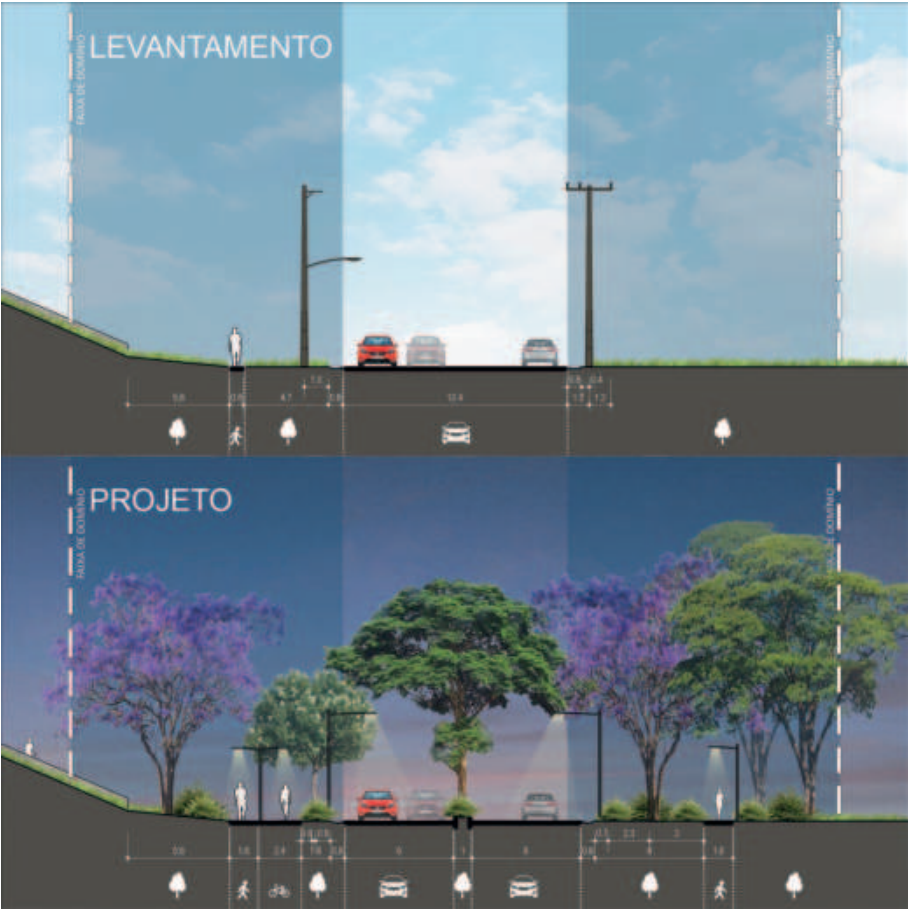
and long-lasting materials guaranteeing longevity, the updated gateway satisfies standards for dependable, climate-adaptive infrastructure that connects urban and rural areas while withstanding environmental stresses, addressing **SDG 9**. This shows how infrastructure investment can build resilience while fostering innovation in public space design.

SGDs considered



By transforming highways into pedestrian and bicycle-priority boulevards with mass transit integration, **SDG 11** is directly advanced. This addresses the mandate for affordable, sustainable transportation systems while lowering urban congestion and emissions, and it establishes a model for how cities can rebalance street space away from private vehicles toward more equitable and environmentally sound mobility options. Native landscaping and smaller industrial

footprints are in line with **SDG 15's** requirements to ensure terrestrial ecosystem conservation, which is crucial for Extrema's biodiverse Atlantic Forest region. By introducing native plant species into streetscapes and linear parks, local pollinators are supported, habitat connectivity is created, and it shows how urban infrastructure can support biodiversity protection while educating locals about their region's unique ecological heritage.



P126 HEALTH TOURISM MODULE

15 LIFE
ON LAND



Author(s): Efrain Miguel Calle Sarzuri
Professional Architectural Organisation(s) of the Author(s): Duarqui SRL
UIA Regions: Region III
Client Name(s): Patacalamachi Stone City Ecotourism Association A.E.C.P.C.P.
Location: Patacalamachi, Campero Canton, Calacoto, La Paz, Bolivia
Geographic Coordinates (Latitude and Longitude): 17°28'13.40"S / 68°56'9.53"W
Status: Completed
Completion date: January 12, 2024
Image Author(s): Efrain Miguel Calle Sarzuri

Project Description: The Health Tourism Module project, part of the Patacalamachi City of Stone Ecotourism Association in the Andean highlands of La Paz, Bolivia, protects the ecosystem, uses local materials, and safeguards the biodiversity of birds and plants while aiming to provide a comfortable, ergonomic, sustainable, and ecological environment characteristic of the site, with the driving idea based on a

modular grid utilizing pink rock stone for toilets and sinks, rustic bronze SGDs considered faucets, and pine wood doors whose properties withstand the extreme weather conditions of the Andean plateau, where winters and winds are so extreme they crack conventional concrete, requiring architecture that does not distort the natural image provided by the site while responding appropriately to sunlight and low temperatures through careful orientation and access openings. The module requires long-term maintenance, does not harm local flora and fauna, and strengthens community customs, designed to satisfy a delegation of twentyfive people per visit through artifacts that meet anthropometric standards and proper material handling, with bathrooms featuring fixtures made of local pink stone, two suspended stone sinks, rustic bronze faucets, natural pine doors, and concrete floors to seal water flow in showers and for cleaning, while orientation and opening of entrances were organized according to times of greatest use, appropriately responding



to water use during low temperatures and shielding entrances from prevailing winds.

The construction was carried out by semi-skilled workers using traditional community tools, avoiding cranes or stone assembly equipment from the city, yet remains sustainable due to low pollution, minimal waste, and use of local tools, with the project's dissemination, construction, and current operation generating no material contamination or damage to groundwater, making it self-sustaining with no short-term maintenance requirements while respecting local flora and fauna and strengthening community customs of the families in the association.

The Sanitary Tourism Module project represents the work of the Calle and Tancara families, children, grandchildren, and great-grandchildren of two brothers, Casiano and Emeterio, who managed to consolidate the association and rescue

the attractions preserved in their native lands including Chulpares, mummies, cave paintings, footprints, and stone markings, a protected moorland during the conflict with the Incas whose paths were a refuge due to the predominance of stone, where lacking agricultural development, the community chose to share its cultural and touristic wealth with the world through a communal tourism project that includes a hostel, bathroom module, water collection, trail opening, ancestral sewing rooms, and mountain camping.

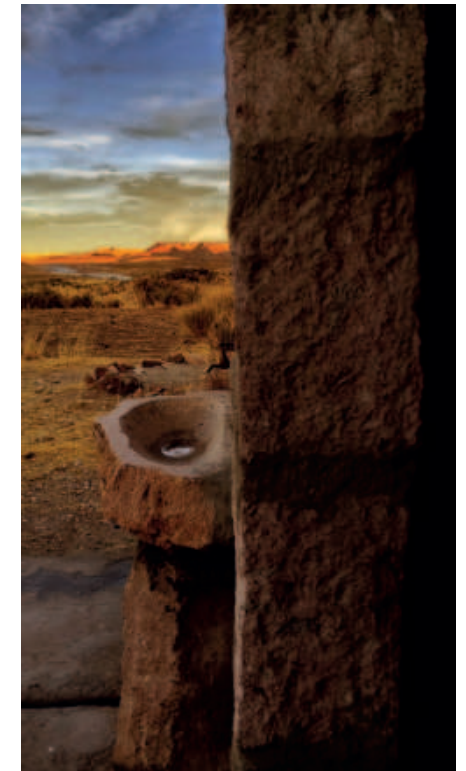
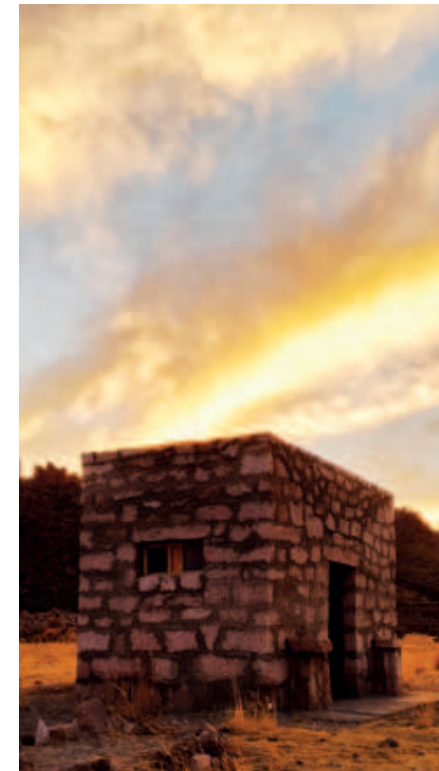
In alignment with **SDG 15**, the project protects the ecosystem through use of local materials and safeguards the biodiversity of birds and plants while providing a comfortable, ergonomic, sustainable, and ecological environment based on a modular grid using pink rock stone with stone toilets and sinks, rustic bronze faucets, and pine wood doors whose properties withstand extreme climatic conditions, with orientation

SGDs considered



and access openings responding appropriately to sunlight and low temperatures while requiring no short-term maintenance, not harming local flora and fauna, and strengthening community customs, respecting the benefits of local raw materials where pink rock is its strength and transportation is carried out by natural vertical drop, with privileged orientation to take advantage of sunlight and extreme winter climate requiring materials resistant to extreme low temperatures. Water supply is collected from a natural spring two kilometers away using only eight percent of the spring without affecting the natural cycle of rainwater accumulated on

the hill ninety-eight meters above the community settlement, while organic waste is stored in an underground well replaced every six years, allowing local birds to remain in the area and vegetation to continue sprouting near the project in the harsh climate, with this infrastructure estimated to last forty years without constant maintenance, built with community knowledge and respect for uses and customs, intended for visitors to this non-invasive community tourism area that demonstrates how architecture can protect and restore terrestrial ecosystems while promoting sustainable use of land through materials and methods rooted in place.





16

PEACE, JUSTICE AND STRONG INSTITUTIONS

Goal 16 promotes peaceful, inclusive societies, access to justice, and effective, accountable institutions. Violent conflicts are derailing progress. In 2022, conflict-related civilian deaths increased by more than 50%—the first such rise since the adoption of Agenda 2030—largely due to the war in Ukraine. In 2024, armed conflict deaths surged 40% from 2023, marking the third consecutive annual rise. About four times more children and women were killed in 2023–2024 than in the previous biennium; of these, 8 in 10 child deaths and 7 in 10 female deaths occurred in Gaza. Armed violence and insecurity undermine development, with sexual violence, crime, and torture prevalent where there is conflict or no rule of law. Solutions require strengthening the rule of law, promoting human rights, reducing illicit arms flows, combating corruption, and ensuring inclusive participation.

- The number of forcibly displaced people reached an unprecedented 123.2 million by the end of 2024. Civilian casualties in armed conflicts surged 40% in 2024.

- The global homicide rate declined from 5.9 per 100,000 (2015) to 5.2 (2023), though 2021 saw the highest number of intentional homicides in two decades.
- Detected human trafficking victims increased by 25% in 2022 compared to pre-pandemic levels (43% vs. 2020), driven by a 31% rise in child victims since 2019.
- In 2024, at least 502 killings of human rights defenders, journalists, and trade unionists were documented across 44 countries, and 123 disappearances across 37 countries (slight declines from 2023).
- Structural injustices, inequalities, and emerging human rights challenges put peaceful and inclusive societies further out of reach.
- To meet Goal 16 by 2030, action is needed to restore trust, strengthen institutions, secure justice for all, and facilitate peaceful transitions to sustainable development.

Source: The Sustainable Development Goals Report 2025

SDG 16 TARGETS

16.1 Significantly reduce all forms of violence and related death rates everywhere.

16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children.

16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all.

16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime.

16.5 Substantially reduce corruption and bribery in all their forms.

16.6 Develop effective, accountable and transparent institutions at all levels.

16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels.

16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance.

16.9 By 2030, provide legal identity for all, including birth registration.

16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.

16.A Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime.

16.B Promote and enforce non-discriminatory laws and policies for sustainable development.

For more information: <https://www.un.org/sustainabledevelopment/peace-justice/>

P5 ECOADAPT

16 PEACE, JUSTICE
AND STRONG
INSTITUTIONS



Author(s): Prof. Dr Rasha Sayed, Arch. Islam Ashraf e Arch. Zeyad Salah
Professional Architectural Organisation(s) of the Author(s): King Salman International University, RMT
UIA Regions: Region V
Client Name(s): SHAWER initiative
Location: Lake Mariout, Alexandria, Egypt
Geographic Coordinates (Latitude and Longitude): 31°10'26.89"N / 29°54'57.74"E
Project/Intervention Area: 56.217m²
Status: Design Phase
Completion date: May 1, 2025
Image Author(s): Prof. Dr Rasha Sayed, Arch. Islam Ashraf e Arch. Zeyad Salah

Project Description: The SHOWER project, initiated in partnership with Eyes in Germany, addresses pandemics, climate change, and environmental challenges through sustainable dwelling designs that ensure access to basic needs and well-being. It prioritizes agricultural spaces and living areas for each family within single dwellings. The project began as a Cairo pilot testing the SHOWER framework in a densely

populated urban environment. A second pilot near King Maryout Lake, involving local universities and government bodies, assesses community adaptation to climate change through mitigation and mitigation strategies that reduce carbon emissions.

The initiative emerged in 2020 following the COVID-19 pandemic, which revealed the fragility of urban environments. The SHOWER team questioned whether the built environment can protect people from health threats through six cognitive areas: Sustainability (SDG 11), Health and Safety (SDG 3), Architecture (SDG 9), Wellbeing (SDG 3), Environment (SDG 13), and Resilience (SDG 11). The goal is a comprehensive scientific framework integrating local and international codes to safeguard built environments against diseases. A post-pandemic architectural trend inspired by Egyptian heritage serves as a resource for construction practices in Egypt and beyond. Over nearly 24 months, this reference code was



developed through collaboration among Egypt, Germany, and Italy, focusing on climate change, sustainability, and urban resilience.

The design answers whether architecture can protect people from health threats through integrated strategies addressing multiple dimensions of sustainability and human well-being, creating homes that serve as shelter and support systems for families facing uncertain futures. The initiative aims to benefit Egypt, the Arab region, and international communities in alignment with the Sustainable Development Goals.

These homes, which directly address **SDG 1** through secure tenure and self-sufficiency, are intended to provide families in need with a genuine chance at stability through space to grow food and freedom from rent burden. They also offer dignity and independence that helps

people build a life without fear of being pushed out or left behind. In terms of **SDG 2**, every family has access to a space where they can cultivate their own food using hydroponics or soil beds, bringing food closer to home, promoting nutrition, and reducing expenses while fostering a sense of pride in what they produce and enhancing food security through household-scale agriculture incorporated into housing design.

In order to help people stay healthier both inside and outside by creating environments that support physical and mental well-being through connection to nature and healthy indoor environmental quality, **SDG 3** is addressed through homes designed with fresh air, natural light, areas for green therapy, and even space to isolate safely if needed. This recognizes that post-pandemic housing must do more than just provide shelter.

SGDs considered





As the project functions as a learning lab where local university students work on-site to study sustainability in action, **SDG 4** is advanced. This creates a space where ideas grow alongside crops and where the next generation learns how to build a better future through practical engagement with sustainable design and construction.

In order to give women more voice and value in neighborhood life through equitable access to productive spaces and community areas, **SDG 5** is supported by careful consideration of how women experience space differently.

Designs ranging from farming areas to shared courtyards support safety, economic inclusion, and comfort. **SDG 6** is achieved by water systems that collect rainwater, reuse greywater for farming, and incorporate clean sanitation infrastructure. This ensures that families have access to water when they need it most while managing this valuable resource sustainably through integrated water cycles.

SDG 7 is furthered by solar-powered and passively ventilated homes that use solar panels and passive ventilation to

reduce energy use, bills, and emissions. These modern, affordable, dependable, and sustainable energy systems enable families to spend less while the planet breathes easier. In order to promote sustained inclusive economic growth and decent employment, **SDG 8** is supported by the establishment of actual local jobs in industries like construction and farming, where skilled individuals are hired locally and structures are developed to support continued income, particularly through community farming and green space management.

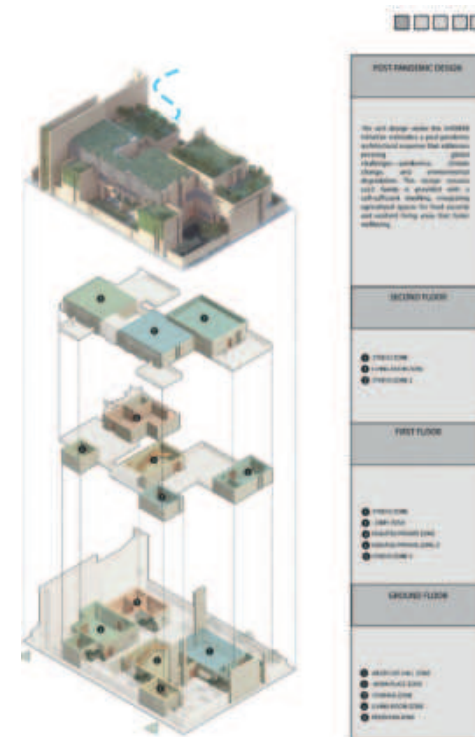
SDG 9 is represented in homes that serve as models for creating safer, greener, and healthier environments during a pandemic. These homes are made to be duplicated anywhere while translating local ideas into global action, showcasing robust infrastructure that encourages creativity via flexible design. **SDG 10** is achieved through inclusive planning, which reduces inequality by building around existing communities rather than pushing people out, respecting those who are already there, and providing everyone with equal access to clean, safe, and sustainable homes regardless of background, income, or history.

Since true sustainability begins with strong communities that make cities and human settlements inclusive, safe, resilient, and sustainable, **SDG 11** is directly advanced by creating future neighborhoods that are walkable, green, self-sufficient, and rooted in local culture—places where people stay, grow, and connect. **SDG 12** is supported by systems that are made to decrease waste and give back, such as composting garbage and reusing water.

Local materials are procured, energy requirements are kept low, and nothing is wasted unless absolutely necessary, encouraging sustainable patterns of production and consumption.

With green roofs, low-carbon materials, farming zones, and off-grid systems all helping to reduce emissions while preparing people for a changing environment, homes built to combat climate change and its effects through integrated design address **SDG 13**. By preventing runoff pollution, lowering the use of chemicals in agriculture, and promoting natural drainage to maintain the cleanliness and vitality of the surrounding lake, **SDG 14** is furthered. This also contributes to the conservation and sustainable use of marine resources.

SDG 15 is achieved by restoring the area around homes with native plants, revitalizing the soil, and adding food forests, transforming vacant space into ecosystems that feed people and the environment while preserving and rehabilitating terrestrial ecosystems and stopping the loss of biodiversity through landscape integration. In keeping with **SDG 16**, the project was not created in a vacuum; rather, it was shaped by



locals, universities, and government representatives. It demonstrates community planning done correctly through efficient, accountable, and inclusive institutions that support inclusive and peaceful societies for sustainable development.

P55 REJUVENATE ZIMKHANA SHEIKH RASEL PARK AND BABURAIL CANAL RESTORATION



Author(s): Md Ishtiaque Zahir Titas (Team Leader), Iqbal Habib, Md. Mehedi Hasan

Professional Architectural

Organisation(s) of the Author(s): Vitti Sthapati Brindo LTD

UIA Regions: Region IV

Client Name(s): Narayanganj City Corporation

Location: Dhaka, Bangladesh

Geographic Coordinates (Latitude and

Longitude): 23.6222° N / 90.5000° E

Project/Intervention Area: 133.000m²

Status: Completed

Completion date: 2023

Image Author(s): Wasik Edaaf

Project Description: Once a vital trade route for boats carrying jute and rice paddy between the Dhaleshwari and Shitalakshya rivers, Baburail Canal was deeply embedded in the daily life and economy of Narayanganj, but over time it became overwhelmed by pollution, encroachment, and neglect, turning the area into a City of Conflict and Violence, prompting an approach rooted in participatory design with local

communities, policymakers, and various user groups actively involved in the planning process through Environmental and Social Impact Assessments and biodiversity studies to ensure sustainability and inclusivity.

Through extensive community engagement and dialogue, the project successfully relocated encroachers voluntarily, avoiding forced evictions and minimizing social conflict while setting a precedent for socially responsible urban regeneration, with national-level workshops and stakeholder consultations shaping a collective vision for the canal's restoration that ensured the design reflected diverse community needs with emphasis on inclusivity, sustainability, and social justice.

The 405 meter long canal now features multifunctional public spaces accessible to all ages, genders, and abilities including floating decks, ghats, stepped edges, shaded walkways, and dedicated areas for women, children, seniors, and recreational activities, fostering social



sustainability and ensuring equitable access to public space for everyone regardless of background or ability, while integrating ecological layers using native plants like Hijol and Jarul to reinforce natural slopes, reduce erosion, promote biodiversity, and enhance passive cooling, with a wetland designed using local aquatic species like water lilies forming microhabitats that reduce erosion, revive ecosystems, and attract birds and pollinators, complemented by a bicycle lane with permeable paving and pedestrian walkways made of locally sourced gravel supporting sustainable urban mobility and groundwater recharge.

The project has transformed Baburail Canal from a neglected polluted space into a lively thriving public area serving as a cultural and recreational hub, with inclusion of the Fine Arts Institute as a cultural center highlighting

Narayanganj's rich tradition of shared cultural expression through flexible indoor and outdoor venues hosting exhibitions, performances, and seasonal festivities, making culture an accessible and dynamic part of daily life while native flowering trees blooming with seasons create visual experiences that connect visitors emotionally to nature's cycle, strengthening their sense of place and belonging. By bridging nature, culture, and justice, the project has not only restored the canal but also strengthened civic trust and community stewardship, serving as a model for urban regeneration that promotes peaceful inclusive development through a conflict-free approach, demonstrating how urban design can be a tool for sustainability, social justice, and community cohesion while setting a precedent for future regeneration projects in cities facing similar challenges.

Reconnecting the canal hydrologically to the Shitalakshya and Dhaleshwari rivers was a crucial part of its revitalization in accordance with **SDG 6**. Water control devices were positioned at both ends of the canal to maintain clean, regulated flow, while permeable pavements and slope protection systems managed water flow, prevented erosion, and promoted groundwater recharge to support the city's long-term water sustainability, ensuring sustainable management of water resources through integrated design. Regarding **SDG 11**, Baburail Canal, once a neglected space marked by conflict and violence, has been transformed into a vibrant multifunctional public area serving as a hub for all ages, genders, and social groups through regeneration of degraded urban land into accessible public space with mixed-use zones that

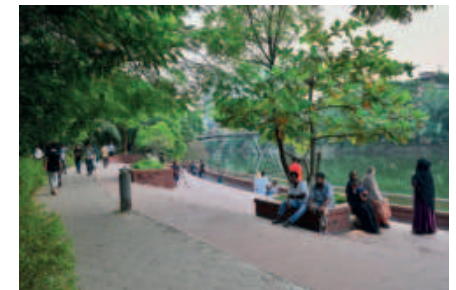
encourage interaction, active mobility, and inclusive cultural expression, integrating urban infrastructure with social infrastructure to foster a sense of community and belonging while creating pedestrian-friendly walkways, recreational areas, and cultural hubs that contribute to the social fabric of Narayanganj as a more sustainable and cohesive urban environment.

SDG 13 is addressed by design, which plays a major role in mitigating the effects of climate change through the replanting of native species in conjunction with low-carbon materials in construction supporting a climate-resilient urban ecosystem; canal excavation and widening to improve flood management and water flow addressing urban flooding issues exacerbated by climate

change; natural shading along walkways and strategic placement of greenery reduce surface temperatures, improve passive cooling, and reduce urban heat island effect at pedestrian level, ensuring outdoor thermal comfort tailored to the region's tropical and monsoon climate.

SDG 15 is furthered by the revitalization project's strong emphasis on ecological sustainability and biodiversity restoration through community involvement in reintroducing native plants along canal edges to restore local ecosystems and lessen erosion. Wetland creation using local aquatic species, such as water lilies, forms microhabitats that support the growth of various plant and animal species, enhancing biodiversity and drawing pollinators and birds to contribute to overall ecological health while incorporating nature into urban design to ensure that development is in harmony with the natural environment, promoting balanced coexistence between urban life and the land.

In accordance with **SDG 16**, the democratically elected mayor of Narayanganj showed a strong commitment to good governance by reclaiming the neglected Baburail Canal through a participatory design process that ensured community consent and facilitated voluntary relocation to avoid forced evictions. By engaging local communities, policymakers, and various stakeholders, the mayor built civic trust and fostered transparency while reclaiming public space as a right, modeling a conflict-free approach to urban regeneration that has come to represent peaceful and inclusive development and serve as a model for future urban governance projects.



P105 DANXIA MOUNTAIN INTERNATIONAL ECO- TOURISM RESORT



Author(s): Yan Chen – Lead Architect and Design Director Xiaogang Zhou – Urban Planner and Senior Technical Consultant

Professional Architectural

Organisation(s) of the Author(s): AIA

UIA Regions: Region IV

Client Name(s): Renhua County People's Government & BAONENG Group (Co-development)

Location: Renhua County, Shaoguan City, Guangdong Province, China

Geographic Coordinates (Latitude and Longitude): 25.0608° N / 113.7347° E

Project/Intervention Area: Approx. 450.000m²

Status: Completed

Completion date: December 10, 2022

Image Author(s): Yan Chen – Baoneng Group Design Division

Project Description: The Danxia Mountain International Eco-Tourism Resort, located within a UNESCO Global Geopark in southern China, redefines sustainable tourism through landscape integration, low-carbon strategies, and cultural heritage preservation,

with a master plan that embraces geomorphological continuity, avoids destructive excavation, and incorporates native materials and passive energy systems, while public access, ecological restoration, and cultural education are interwoven to make the resort a model for climate-adaptive and inclusive regional development that demonstrates how tourism infrastructure can enhance rather than diminish the natural and cultural assets of a globally significant protected area.

In accordance with **SDG 1**, the project empowers underdeveloped mountain communities through sustainable income generation connected to protected landscape stewardship, ensuring that conservation efforts directly benefit local populations through economic opportunities that provide incentive for continued environmental protection, and supports poverty alleviation through local employment in tourism, conservation, and cultural services. In terms of **SDG 2**, the project strengthens food security



and encourages sustainable rural livelihoods in line with ecological land-use planning by providing opportunities for agrotourism, local food services, and native crop cultivation. This connects agricultural traditions with tourism economies to strengthen both food systems and community resilience.

The master plan's integration of walking trails, forest therapy zones, and clean air corridors - all of which encourage active living and mental health - addresses **SDG 3**. The design promotes environmental wellness through immersion in a restorative natural setting, enabling both residents and visitors to reap the health benefits of spending time in nature that have been scientifically proven. In order to promote environmental awareness and heritage literacy among young people, tourists, and locals alike, the resort offers guided educational programs, ecological

interpretation trails, and cultural workshops. This advances **SDG 4** and turns the landscape into a classroom for lifelong learning about geology, ecology, and cultural customs.

The project's promotion of gender inclusion supports **SDG 5** by facilitating equal employment in tourism operations, crafts, and educational programming, guaranteeing fair income access and visibility for women in rural development roles that might otherwise be dominated by men, and promoting social recognition and economic empowerment. Ecological water systems, such as rain gardens and porous surfaces that restore watershed function, are used to achieve **SDG 6**. Greywater reuse and eco-wetlands improve water security while preventing pollution in this delicate red sandstone terrain, showing how tourism development can preserve rather than deteriorate water resources.

SGDs considered



In order to achieve **SDG 7**, passive energy strategies that lessen reliance on mechanical systems are used. The project incorporates solar lighting and encourages decentralized energy planning for future microgrid integration in remote mountainous areas, guaranteeing access to modern, affordable, dependable, and sustainable energy while minimizing environmental impact. **SDG 8** is achieved as the resort supports inclusive economic development by integrating rural livelihoods with cultural heritage preservation through employment that values both traditional knowledge and new skills, and by creating green jobs through community-based tourism, local crafts, and ecological education.

Infrastructure interventions that use low-impact engineering and modular construction techniques are the embodiment of **SDG 9**. Innovation lies in adapting to landform constraints while advancing ecological infrastructure and local material economies, creating resilient infrastructure that works with

rather than against the geopark's unique geological conditions. By incorporating inclusive design, fair wages, and participatory development into every stage of execution, the project ensures equitable access for all, including seniors, low-income locals, and indigenous minorities, thereby addressing **SDG 10** and reducing inequality through intentional attention to diverse user needs and economic participation.

In addition to strengthening urban-rural ties and creating resilient tourism infrastructure based on place-based values that make cities and human settlements more inclusive, safe, resilient, and sustainable through investment in rural heritage, the project directly advances **SDG 11** by revitalizing rural areas through ecologically sensitive planning, enhancing cultural identity, and ensuring inclusive access to nature. Reusing excavated earth, using locally sourced stone and wood, and managing stormwater on-site to minimize waste and lessen environmental impact are



all ways to support **SDG 12**. They also highlight material efficiency and circular principles in tourism development, which show sustainable patterns of production and consumption.

By minimizing carbon footprint through passive design, terrain-preserving site strategies, and local low-impact materials, the project addresses **SDG 13**. It also contributes to climate adaptation by reducing heat-island effects, mitigating land disturbance, and supporting resilient landscape systems that can withstand changing environmental conditions while lowering emissions. The project, which is located in a UNESCO geopark, directly advances **SDG 15** by preserving delicate landforms, reestablishing native vegetation, integrating ecological corridors, reducing soil sealing, boosting

biodiversity, and exhibiting sustainable land stewardship through architectural design that puts ecosystem health ahead of human use.

In agreement with **SDG 16**, the planning process involved a variety of stakeholders, such as the local government, rural communities, and cultural institutions. This ensured transparency, participatory governance, and long-term co-management of shared heritage assets. It also built inclusive, accountable, and effective institutions through cooperative decision-making that gives voice to everyone with an interest in the future of this distinctive landscape.

P146 AGADIR OUFELLA'S FORTRESS & PLATFORM



Professional Architectural Organisation(s) of the Author(s): Studio Salima Naji Architectes
UIA Regions: Region V
Client Name(s): SDRT Souss Massa and Region
Location: Agadir, Souss Massa, Morocco
Geographic Coordinates (Latitude and Longitude): 30.430136416606928 / -9.6245335400644
Project/Intervention Area: 9.529m²
Status: Design Phase
Completion date: January 13, 2023
Image Author(s): Studio Salima Naji

Project Description: On 29 February 1960, a 5.7 magnitude earthquake struck Agadir, killing over 15,000 people and destroying more than 90% of the fortress. Sixty years later, the Kingdom of Morocco initiated a project to restore this emblematic site as a place of memory and contemplation, following international protocols for post-disaster heritage interventions. The intervention includes a reception platform built with earthquake-resistant

techniques at the cableway arrival point, welcoming visitors to the citadel with restored ramparts and main gate. The south-western area was restored after archaeological excavations, with fortress walls reconstructed using original materials. Wooden footbridges and guard-railing replicate the alleyways of the lost city, allowing visitors to explore without treading on ground where victims rest.

The project follows a multidisciplinary scientific protocol involving archaeologists, historians, anthropologists, architects, and engineers. A participatory approach engaged survivors and memory bearers, with a committee of earthquake victims validating each stage. Preliminary studies ran from 2017 to 2019, followed by emergency excavations (2020-2021) and full-scale analyses (2019-2022).

All services are buried underground to ensure only the fortress remains visible atop the hill. The reception platform houses a cable car station,



café, information point, and belvedere restaurant across two underground levels. Visitors arrive by footpath, shuttle bus, or cable car, with historic footpaths redeveloped for all abilities.

As tribute to victims, the construction system avoids concrete, instead updating vernacular earthquake-resistant methods from the Atlas region. Walls combine treated wood and 80cm dry stone on reinforced concrete foundations, erected horizontally in alternating layers without mortar. Wooden braces hold outer and inner walls together, absorbing shearing forces during earthquakes. This system, used in the High Atlas, Nepal, Pakistan, and Himalayas, meets seismicity standards innovatively while honoring ancestral building traditions.

In accordance with **SDG 1**, the project integrated site workers, such as guides

and hawkers, and gave their camels and ponies proper care and training in order to create a sustainable revenue stream connected to the restored cultural site. In terms of **SDG 3**, a health path, pedestrian access, and a solar-powered cable car provide the best circumstances for women, children, and the elderly to enjoy clean air, physical activity, and cultural engagement in a secure setting.

Comprehensive signage in Arabic, English, French, and Tifinagh is used to address **SDG 4**. As an example of how historic initiatives support informal education, site workers who accompanied excavations were the first to read these placards. In an area where few women hold positions of decision-making, the principal architect is a woman, which supports SDG 5. The super-perfect continuously supports and promotes female follow-up engineers.

SGDs considered



A closed-circuit water treatment facility and renovated conventional rainwater cisterns help achieve **SDG 6**. By combining old and new technology, one cistern's pump allows rainwater to be reused, guaranteeing sustainable water management. With solar collectors on parking lot blinds, the cable car uses solar energy and downhill power to generate electricity, advancing **SDG 7** and showcasing a dedication to sustainable energy through cutting-edge transportation technology.

The creation of statutes for master craftsmen and the consolidation of manual labor support **SDG 8**. Stone was chosen using just human energy in an unemployed area, promoting inclusive dignity by appreciating traditional talents. The project's achievement in growing the stone and bio-sourced materials industries in both public and commercial applications embodies **SDG 9**. The wood-stone earthquake-proofing

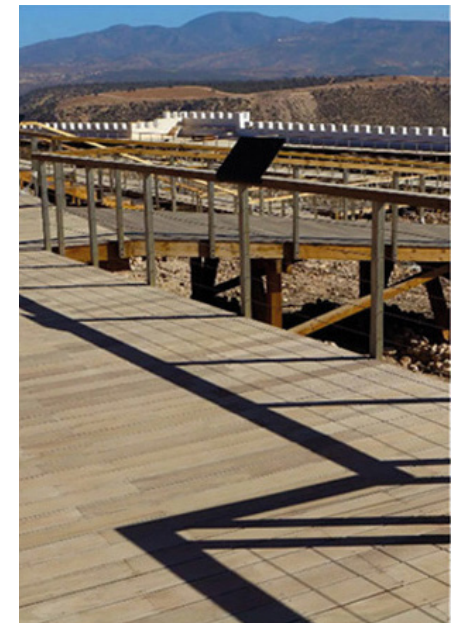
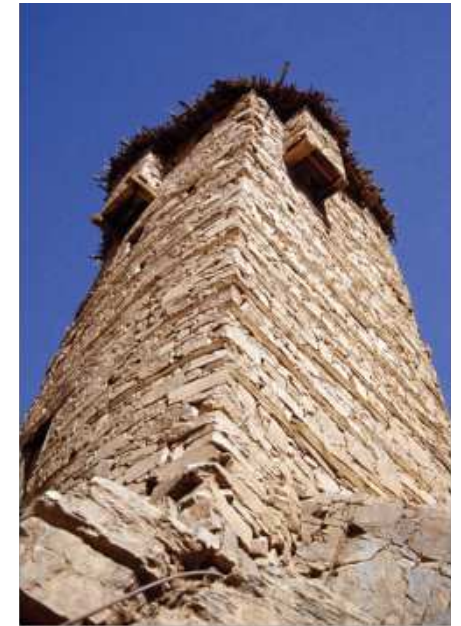
technology suggests revitalizing Morocco's construction sector by providing sustainable development based on in-depth local expertise.

Thick walls and little gaps that don't require air conditioning help achieve **SDG 11** through environmental performance. Renewable materials with low-energy extraction techniques provide up to 60–70% of the construction mass, resulting in passive, climate-responsive structures. Sustainable materials that are obtained locally and don't require significant transportation help achieve **SDG 12**.

Interiors made of palm wood and kiln-dyed laurel, stone walls constructed by Anti-Atlas masons, and local slate from six regional cooperatives guarantee sustained human investment while aiming for carbon neutrality.

SDG 13 is achieved by methodically aiming for carbon neutrality through material and architectural decisions. The cable car and lighting are powered by solar energy, water is utilized wisely and reused in closed circuits, and integrated design takes immediate action against climate change. Endemic species like euphorbias and cactus, along with succulent plant cover that preserves terraces and the landscape, help achieve **SDG 15**. This urban environment is less polluted because of drip systems that use recycled water, safeguarding and rehabilitating terrestrial ecosystems.

Since too many lives could not be saved beneath concrete slabs, the construction system reinvests in ancestral earthquake-resistant procedures in accordance with **SDG 16**. In 2023, the dry stone and wood method demonstrated its resilience to shearing, meeting seismicity standards in a novel way while fostering inclusive and peaceful societies through design that respects survivors, honors memory, and creates transparent, accountable institutions for managing shared heritage.





17 PARTNERSHIPS FOR THE GOALS

Goal 17 revitalizes the global partnership for sustainable development, requiring cooperation between governments, the private sector, and civil society to ensure no one is left behind. Low- and middle-income countries (LMICs) face record-high \$1.4 trillion debt-servicing costs in 2023, compounded by a \$4 trillion annual SDG investment gap—60% higher than the \$2.5 trillion estimated in 2019. The Secretary-General has urged an SDG Stimulus of at least \$500 billion annually. Foreign direct investment to developing countries has decreased. Official Development Assistance (ODA) declined by 7.1% after five years of growth, with further cuts expected through 2025. In 2024, ODA from DAC members totaled \$212.2 billion (0.33% of their combined GNI)—a 7.1% real decline from 2023—due to reduced contributions to international organizations, lower aid for Ukraine, decreased humanitarian aid, and less spending on hosting refugees. Success requires mobilizing resources and fulfilling ODA commitments.

- Developing countries face an unprecedented rise in external debt after COVID-19, compounded by inflation, rising interest rates, and constrained fiscal capacity, underscoring the urgent need for debt relief.
- About 60% of low-income countries are at high risk of debt distress or already experiencing it.
- In 2023, an estimated 67% of the world's population (5.4 billion) used the Internet — a 69% improvement since 2015, but progress in bridging the digital divide has slowed post-pandemic.
- Worldwide, 70% of men use the Internet compared to 65% of women, with 244 million more men than women online in 2023.
- Despite improvements in data systems and statistical capacities, the digital divide remains wide, and many countries lack sustainable financing for data infrastructure.

Source: The Sustainable Development Goals Report 2025

SDG 17 TARGETS

- 17.1** Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection.
- 17.2** Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of ODA/GNI to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries.
- 17.3** Mobilize additional financial resources for developing countries from multiple sources.
- 17.4** Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress.
- 17.5** Adopt and implement investment promotion regimes for least developed countries.
- 17.6** Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.
- 17.7** Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed.
- 17.8** Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.
- 17.9** Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation.

- 17.10** Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda.
- 17.11** Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020.
- 17.12** Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access.
- 17.13** Enhance global macroeconomic stability, including through policy coordination and policy coherence.
- 17.14** Enhance policy coherence for sustainable development.
- 17.15** Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development.
- 17.16** Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.
- 17.17** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships
- Data, monitoring and accountability.
- 17.18** By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.
- 17.19** By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries.

For more information: <https://www.un.org/sustainabledevelopment/globalpartnerships/>

P50 CO-CREATING CONSTRUCTION LABOUR COMMUNITIES - RMZ AZURE

17 PARTNERSHIPS
FOR THE GOALS



Author(s): NIVASA, An architectural social venture
Professional Architectural Organisation(s) of the Author(s): NIVASA, An architectural social venture
UIA Regions: Region IV
Client Name(s): RMZ Foundation
Location: Bangalore, Karnataka, India
Project/Intervention Area: 4.000m²
Status: Completed
Completion date: June, 2017
Image Author(s): NIVASA, An architectural social venture

Project Description: NIVASA is a not-for-profit Architectural Social Venture that enables humane and dignified housing for the urban and rural poor, through design thinking.

Labour housing, living, working and health conditions are abysmal in most construction projects. Co-creating Construction Labour Communities is about encouraging humane and dignified living conditions for the construction migrant workers, by catalysing an initiative amongst all stakeholders

to move from labour camp to labour community in each of the construction projects.

Our objective is to promote humane living conditions for construction labourers by influencing intervention in housing and Infrastructure, education, health and hygiene, recreation and vocational Training for welfare of construction labourers, by ensuring an intrinsic change happens in all stake holders of construction projects. The participants are the specific projects teams from the real estate industry, if necessary with the help support from community NGOs, and the beneficiaries are the migrant construction labourers.

Our Concept is to ensure a sense of partnership, ownership and community amongst all stakeholders.

Our Strategy to achieve the goals is to use K.A.I.P.A principles to bring about behavioural change in any mindset.
 K - The Knowledge that we need to bring about change.



A - Creating Awareness in others on the need for change.

I - Intention- ensuring the end user/ partner gets the intention in him to bring about the change.

P - The end user /partner in time becomes a Practitioner of the change.

A - The end user/partner turned Practitioner now becomes an Advocate or agent of change.

Design interventions include master plans, individual units, kitchens, washrooms, amenities, and landscaped areas. Implementation involves stakeholder engagement through workshops, awareness sessions, tender guidelines, design guidelines, monitoring systems, and benchmarking. Construction agencies can partner with local grassroots NGOs who are experts at working with labour welfare, so that we ensure positive action happens both top-down and bottom up.

Implementation strategy encompasses Product (physical infrastructure including house prototypes, kitchens, dining, and sanitation units), Process (manuals, checklists, tender guidelines, design guidelines, monitoring systems, and benchmarking), People (engagement of developer and contractor teams), and Prerequisite (consistent involvement of the stakeholders throughout engagement).

Impact includes, depending on the intensity of outreach, reduced labour attrition, improved construction quality and productivity, recognition from developers encouraging better facilities, increased morale, higher attendance, reduced illness, enhanced communication, and easier labour management and over all feel good amongst stakeholders.

SGDs considered



Labourers report better access to water, electricity, and food; management visits bring contentment; less crowded rooms with privacy; bathroom privacy; protection from rainwater; personal storage; non-slushy pathways; and involvement of the management in workers increasing their overall well-being.

In alignment with **SDG 3**, the project addresses mental and physical health challenges faced by construction workers due to long working hours, poor living conditions, and social isolation through first aid facilities, better ventilation, privacy, avoiding overcrowding, hygienic kitchens, and sanitation facilities that significantly enhance health outcomes, with wellness initiatives like yoga, play areas, and creches contributing to mental well-being of workers and their families, ensuring healthy lives and promoting well-being for all ages within the construction labour community. In relation to **SDG 6**, the availability and sustainable management of water and sanitation for all residents of construction labor communities is ensured by the provision of hygienic bathing and washing areas, paved pathways, and adequate sanitation facilities.

Additionally, well-planned designated cooking areas using smokeless chulhas and separate washing areas reduce indoor air pollution, guarantee access to hygienic food, and lower the risk of water contamination.

SDG 8 is addressed because improving living and working conditions increases worker productivity, morale, and attendance. The project formalizes



guidelines in contracts to mandate humane living conditions, reinforcing the right to dignity at work, fostering safe and secure working environments, and improving access to financial services; intervention results in lower attrition, lower absenteeism due to strikes, and higher efficiency directly supporting full and productive employment, decent work for all, and sustained, inclusive, and sustainable economic growth. By assisting marginalized labor communities, fighting discrimination, and putting social protection measures in place for a more equitable society, the Construction Labour Community initiative advances **SDG 10** by reducing inequality through targeted intervention for one of the most vulnerable.



The initiative directly advances **SDG 11** by promoting safe and affordable housing, upgrading slum settlements for construction labor communities, and supporting inclusive and participatory urban planning and management processes. The development of well-planned, safe, and inclusive labor settlements contributes to more resilient urban development, while community areas, greenery, and children's spaces integrate the workforce into the city's spatial and social fabric, making cities and human settlements inclusive, safe, resilient, and sustainable.

According to **SDG 17**, the Construction Labour Community initiative's success depends on strong partnerships between governments, the private



sector, and civil society. The partnership between NIVASA, developers, contractors, project management consultants, and NGOs reflects multi-stakeholder partnerships essential to sustainable development, creating a replicable model and platform for advocacy within the construction sector that shows how partnerships for the goals can transform the lives of marginalized workers through collective action and shared commitment to dignity and humane conditions.

P64 MALABAR HILL FOREST TRAIL

17 PARTNERSHIPS
FOR THE GOALS



Author(s): Rahul Kadri, Harish Vyas, Bhumika Ganjawala, Heena Sheikh, Pooja Satam, Pramod Shelar & Anjan kurtadkar

Professional Architectural

Organisation(s) of the Author(s): IMK Architects

UIA Regions: Region IV

Client Name(s): Brihanmumbai Municipal Corporation

Location: Mumbai, India

Geographic Coordinates (Latitude and

Longitude): 18.95° North, 72.8° West

Project/Intervention Area: 723m²

Status: Completed

Completion date: March 30, 2025

Image Author(s): Paul Raftery

Project Description: The **Malabar Hill Forest Trail** in Mumbai reclaims 12 acres of ecologically sensitive urban forest through a 482-meter elevated walkway built without cutting a single tree. Low-impact concrete pile foundations preserve root systems and soil permeability, while cylindrical epoxy-coated steel columns offer durability and modularity. The walkway is

lifted between two to ten meters above ground, allowing natural stormwater flow along the sloping terrain and enabling uninterrupted movement of wildlife. In areas of major surface runoff, longer structural spans are introduced where columns are avoided, ensuring minimal ecological disturbance. The alignment responds closely to the site's topography, with subtle level changes and slopes that ensure accessibility.

Constructed using prefabricated components, the deck is finished in Merbau wood, blending with the forest while enabling rapid, low-impact assembly. Its width expands periodically to accommodate seating and viewing decks, culminating in a loop that offers views of Girgaon Chowpatty and the Arabian Sea. Warm LED down lighters integrated within the balustrades reduces light pollution, while the railing system is designed to incorporate interpretive signage. Seating bays, waste bins, and CCTV infrastructure ensure safety and comfort.



The project resulted from participatory governance initiated by the Nepeansea Road Citizens' Forum, supported by the JSW Foundation, and implemented by the Brihanmumbai Municipal Corporation. This collaboration between community, private institutions, and public agencies created a civic space rooted in shared ownership and ecological stewardship.

In line with **SDG 11**, the **Malabar Hill Forest Trail** transforms a neglected forest into a safe, accessible, and climate-responsive public space. The elevated walkway minimises ground-level intervention, maintaining natural hydrology and regulating visitor movement to prevent erosion and degradation. By introducing accessible pathways with gentle slopes, the project

ensures inclusive use for a wide range of visitors, from elderly users to children and students.

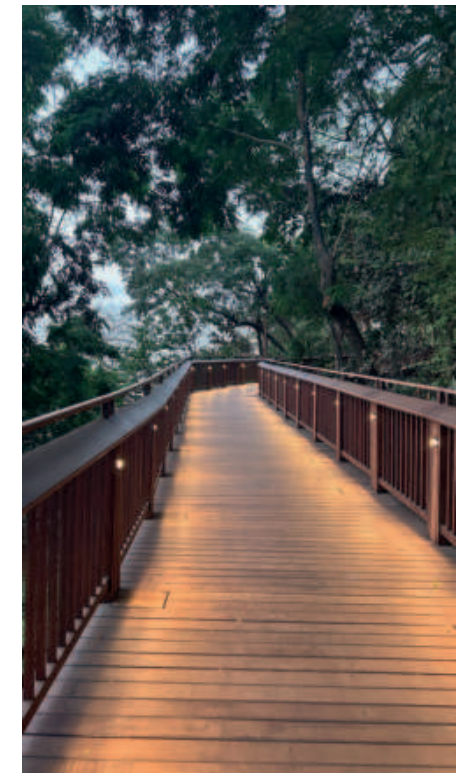
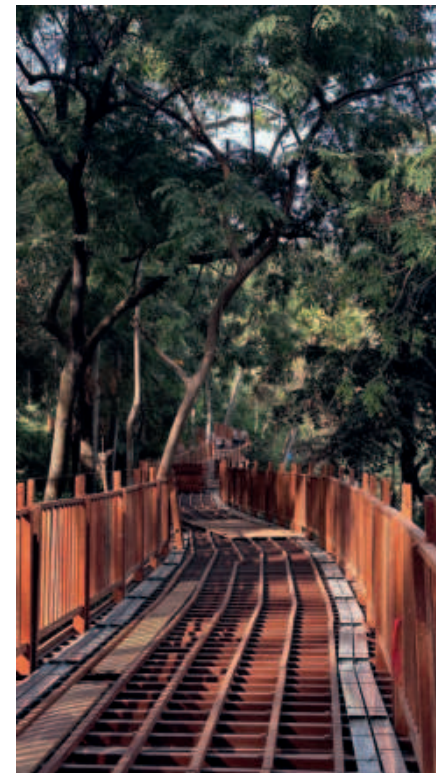
With respect to **SDG 15**, the project prioritises ecological protection by constructing without removing any trees and preserving existing root networks and habitats. The elevation of the walkway allows biodiversity to thrive below, while materials such as Merbau wood and epoxy-coated steel ensure durability and reduced long-term impact. Integrated signage educates visitors about local flora and fauna, reinforcing awareness while limiting direct human interference with the forest floor. Aligned with **SDG 16**, the project reflects a model of participatory

SGDs considered



governance. Initiated by citizen groups and supported by institutional and municipal collaboration, the design process incorporated community inputs in aspects such as accessibility, seating, and public interface. This approach fosters transparency, inclusivity, and long-term stewardship of the space.

Finally, under **SDG 17**, the project demonstrates the effectiveness of multi-stakeholder partnerships. The collaboration between the Nepeansea Road Citizens' Forum, JSW Foundation, and Brihanmumbai Municipal Corporation illustrates how shared resources and collective vision can deliver environmentally and socially responsive infrastructure. **The Malabar Hill Forest Trail** establishes a replicable model for other cities, showing how public participation and ecological sensitivity can shape future urban development.



P66 SHAKO – COMMUNITY INFRASTRUCTURE FOR RESILIENT LIVING

17 PARTNERSHIPS
FOR THE GOALS



Author(s): Mahia Mustary Nushin, Aqib Mohammad Nibir

Professional Architectural

Organisation(s) of the Author(s):

BRAC University, Dhaka University of Engineering & Technology (DUET)

UIA Regions: Region IV

Client Name(s): Water Nomad Community in Bangladesh (Bede)

Location: Chadpur, Dhaka, Bangladesh

Geographic Coordinates (Latitude and

Longitude): 23.224053 / 90.649131

Project/Intervention Area: 2.740m²

Status: Design Phase

Image Author(s): Mahia Mustary Nushin, Aqib Mohammad Nibir

Project Description: The site in Chandpur 10, Dhaka, is home to over 90 households from a water nomad community, split between boat dwellers and stilt house residents. Seasonal monsoon flooding submerges the entire area, disrupting daily life by eliminating spaces for fishnet repair, children's play, and other activities. WASH infrastructure including pit latrines and bathing areas is severely impacted. Though Oxfam

provided floating WASH units, a past storm accident made the community wary of using them.

In response, a raised walkway named SHAKO is proposed, built six feet above ground with a one-foot safety margin during heavy monsoon. It serves as a main spine linking the city bazaar to all household types and extending to the WASH zone, sloping down to meet the river for boat access. During dry season, it functions as a shaded playscape with tea stalls underneath. During monsoon, it becomes the primary mobility route ensuring safe access to homes and WASH facilities while enabling small-scale commerce and recreation.

Active community participation through construction empowers residents to understand, adapt, and customize the intervention. SHAKO is not merely a physical structure but a catalyst for social, economic, and environmental transformation, addressing multifaceted challenges faced by one of Bangladesh's most vulnerable communities while



advancing multiple Sustainable Development Goals in an integrated manner.

In alignment with **SDG 1**, the incorporation of income-generating activities along the walkway promotes economic resilience, especially during monsoon seasons when regular income sources become limited due to flooding. It also creates a platform for micro-enterprise that can lift families out of extreme poverty by ensuring they have access to economic opportunities year-round regardless of water levels, and it offers opportunities for small commerce and trade that help alleviate poverty through sustained economic activity even in adverse conditions. Regarding **SDG 2**, small-scale gardening initiatives adapted to the main accessway, along with elevated porches and yards, address food insecurity by increasing household-level food production even during times of dry land scarcity during monsoon floods, contributing to food security and improved nutrition through localized agriculture that withstands seasonal inundation, enabling families

to grow their own food and reduce dependence on external food systems that become ineffective.

SDG 3 is addressed because the project improves public health and promotes healthier living conditions for all community members, especially vulnerable children and the elderly who are most susceptible to water-related illnesses. The elevated walkway also offers a safe space for recreation and social interaction that supports mental well-being and community cohesion, and it reduces exposure to waterborne diseases like typhoid and skin infections through safe, dry access to clean water and sanitation facilities. **SDG 6** is accomplished because the proposed access bridge guarantees safe and dependable access to WASH facilities and clean water sources, particularly during water level rise. This helps prevent water contamination and improves hygiene and sanitation through dependable infrastructure that remains functional throughout seasonal changes, ensuring sustainable management of water and sanitation.

SGDs considered



SDG 10 is supported as the project targets the socially marginalized and often neglected water nomad community, aiming to enhance both adult and child development opportunities while promoting social inclusion through infrastructure that connects them to markets, services, and the broader urban fabric, reducing inequality by providing equitable access to mobility and opportunity that breaks down the physical and social barriers that have historically isolated this community from mainstream society. By providing stable, year-round accessibility, lowering social discrimination, and promoting inclusive,

equitable community development that makes cities and human settlements more inclusive, safe, resilient, and sustainable through targeted investment in marginalized populations—demonstrating that sustainable urban development must include those living at the periphery of formal city systems—the initiative directly advances **SDG 11**.

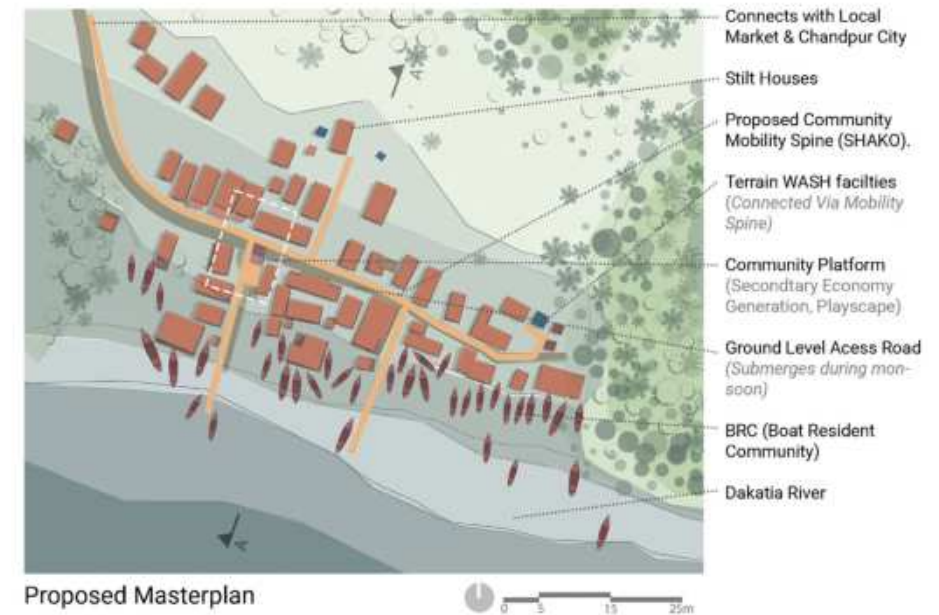
The proposal offers a resilient, scalable model for deltaic communities impacted by climate change. It takes immediate action to combat climate change and its impacts through adaptive



STILT HOUSE RESIDENTS



BOAT RESIDENT COMMUNITY (BRC)



design that works with rather than against seasonal water dynamics, incorporating resilience into the very fabric of community infrastructure so that residents can withstand and adapt to the increasing frequency and intensity of flooding associated with climate change. This approach addresses **SDG 13**. By providing a voice to a marginalized community through participatory governance, ensuring that their needs are heard and addressed in decisions affecting their lives, fostering trust between community members and institutions, and developing an inclusive decision-making model that can be replicated in other marginalized communities facing similar challenges, the project supports peaceful and inclusive societies in line with **SDG 16**.

In order to ensure long-term sustainability and impact, **SDG 17** is ultimately advanced through crucial collaboration among community members, government agencies, funding organizations, and policymakers.

These partnerships are essential to the project's success and show how multi-stakeholder cooperation can deliver infrastructure that is both technically sound and socially just, proving that the complex challenges of sustainable development can only be addressed when all sectors of society work together in genuine partnership.

P91 MODEL ANGANWADI

17 PARTNERSHIPS
FOR THE GOALS



Author(s): NIVASA, An architectural social venture
Professional Architectural Organisation(s) of the Author(s): NIVASA, An architectural social venture
UIA Regions: Region IV
Client Name(s): Women and Child Development(WCD) Department, Government of Karnataka
Location: Bengaluru, Karnataka, India
Project/Intervention Area: 80m²-120m²
Status: Completed
Completion date: June 4, 2022
Image Author(s): NIVASA, An architectural social venture

Project Description: The Anganwadi center is a child-centric, modular prototype designed by NIVASA for the Department of Women and Child Development in Karnataka, serving as a crucial part of the Integrated Child Development Services program launched by the Government of India to cater to children aged zero to six years. NIVASA, an architectural social venture, works on solutions that enable humane and dignified living conditions

for the underserved through scientific and systemic design, strongly believing design to be a catalyst for social change through a people-centric approach. This approach involves users and multiple stakeholders in the decision-making process while encouraging workers' safety and wellbeing during construction.

The design approach rigorously assimilates best practices by applying a scientific method that integrates the use of local materials, encourages play-based learning, and ensures adaptability across diverse climates and geographies, offering an inclusive, sensory-rich, and context-responsive approach for early childhood care and education. Spread across one thousand twenty square feet that incorporates play areas, learning zones, and art-integrated walls using local building materials, with roof options including RCC flat, sloping, or tiled configurations and safety-focused features like rounded edges and accessible handwash areas. The design is scalable across regions, having been adopted as a government prototype and



currently replicated in multiple districts. While from a program perspective the center also caters to pregnant and lactating women and adolescent girls through services including supplementary nutrition, health check-ups, immunizations, referral services, pre-school education, and nutrition and health education to mothers and caregivers.

In alignment with **SDG 1**, the Anganwadi provides free basic services including nutrition, health check-ups, and immunization to children under six, pregnant women, and lactating mothers from vulnerable communities, reducing intergenerational poverty by investing in early childhood development during the most critical years of human capital formation. Regarding **SDG 2**, the center provides supplementary nutrition to children, pregnant and lactating women, and adolescent girls in some cases, helping reduce malnutrition, stunting, and wasting in children under five through consistent access to nutritious food that addresses the immediate and long-term health consequences of undernutrition. **SDG 3** is met by Anganwadis, which improve maternal and child health by

reducing mortality through immunization, health examinations, and referrals. They also give mothers essential nutrition and health education, and their child-safe design elements—such as rounded edges, adequate ventilation, and designated play areas—promote young children's holistic physical and mental well-being in a safe setting. **SDG 4** is achieved by using Building as Learning Aid principles to provide non-formal pre-school education to children ages three to six. This approach supports holistic early education through play-based learning zones, sensory design, and community and mother-child interaction spaces that establish a solid foundation for school readiness and cognitive development necessary for future educational success.

Since women make up the majority of Anganwadis' workforce and serve as Anganwadi Workers and Helpers, **SDG 5** is supported. Women are encouraged to participate in the workforce and are empowered by generating income and taking on leadership roles in their communities, which paves the way for gender equality through social recognition and economic

SDGs considered



independence. By integrating basic infrastructure into the center design, Anganwadis in rural areas ensure the availability and sustainable management of water and sanitation for some of the most underserved populations. This addresses **SDG 6** by providing drinking water and sanitation facilities where there are no toilets or access to clean water.

SDG 10 is supported because the project focuses on low-income and marginalized communities, reducing inequality through targeted intervention at the last mile, and bridging social and economic gaps in access to health, nutrition, and education by providing essential services directly to those who would otherwise be excluded from mainstream development programs.

Community art walls guarantee context-sensitivity and cultural resilience that make the centers genuinely belong to the communities they serve, while adaptable roof systems, such as locally cast panel and rafter constructions that streamline construction processes and upskill residents, directly advance **SDG 11** by boosting the local economy and lowering construction costs.

In accordance with **SDG 16**, Anganwadis play a crucial role as last-mile delivery points for public welfare services in impoverished rural and urban areas, fostering genuinely inclusive institutions that treat the most marginalized people with respect and care and boosting confidence in the government's capacity to provide basic services. **SDG 17** is finally achieved as Anganwadis flourish through inter-sectoral cooperation between the departments of Health, Education, Women and Child

Development, and Panchayati Raj, as well as partnerships with NGOs and the community. This shows how effective multi-stakeholder engagement is essential for accomplishing important development goals and proves that the complex challenges of early childhood development can only be addressed when all sectors of society work together in genuine partnership.



Art wall at the entrance as a welcoming feature which creates joy



Vernacular wall, with any locally available materials, with varied sizes, of circular openings to create curiosity



Circular openings in the verandah area Where children can climb, sit and play!

