Nature-based solutions to Post-COVID-19' urbanization challenges

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URBAN THINKERS CAMPUS
THE CITY WE NEED

WORLD URBAN CAMPAIGN

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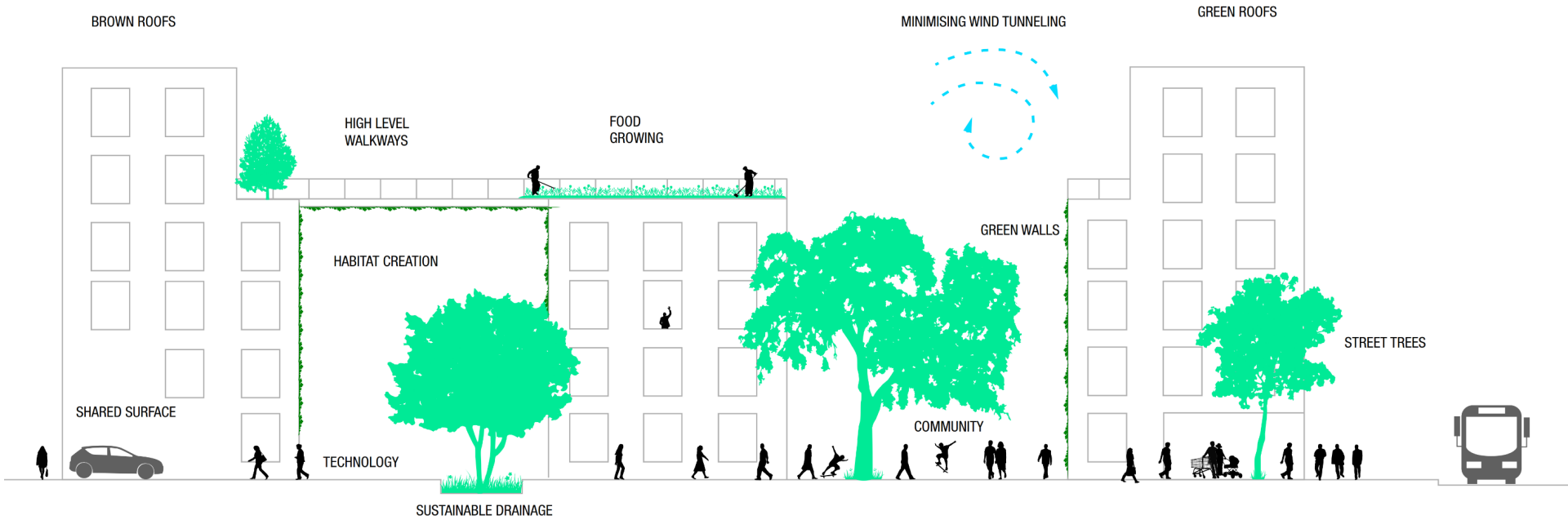
Public spaces and nature-based solutions in cities



- **Public spaces that are designed through nature based and green infrastructure solutions in cities promote environmental and social resilience**

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Why nature-based solutions?

Environment

- Increase carbon sequestration
- Improve air quality
- Additional recreational space
- Efficient land use
- Improve human health
- Flood protection
- Drinking water source protection
- Replenish groundwater
- Improve watershed health
- Protect or restore wildlife habitat
- Urban heat island mitigation

Social

- Establish urban greenways
- Provide pedestrian and bicycle access
- Create attractive streetscapes and rooftops that enhance livability and urban green space
- Educate the public about their role in stormwater management

Economic

- Reduce hard infrastructure construction costs
- Maintain aging infrastructure
- Increase land values
- Encourage economic development
- Reduce energy consumption and costs

Bio-diversity

- Improved habitats for wildlife
- Ecological corridors
- Landscape permeability

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How - Nature base solutions for a Covid-19 recovery – Health and Development Co-benefits

Different scales

Preserve and restore regional landscape systems to manage water and biodversity

Create a network of green and public spaces that mitigate climate risks

Prioritize wetlands, ponds and lakes development and provide for streams and riparian vegetation

Construct swales and buffer strips for drainage

Prioritize permeable paving

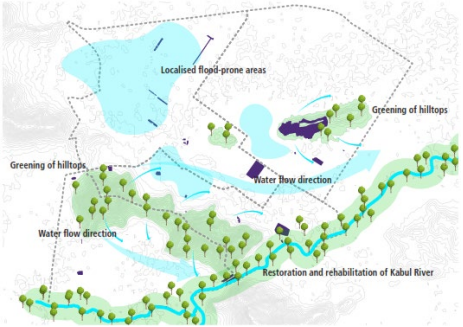
Leverage on green roofs and green walls

Case study: Kabul, Afghanistan
Network of public space for climate resilience and heritage protection

- With its extreme climate conditions, it is important for Kabul to promote **a climate-sensitive public space design** such as trees during hot summer periods, water-sensitive landscapes and maximizing solar access.

- **Through planning tools** such as master planning, urban regeneration and redevelopment, sub-divisions and land readjustment, **increase the area of green space** for optimum urban performance, creating green, and public space networks along rivers, hilltops, streets and new and existing neighbourhood and city parks.

- Repurpose streets among other corridors as ecological corridors, protecting vital aquifer zones, linking ecological restoration to



Restore Kabul River

Increase area for green spaces for environmental and cultural heritage protection

Leverage on medians to create a green network

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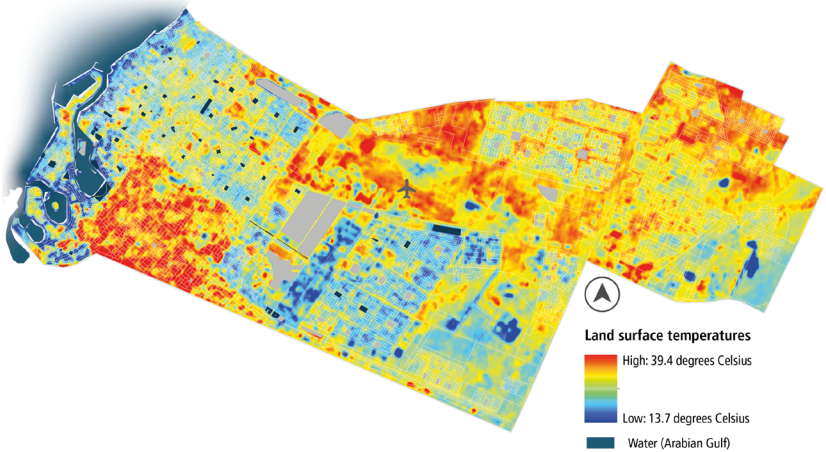
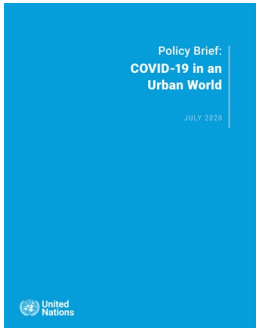
Case study: Sharjah, UAE
Nature-based solutions for adaptation: urban heat island effect



Areas with green coverage experience low to medium temperatures, while areas with no green cover are prone to high temperatures (south west and north eastern side).These are mostly industrial areas, Airport area, Um Faneean and Al Saiaa area

UN Secretary General Policy Brief on COVID-19 in an Urban World



Pillars for building back better towards the 2030 Agenda:

1. Health First
2. Protecting People, Social Protection and Basic Services
3. Protecting Jobs and Economic Recovery
4. Macroeconomic Response and Multilateral Cooperation
5. Social Cohesion and Community Resilience

There will be no return to the "old normal"

There is an **urgent need to rethink and transform cities to respond to COVID-19 and potential future pandemics**, and **to recover better by building more resilient, inclusive and sustainable cities**

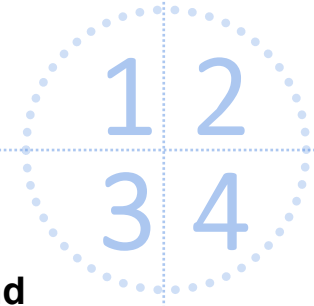
1. Tackling inequalities and development deficits
2. Strengthening the capacities of local actors, particularly governments
3. Pursuing a resilient, inclusive, gender-equal and green economic recover

Ongoing processes: **Country Socio-economic Recovery Plans** and **New Deals**

UN-Habitat Report - Future state of cities in a world with pandemics

1 Rethinking the state, re-organizing local governance mechanisms.
Urbanization and the governance of COVID-19 pandemic

2 Addressing the systemic poverty and inequality in cities,
and the impact of COVID-19



3 Rethinking urban morphology, and systems
bringing in new evidence on density and compactness and the functionality of cities

4 Rethinking the current urban economy business model.
Urban Economy, Growth, Investment and Labour Markets and the effects of COVID-19

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Urban Health , Public spaces and nature-based solutions in cities

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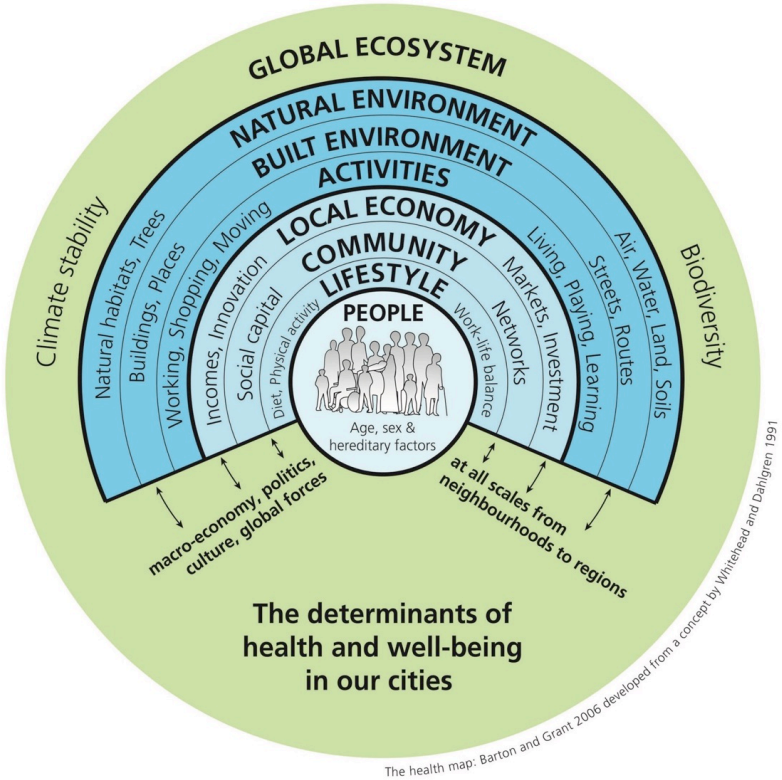
"If the purpose of planning is not for human and planetary health, then what is it for?"



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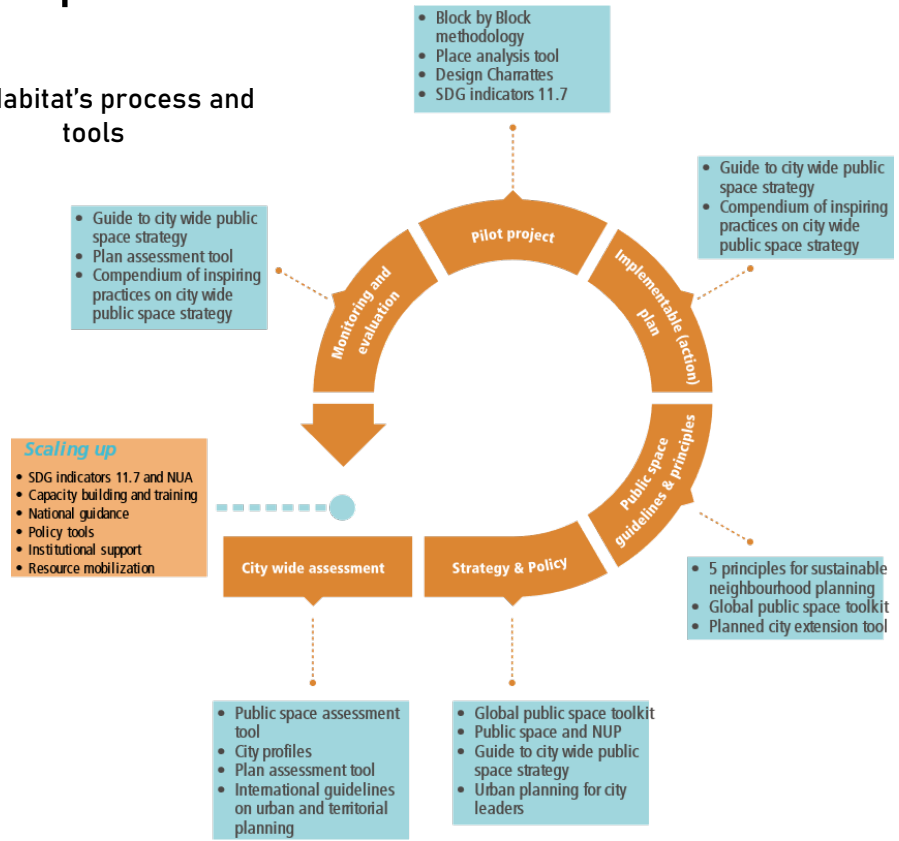
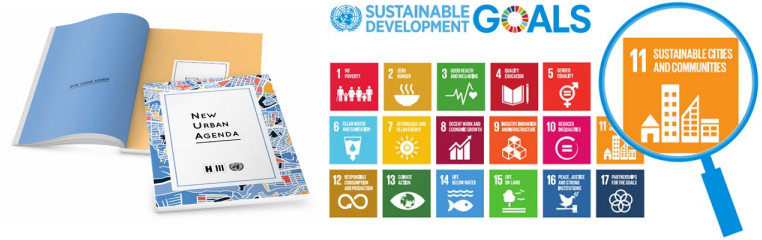
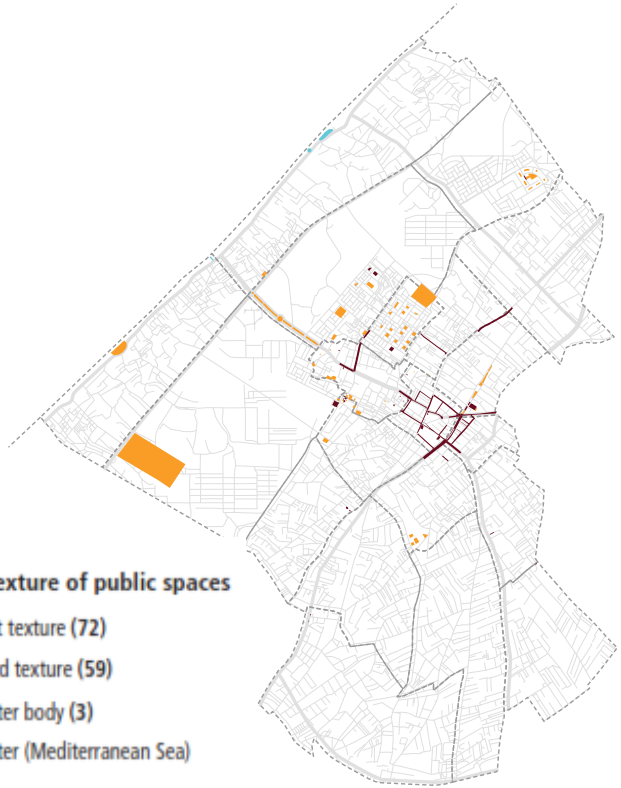
How can city leaders design tools for long-term planning, have a healthy covid-19 and to support SDG and NUA reporting on public space?

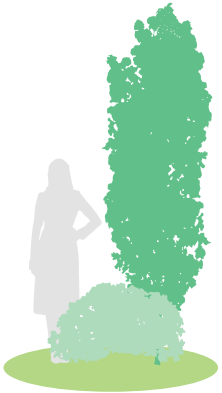
UN-Habitat's process and tools





Public Space Assessment at City level.





60% of public spaces have trees

28% of public spaces have grass coverage

2% of public spaces have urban agriculture

Khan Younis, Gaza Strip, Occupied Palestinian Territory

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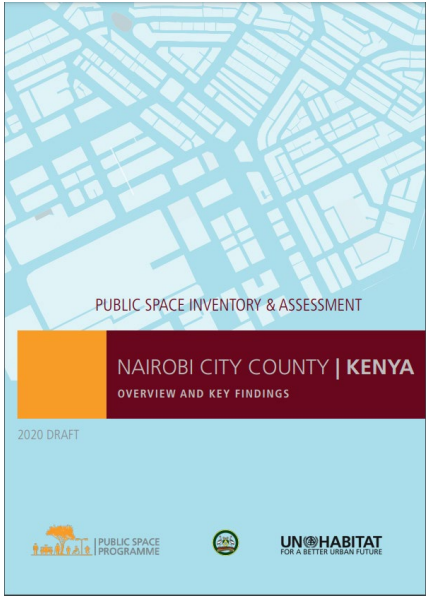
Public space inventory assessment – Nairobi City county, Kenya



KEY FINDINGS

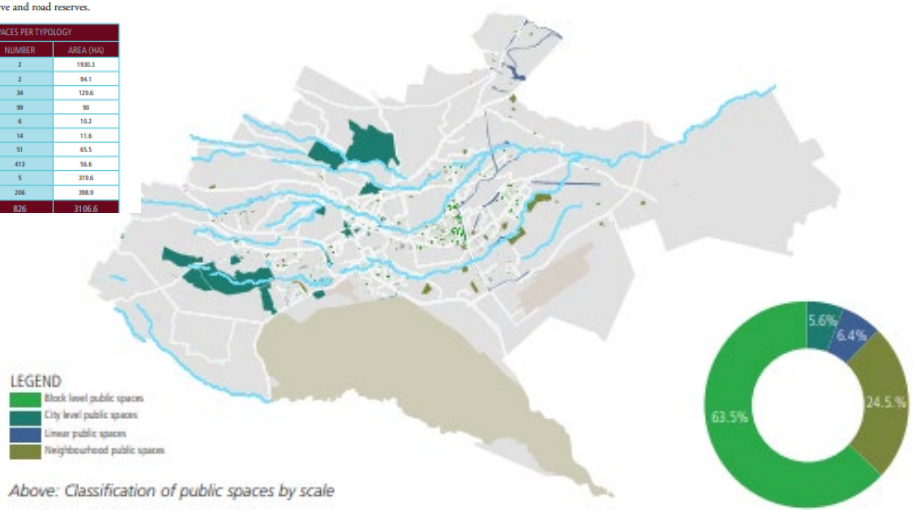
NAIROBI HAS A RICH DIVERSITY OF PUBLIC OPEN SPACES

Nairobi's Public Open Space ecosystem is a complex tapestry of natural and environmental contrasts. The typologies of public open space include urban forests, cemeteries, parks and gardens, squares and courtyards, and road reserves amongst others. However, the ecosystem is dominated by potential public open spaces, such as derelict land, infrastructure rights of way such as electricity wayleaves, railway reserves and riparian reserves. Other typologies of public spaces in the city include amenity green spaces, public parking lots, street corners and other non-defined spaces which include disused quarries. Public parking lots for instance are used as parking spaces during the week and either as public markets on Saturdays and during public holidays, and as skating rinks on Sundays.

The inventory revealed that the city has 526 block level public spaces. Majority of them are courtyards, playgrounds and gardens. At the neighbourhood level, there are 203 public spaces. These include neighbourhood squares gardens, neighbourhood parks and sports fields. The city also has 46 city level public spaces. These include the large and strategic public spaces around the city. On the other hand, the city has 53 linear public spaces. Majority of these are potential public spaces. They include infrastructure-rights-of-way like electricity way leave, railway reserve and road reserves.

NUMBER OF PUBLIC OPEN SPACES PER TYPOLOGY

#	TYPOLOGY	NUMBER	AREA (HA)
1.	Urban Forests	2	1930.3
2.	Nature reserves	2	94.1
3.	Parks and Gardens	34	129.6
4.	Playgrounds	99	90
5.	Cemeteries	6	10.2
6.	Squares	14	11.6
7.	Sports fields	51	65.5
8.	Courtyards	413	56.6
9.	Infrastructure ROW	5	319.6
10.	Others	206	398.9
#	TOTAL	826	3106.6



Above: Classification of public spaces by scale

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Next steps…

- Target and Indicator - Green sq metre per person
- Develop environmental standards/guidelines for land use, natural and biodiversity preservation and pollution – for different contexts
- NBS to be incorporated in economic recovery
- Linking Planning-Health-Nature Based Solutions Capacity building
- Financial mechanisms and cost-benefits analysis on NBS
- Partnerships

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