Bigdata and implementation of Goal 11 targets

Experiences from UN-Habitat

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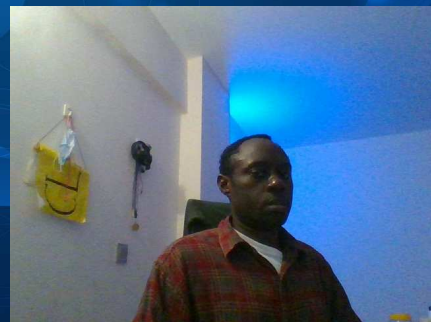


UN-Habitat at a glance

UN HABITAT
FOR A BETTER URBAN FUTURE

Mandate

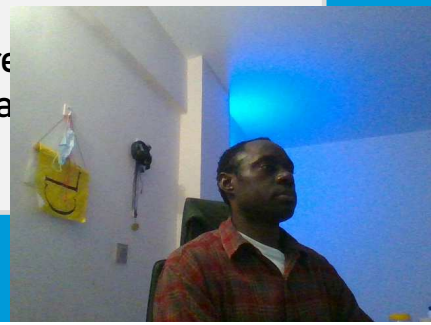
To promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all

Focus

To promote transformative change in cities and human settlements through knowledge, policy advice, technical assistance and collaborative action to leave no one and no place behind

Data

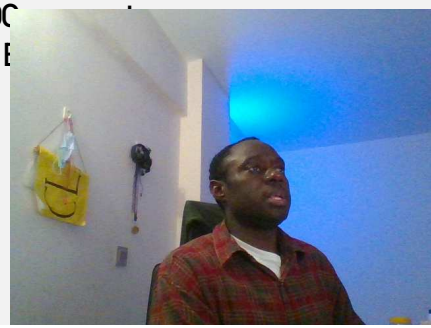
Our work is anchore
rigorous research a



SDG 11, *10 Targets*:

Make cities and human settlements inclusive, safe, resilient and sustainable.

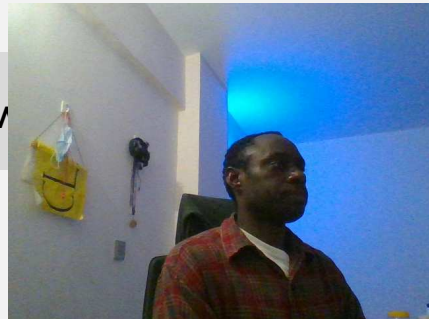
- Housing and slums
- Suitable transport
- Participatory planning
- Cultural heritage
- Disaster and risk reduction
- Air quality and waste management
- Public spaces
- Rural-urban and regional planning
- Mitigation of climate change and resilience
- LDC



Bigdata and SDG 11 applications

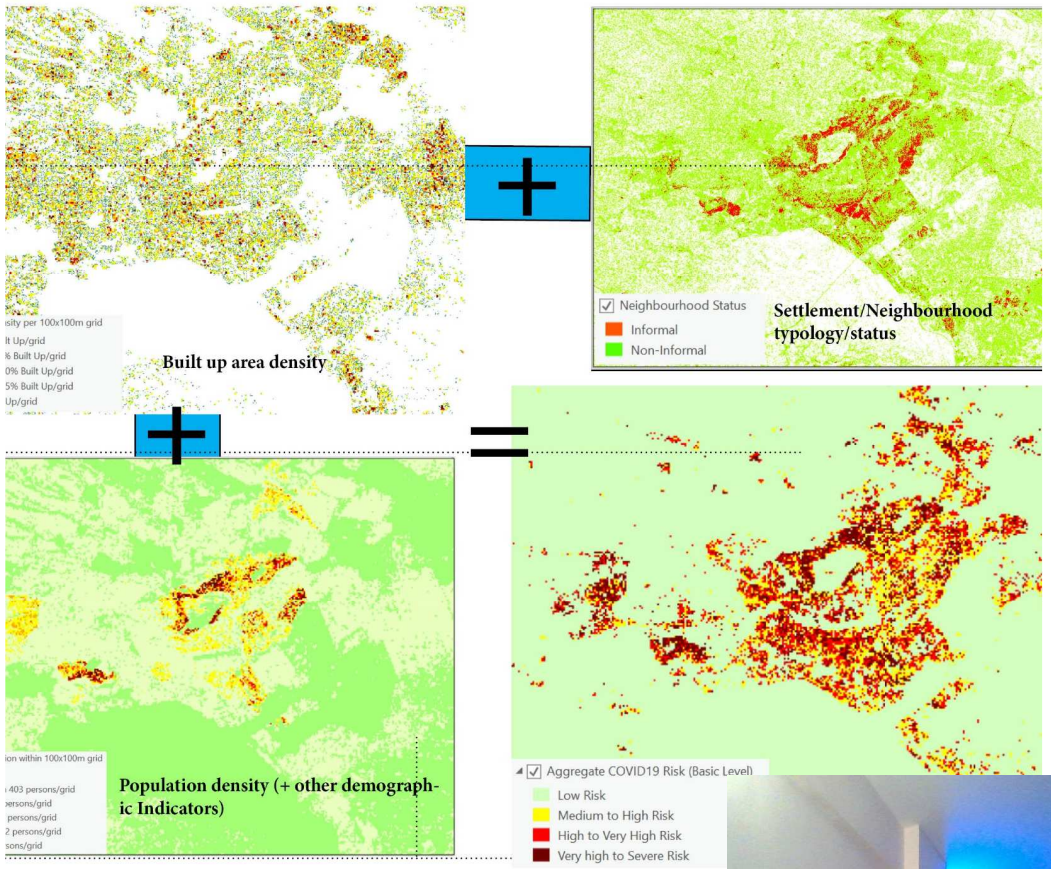
For any smart city, big data lies at its core of technological innovations

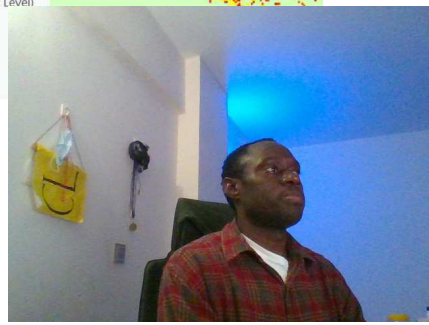
- Smart-traffic decision system depend on big data analytics.
- Waste management
- Bigdata for public safety management.
- Air quality monitoring
- Bigdata for Smart decision making for spending effectively on repairs, beauty, renovations, expansions etc.
- Health and happiness of the city
- Urban sprawl management and city planning
- Building energy efficiency (heating and lighting costs management)
- Transport services development
- Hyper-local v



Grid-Level COVID-19 Risks Assessment at City Level

- DAU model assesses risks against:
    - Built-up area density
    - Population density
    - Settlement morphology
    - Basic Service availability
    - Risk accelerators – age, health status
- Grid level focus helps understand intra-city & intra-settlement risk variations





Slum mapping to assess COVID-19 vulnerabilities

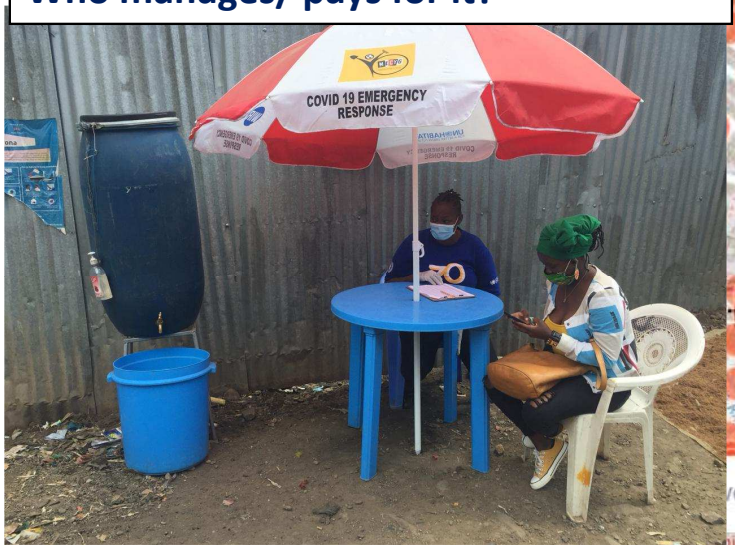
What exists

- Water point
- Public space
- Health facility
- Hand washing facility
- Communal sanitation facility (eg
- Communal kitchen
- Education Facility
- Social hall / community centre / r
- Market
- Transport stops (matatus/ boda-

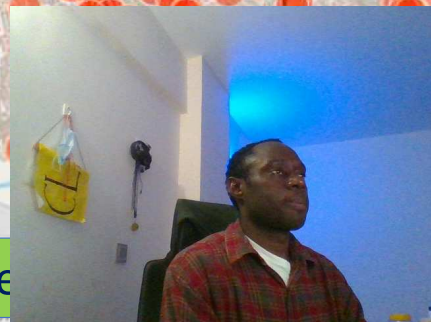
Where is it?

Is it working?

Who manages/ pays for it?

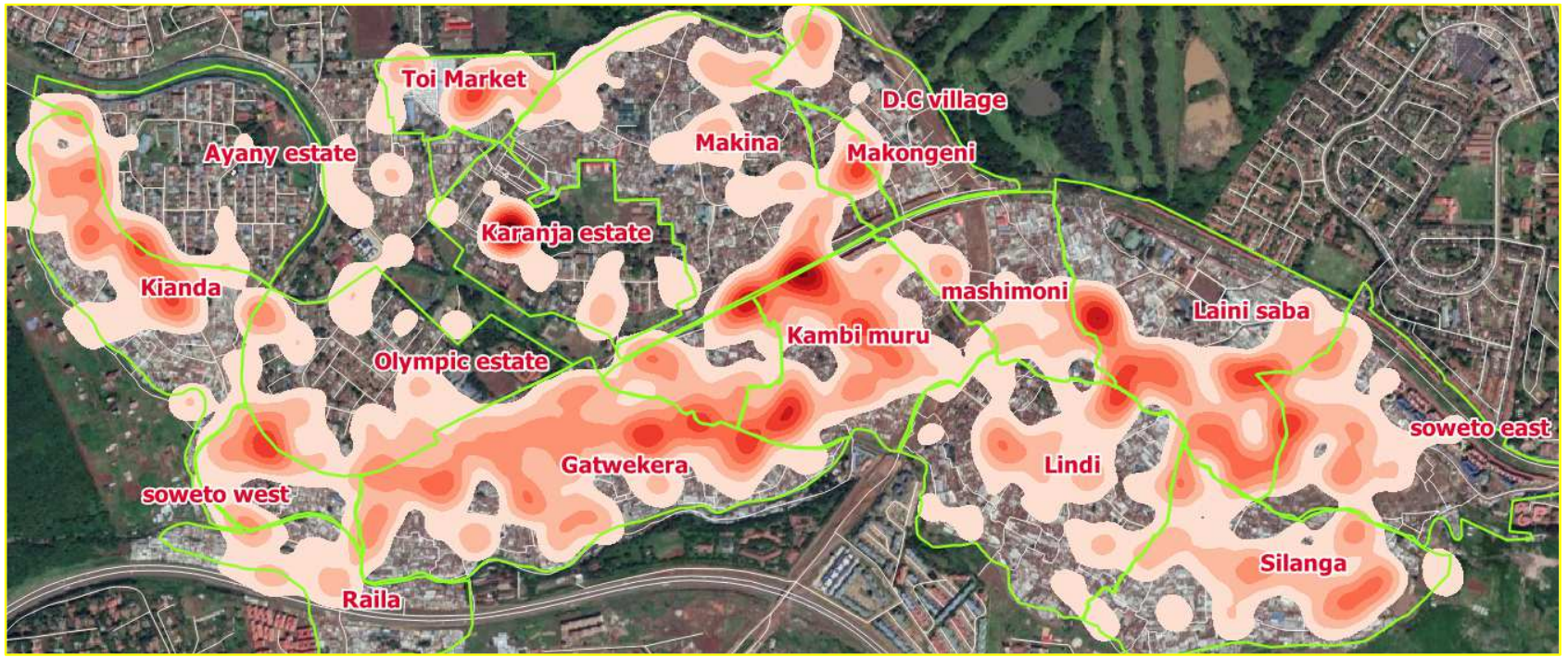


Collaborative process with partners, slum reside

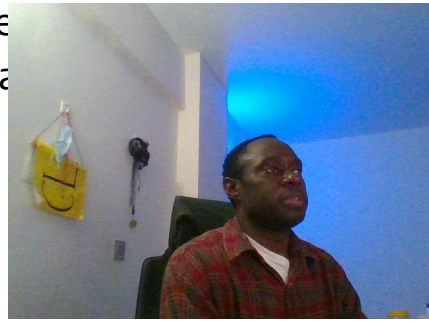


Facilities density mapping/heatmaps from Kibera, Nairobi

Facility Densities

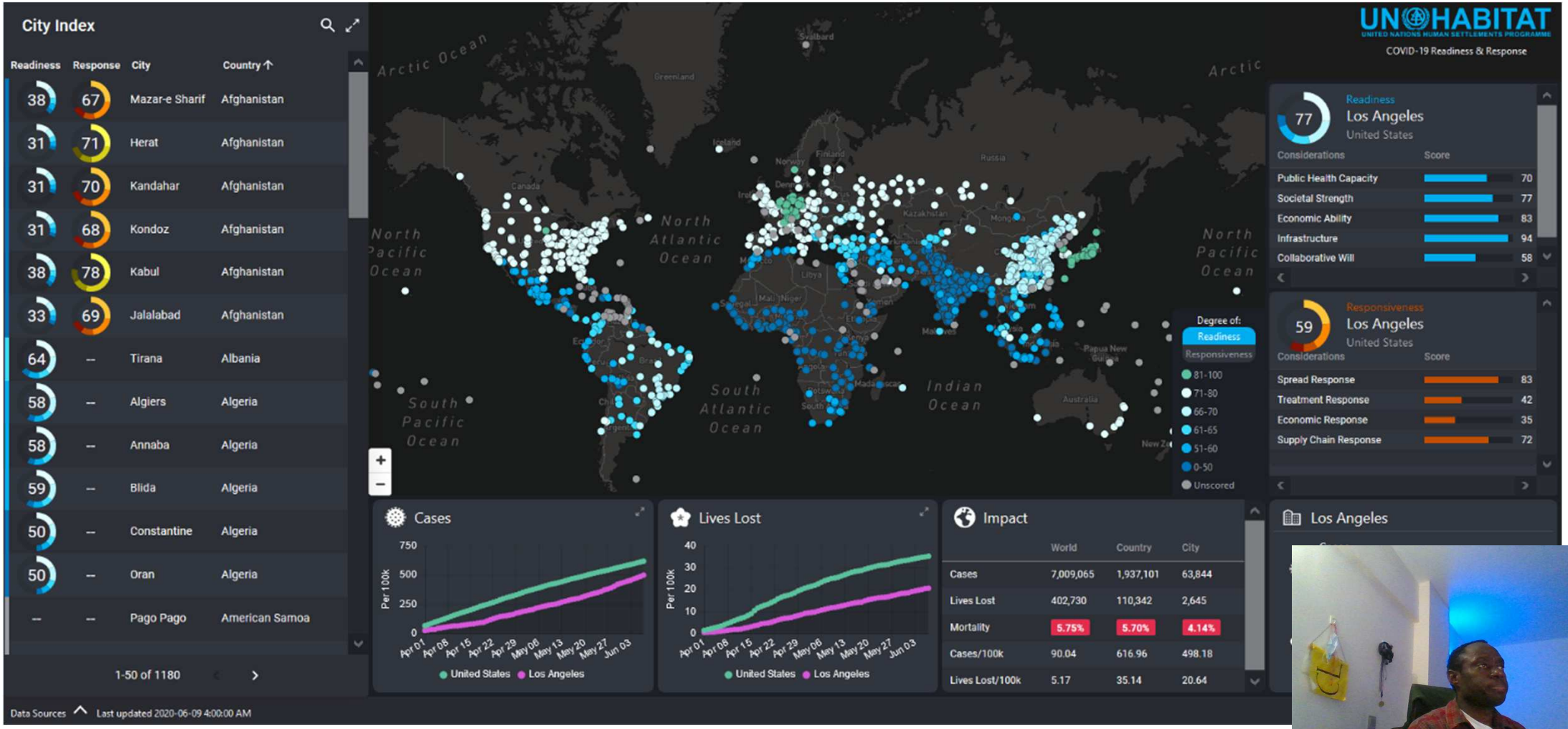


Villages with the highest concentration of facilities are Gatwekera, Kambi Muru and the lowe
Laini Saba. Ayany and the norther parts DC, Makongeni, Mashioni and Laini Saba have the lea
concentration of facilities.



The COVID-19 Preparedness and Response Platform

https://unhabitat.org/innovative-new-platform-tracks-cities%E2%80%99-readiness-and-response-to-covid-19



https://unhabitat.citiiq.com/

City profiles

City Profile #1

NAIROBI | KENYA

Total population (2019): 4,397,073 (<15 Yrs: 30.4% | 60+ Yrs: 1.4%)

Prevailing urban conditions

Access to basic services

Access to safe water, sanitation and hygienic facilities is essential to protecting populations during infectious disease outbreaks such as the COVID-19 pandemic.

88%

Nairobi residents living in households that have access to improved drinking water[1] whose collection does not exceed a 30-minutes round trip.

About half a million residents (550,000) do not have access to safe water services in Nairobi.

30%

About a third of Nairobi residents have access to basic sanitation services, i.e. they use improved sanitation facilities[2] which are not shared with other households.

About 3.5 million people lack basic sanitation facilities.

45%

Nearly half of Nairobi residents use basic handwashing facilities with soap and water in their households.

About 2.5 million of Nairobi residents lack soap, safe water and the washing facilities they need to protect themselves and their community.

Source: UN-Habitat – Global Urban Indicators Database; 2014 KDHS

Housing conditions

Overcrowding is one of the key factors in the transmission of infectious diseases such as COVID-19, acute respiratory infections, Ebola, meningitis, cholera, etc.

38%

(1.6 M)

Nairobi's population that lives in households where at least 3 people share a single room.

44%

(2 M)

Nairobi's population living in slums or informal settlements.

Source:1 2014 KDHS

Health system

Adequate supply of hospital beds or density of health-care professionals to meet population needs is key for an efficient response to a health crisis such as the Covid-19 pandemic.

Doctors: 53 per 100,000 people
Nurses: 14 per 100,000 people
Clinical officers: 6 per 100,000 people

13

There are about 13 hospital beds for every 10,000 people in Nairobi

0.6

Nairobi has less than 1 ICU bed for every 10,000 people.

Source: Ministry of Health 2015, https://data.humdata.org/dataset/kenya-number-of-hospital-icu-beds-per-county

1 Improved water sources include piped water into the dwelling, yard, or plot; a public tap/standpipe or borehole; a protected well or protected spring water; rainwater; and bottled water.
2. Improved toilet facilities include: a flush/pour flush toilets that flushes the water and waste to a piped sewer system, septic tank, pit latrine, or an unknown destination; a ventilated improved pit (VIP) latrine; a pit latrine with a slab; or a composting toilet

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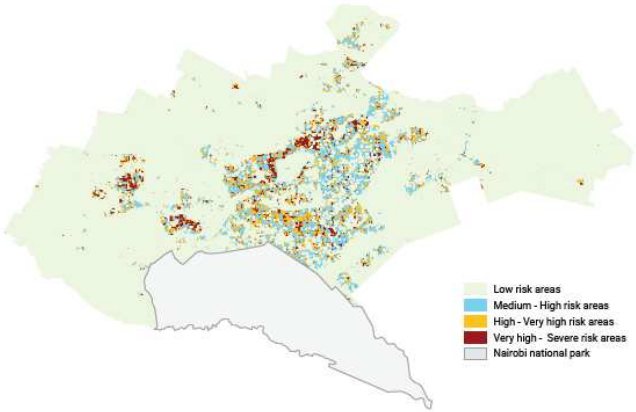
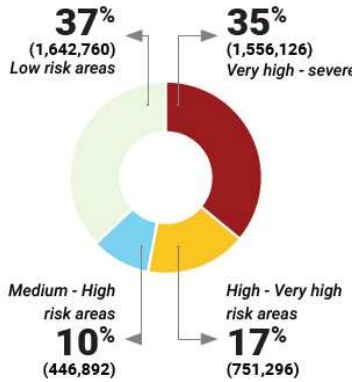
COVID-19 vulnerability level

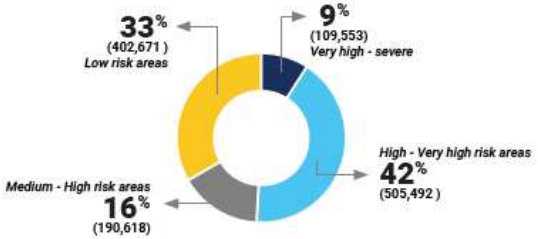




Source: UN-Habitat – Global Urban Indicators Database

COVID-19 vulnerability level

Based on a grid-level analysis of built-up area density, population density, and the prevailing preventive and governance structures, Mombasa residents face varying COVID-19 risk levels.



Source: Global Urban Indicators database

Main challenges

- Much of the big data with the most potential for public good is collected by the private sector. Public-private partnerships are key.
- In developing cities, the reality is that operations are uncoordinated and data capture is still a heavy manual process.
- Scale up of technology and pricing and regulation.
- Data aggregation for nations with many cities--- quality assurance.


Millions of Ugandans quit internet services as social media tax takes effect

Economic fears raised as online subscriptions plummet in months following launch of levy created to curb 'gossip'

ough her WhatsApp messages. Critics say Uganda's s

Thank You

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